



The Impact of IWIP Company on the Socio-Economic Community in Lelilef Village, Weda Tengah District, Central Halmahera Regency, North Maluku Province

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ABSTRACT

This study aims to analyze the impact of the mining company PT Indonesia Weda Bay Industrial Park (IWIP) on the social, economic, and environmental aspects of the community in Lelilef Village, Central Weda District, Central Halmahera Regency, North Maluku Province. The research employs both quantitative and qualitative descriptive methods, with data collection techniques including interviews, observations, and documentation. The findings indicate that IWIP's presence has brought positive impacts such as increased employment opportunities, local economic growth, infrastructure development, and improved access to healthcare and education services. IWIP's Corporate Social Responsibility (CSR) programs have supported local farmers, road construction, and environmental conservation through mangrove planting and the preservation of endemic flora and fauna. However, negative impacts have also been experienced by the community, including air pollution, increased health issues, ecosystem damage, and flooding due to changes in river flow and the conversion of agricultural land. Cross-tabulation results show that most respondents acknowledged economic improvements but also expressed concerns about environmental degradation and social changes. This study concludes that the presence of the company requires continuous evaluation to ensure that industrial development remains aligned with environmental protection and the well-being of the local community

INTRODUCTION

All mining activities as an effort to utilize natural resources are part of a form of gratitude for God's gifts (Pambudi, et al, 2023). Natural resources are a very valuable gift for a nation and must be managed with full responsibility (Soelarno, 2023). The principle of responsibility in the management of natural resources that should be applied in Indonesia is in accordance with the mandate of the 1945 Constitution Article 33 Paragraph (3), namely that the earth, water, and natural resources contained therein are controlled by the State and utilized for the greatest possible welfare of the people. Pambudi, et al (2023) in A, PH, Lampasa, Y. et al (2024).

One of the mining sectors that has been a focus of attention until now is the mining sector in North Maluku Province because this region is still very rich in natural resources. In addition to having coconut, clove and nutmeg commodities and other agricultural products, North Maluku also has mining resources, namely Nickel. (Suritno et al, 2022).

The positive impact of mining is to reduce unemployment by absorbing labor, especially the community around the mine, changing the livelihoods of the community that previously only depended on the agricultural sector, and opening up new business opportunities, so that this can improve the economy of the community around the mining area. While the negative impacts of mining are very diverse, one of which is opening up forest areas into mining areas, which results in the loss of forest function as producers of forest products such as wood and rattan, regulating existence on earth, regulating soil fertility, affecting climatic elements such as forests, temperature, sun heat, wind and humidity, and as a habitat for living things. (Seki, 2022).

LITERATURE REVIEW

The mining activities of the Indonesia Weda Bay Industrial Park (IWIP) in Central Halmahera Regency aim to increase regional and national economic activities, but on the other hand, it is suspected that there will be impacts, both on the community and the surrounding environment. Apart from the company's internal objectives both micro and macro, the mining activities of the Indonesia Weda Bay Industrial Park (IWIP) have so far allegedly caused impacts on the socio-economic community and the ecological environment. (Hairil, et al, 2024). The purpose of this study is to analyze the impact of the IWIP company on the socio-economics of the community in Lelilef Village.

METHODOLOGY

Location and Time of Research

This research was conducted in Lelilef Village, Weda District, Central Halmahera Regency. The time needed was 2 months from January to February 2025. The reason for choosing this location is because in the area there are already many company workers to increase their personal or family income.

Sampling Determination Method

The sampling method in this study was conducted by means of a census of heads of families whose land was purchased by the company.

Data Analysis Techniques

1. Qualitative Descriptive Analysis

In the study, the data was analyzed descriptively qualitatively. Descriptive analysis is an analysis method that only focuses on providing information about the data that has been collected and does not attempt to test hypotheses or make conclusions that can be applied to the entire population. The purpose of the findings of descriptive analysis or description of data collected from field studies in the form of systematic explanations. The purpose of this study is to determine how the presence of the Iwip Company affects the socio-economic climate of the community and to arrive at the conclusion time.

After the data collection is successfully collected in the field, the next step in this procedure is to conduct data analysis. In this study, quantitative analysis methods and scales are used to conduct data analysis.

2. Measurement Scale

In order to develop a scale to evaluate a particular characteristic, research must proceed with the premise that there is an actual continuum of the characteristic. There appears to be a progression from the most extreme levels of agreement to the following levels: strongly disagree, disagree, neutral, agree, strongly agree. Items that are connected to each other cannot be on the same scale because there must be a continuum there in order to function properly (Hary, 2021).

According to Qumari (2008) the Likert Scale is a scale used to assess the perception, attitude, or view of a person or group of an event or social phenomenon, depending on the operational criteria that have been determined by the researcher. This scale is a psychometric scale that is often used in questionnaires and is most often used for research in the form of surveys, especially descriptive survey research. The most common application in questionnaires. In measuring the Likert scale there are two forms of questions, namely the positive question form to measure the positive scale, and the negative question form. Positive questions are scored 4,3,2, and 1, while negative questions are scored 1, 2, 3, and 4 or -2, 0, 1, 2 (Febriko and Puspitasari 2018). So the weighting of the respondent's answers is given from the highest score to the lowest score, namely 4, 3, 2, and

1. The Following can be Seen in the Following Table:

Table 1. Likert Scale

No	Single	Symbol	Score/weight
1	Strongly agree	ST	4
2	Agree	S	3
3	Don't agree	TS	2
4	Strongly Disagree	STS	1

Source: Sugiono, 2013

After determining the highest score to the lowest score, then the number of respondents who choose is multiplied by the choice of Likert score numbers, the following is the formula for determining the score as follows:

Information:

T = Total number of respondents

Pn = Choice of Likert score value used

Based on the respondent's answer, a tendency will be obtained for the respondent's answer. The questionnaire distributed was carried out using a Likert scale.

f1 = frequency of respondents who chose strongly agree

f2 = frequency of respondents who chose to agree

f3 = frequency of respondents choosing neutral

f4 = frequency of respondents choosing to disagree

f5 = frequency of respondents choosing strongly disagree

So how to calculate the overall score = $((f1 \times 5) + (f2 \times 4) + (f3 \times 3) + (f4 \times 2) + (f5 \times 1))$.

Furthermore, to get the interaction results, you must first

Y = Highest Likert scale x number of respondents

X = Lowest Likert scale x number of respondents

It is known that the highest score (Y) and the lowest score (X) for the research item with the following house: Then the respondent's interpretation assessment of the Iwip. Sukses Mantap Sejahtera (SMS) company towards the socio-economics of the community is the result of the value produced by using the % index formula, namely:

$$\text{Index Formula \%} = \text{Total Score} / Y \times 100$$

Information:

Total score = number of respondents who chose

Y = highest score (likert scale x number of respondents)

After calculating with the index formula %, the result will appear in the form of a percentage value of the Likert scale. The Likert scale calculation coefficient uses the following formula:

The interval formula is $I = \frac{\text{Total Score}}{\text{Total Score}} \times 100$ / highest number of

From the measurement of the score interpretation above, the results obtained based on the interval can be seen in table 2.

Table 2. Interval Based Score Interpretation Criteria

Information	Coefficient
Strongly Disagree	%-39.99%
Disagree	40%-59.99%
Agree	60%-79.99%
Strongly agree	80%-100%

Source: Nazir M, 2005

RESULTS AND DISCUSSION

1. Overview of the Lelilef Urban Area Research Location

A brief history of the development of the Iwip Company in Central Halmahera Regency Indonesia Weda Bay Industrial Park (IWIP) is an integrated heavy metal processing company located in the village, Weda District, Central Halmahera Regency, North Maluku Province and was established on August 30, 2018. IWIP is a national priority based on Presidential Regulation No. 18 concerning the National Medium-Term Development Plan for 2020-2024. Has the status of a National Vital Object based on Presidential Decree No. 63 of 2004. One of the National strategic projects of President Joko Widodo through the ratification of Presidential Regulation of the Republic of Indonesia No. 109 of 2020 concerning the Third Amendment to Presidential Regulation Number 3 of 2016 concerning the Acceleration of the Implementation of National Strategic Projects.

Overall, the location of land management for mining industry activities carried out by the Iwip Company is located in Weda Tengah District and Weda Utara Regency with a total land area of 5,000 Ha, while the mining product management factory is located in Weda Tengah District, precisely in the Lelilef urban area.

Weda Bay Industrial Estate has a vision and mission to carry out sustainable industrial activities and reduce greenhouse gas emissions by adhering to the principle of "Green Industry to build The Greener Future". The vision and mission of the Iwip company include:

1. Building a world-class nickel-based industrial area.
2. Building an efficient and profitable business for shareholders and clients.
3. Creating sustainable and responsible businesses in the transformation of the earth's resources.
4. Developing superior human resources (having integrity, capacity, honesty and trustworthiness); and
5. Contribute to world, national and local development.

Visualization of the Location of the Mining Product Management Industry Center by PT IWIP in the Lelilef Urban Area, Weda Tengah District, where several images above show: (A & B) Visualization of the PT IWIP smelter, (C) PT IWIP port area (D) Location of nickel stamp piles.

a. Research Location Limitations

This research was conducted around the mining industrial area of PT. IWIP located in Weda Tengah District, Central Halmahera Regency which is physically focused on two village administrative areas, namely Lelilef Waibulan Village with an area of 167.61 Ha, and Sawai Village with an area of 177.34 Ha where the total area of the research location is 344.95 Ha. The first reason the urban area was used as the research location in this study is because strategically the location of the Lelilef Urban area is very close to the location of the PT IWIP mining industry center compared to other areas in Central Halmahera Regency, and is also the capital of Weda Tengah District with a fairly large population compared to other areas in Weda Tengah District, and is a place of settlement for one of the indigenous people of Halmahera Island known as the Sawai tribe.

b. Total population

1. Population Distribution and Density

The population at this research location includes two villages, namely Lelilef Sawai Village and Lelilef Waibulan Village. The population of Lelilef Waibulan Village in 2022 is 3,639 Jia with a population density of 20 people/km² and Sawai Village 3,243 people with a population density of 33 people/km². For more details, see table 3.

Table 3. Distribution and Income of Population of Research Locations in 2018-2022

No.	Village	Amount (Soul)	An area (Km ²)	Density (People/Km ²)
1.	Lelilef Waibulan	3,639	36.6	20
2	Lelilef Sawai	3.243	108.12	33
	Total	6,882	144.72	48

Source. Weda Tengah District in Figures 2022

1. Population Growth

Population growth in the Lelilef urban area has increased quite significantly every year compared to other areas in Central Halmahera Regency outside the Regency Capital, which has the largest growth within the Regency. The largest population growth in the Lelilef urban area occurred in 2021-2022, which was 2,200 people. While the lowest population growth occurred between 2018-2019, which was 18 people. For more details, some are shown in table 5.

Table 4. Population Development of Research Locations in 2018-2022

No	Year	Resident Soul	Development Soul	Growth %
1	2018	2,519	-	-
2	2019	2,537	18	0.17
3	2020	3,577	1,040	29.07
4	2021	4,782	1.205	25.20
5	2022	6,882	2.100	30.51

Source. Central Halmahera Regency in Figures 2022

c. Educational Aspects

Lelilef Village in Weda Tengah District, Central Halmahera Regency, North Maluku Province, has several educational institutions that play an important role in supporting the development of local community education. Here are brief profiles of several schools in the village:

1. SD GMIH Lelilef is a public elementary school that was established on January 5, 1949 with accreditation B. It uses the Independent Curriculum and has a Principal, Alman Abubakar.

2. SD Inpres Lelilef is a public elementary school established on January 1, 1975 with B accreditation and implementing the Merdeka Curriculum. The current principal is Sahril Rasid.
3. SMKN 2 Central Halmahera is a high school that plays an important role in providing access to quality education for students in Lelilef Village.

In addition to formal educational institutions, PT Indonesia Weda Industrial Park (IWIP) located in Lelilef Village also contributes to the field of education through corporate social responsibility programs. The program includes providing scholarships, eradicating illiteracy, and providing learning facilities for various levels of education in Central Halmahera and East Halmahera. Collaborative efforts between educational institutions and support from the industrial sector in Lelilef Village are expected to continue to improve the quality of education and provide significant benefits to the local community.

d. Health Aspects

Lelilef Village in Weda District, Central Halmahera Regency, North Maluku Province, has various health facilities and programs that support the welfare of the local community. Here are some important aspects related to health services in the village

a. Lelilef Health Center

Lelilef Health Center acts as the main health service center for residents of Lelilef Village and its surroundings. This health center provides two main types of services:

1. **In-house Services:** Includes individual health services provided directly at the Community Health Center.
2. **Services Outside the Building:** Implemented through integrated health posts (posyandu) which are routinely held every month in the community. These services include examinations of pregnant women, weighing of babies and toddlers, immunizations, and other health services. For residents who cannot attend the integrated health posts or health centers, health workers make home visits to check their health conditions.

b. Elderly Posyandu Program

Lelilef Health Center also routinely holds elderly health posts in Lelilef Wobulen Village and Lelilef Sawai Village. This activity involves around 30 elderly patients, with an average age of over 60 years. The purpose of this program is to monitor and improve the health of the elderly in the community.

c. Lelilef Health Center Accreditation

In 2023, Lelilef Health Center successfully achieved full accreditation, which is the highest predicate in assessing health facilities. This achievement shows the Health Center's commitment to improving the quality of health services for the community.

d. Support from PT Indonesia Weda Bay Industrial Park (IWIP)

As part of its social responsibility program for change, PT IWIP has provided various supports for the health sector in Lelilef Village, including:

1. Construction of the Lelilef Inpatient Health Center: Implemented in stages to improve health service facilities in the village.
2. Medical Equipment Assistance: Including distribution of 10 gas cylinders for Lelilef Health Center to improve health quality.

e. Referral Health Facilities

For health services that require further treatment, the people of Lelilef Village can be referred to the Weda Regional General Hospital (RSUD). This RSUD provides various medical services and is located on Jalan Raya, Were, Weda District, Central Halmahera Regency.

e. Economic Aspect (Work)

Lelilef Village in Weda District, Central Halmahera Regency, North Maluku Province, has experienced significant changes in its economic structure along with the development of the mining industry in the region. Here are some of the main aspects that affect the economic conditions and employment in Lelilef Village:

a) The Presence of PT Indonesia Weda Bay Industrial Park (IWIP)

PT IWIP is an integrated industrial area that focuses on nickel mining and processing, located in Lelilef Village. This company has created new jobs for the local community, both directly through workforce recruitment and indirectly through supporting business opportunities. The contribution of the processing industry sector, including PT IWIP, drove the economic growth of North Maluku by 13.73% in the fourth quarter of 2024, with this sector contributing 24.69% of the Gross Regional Domestic Product (GRDP).

b) Impact on Traditional Livelihoods

Before the presence of the mining industry, most of the residents of Lelilef Village relied on agriculture and fisheries as their main source of livelihood. However, land expansion for mining activities has caused the conversion of agricultural land and fishing areas, which has an impact on the shortage of agricultural products and fish catches for local communities.

c) Socio-Economic Changes in Society

Research shows that PT IWIP's mining activities have affected the socio-economic dynamics in Lelilef Village. The community faces challenges in adapting to these changes, including adjusting to the loss of traditional livelihoods and the need for new skills that are in line with the needs of the mining industry.

d) Challenges and Opportunities

Although the presence of PT IWIP brings economic opportunities through job creation and increasing regional income, there are also challenges that need to be overcome, such as:

1. **Workforce Skills Enhancement:** Local communities need to receive appropriate training and education to meet the qualifications required in the mining industry sector.

2. **Economic Diversification:** Economic diversification efforts are needed to reduce dependence on the mining sector and ensure the long-term sustainability of the village economy.
3. **Environmental Impact Management:** It is important to ensure that industrial activities do not damage the environment and natural resources that support people's lives.

Overall, Lelilef Village is at a crossroads between maintaining traditional livelihoods and adapting to changes brought by industrialization. Collaboration between government, companies, and communities is essential to ensure that economic development provides equitable and sustainable benefits to all villagers.

a. Transportation Aspects

Lelilef Village in Weda Tengah District, Central Halmahera Regency, North Maluku Province, has various transportation aspects that support population mobility and economic activities. Here are some important points related to transportation in the village.

Accessibility to Lelilef Village:

1. **To Reach Lelilef Village From Jakarta, there are Travel Options:** Flights to Ternate: The journey from Jakarta to Ternate takes approximately 3 hours and 20 minutes.
2. **Sea Transportation to Sofifi:** From Ternate, the journey continues by speedboat from Semut Mangga Dua to Sofifi port for 30 minutes.
3. **Overland Journey to Lelilef:** From Sofifi, the overland journey to Lelilef Village takes about 4 hours.

a. Lelilef Port

Lelilef Port functions as a public port that supports activities in the Indonesia Weda Bay Industrial Park (IWIP). In August 2024, the Ministry of Transportation granted concession rights to PT. Weda Bay Port to manage port services at Lelilef Port for 40 years.

b. Land Transportation and Road Infrastructure

The presence of IWIP has increased land transportation activities in Lelilef Village. Many transportation drivers have experienced increased income due to the increasing demand for transportation.

However, several villages in Weda Tengah District, including Lelilef Village, face challenges related to road infrastructure conditions. Severe road damage, especially during the rainy season, makes it difficult for residents to access transportation. The community hopes that companies operating in the area can contribute to improving road infrastructure.

c. Impact of Disasters on Transportation

In July 2024, floods hit several villages in Central Halmahera, including Lelilef Waibulen Village. The floods disrupted economic activities and cut off transportation access, causing difficulties for residents of the mining area.

Overall, transportation in Lelilef Village includes a combination of land and sea access that is important for population mobility and industrial activities. Despite challenges related to road infrastructure and the impact of natural disasters,

collaborative efforts between the government, companies, and communities are expected to improve the quality and accessibility of transportation in this area.

1. Espondent Characteristics

a. Respondent Age Characteristics

Age is the life of the respondents until the time the research was conducted expressed in years. A person's age is usually determined by their ability to carry out activities and maturity in a person's actions or deeds. The characteristics of respondents based on age in Lelilef Village, Weda District, Central Halmahera Regency can be seen in table 5.

Table 5. Respondent Age Characteristics

No	Age (Years)	Number of Respondents (People)	Percentage (%)
1	29-64	29	20
2	>64	1	23.3
	Amount	30	100

Source: Primary Data After Processing 2025

Based on table 5, the research results can be presented with the support of tables, graphs or images arranged in the form of phrases (not sentences) concisely. According to the research results of Arvianti (2016), workers in the agricultural sector are on average old (40 years and over), while young workers prefer to work as industrial workers rather than farm workers. The underlying phenomenon is because the workforce (parents) lack or do not have skills.

Respondents aged 29-64 years are included in the productive age. Respondents who are still able to carry out farming efforts, or other efforts such as entrepreneurship well so that there is an increase in production.

In the table that can be seen above, there is one respondent who is 64 years old, that age still wants to work, because respondents with that age already have a lot of experience, and they get income from selling land to build mining including a large nominal so they prefer to be successful farmers who can be categorized as relaxed work. And to work in a company with an age that is categorized as elderly with a high school diploma is too hard to do.

b. Characteristics of Education

According to Asih (2007), a higher level of education significantly affects an entrepreneur's ability to run their business, because it provides them with knowledge and skills that enable a person to be more rational in taking risks that are managed. The characteristics of respondents based on their level of education in Lelilef Village, Weda District, Central Halmahera Regency can be seen in Table 6.

Table 6. Respondent Characteristics

No	Last education	Number of Respondents (People)	Percentage %
1	SD	3	10
2	JUNIOR HIGH SCHOOL	7	23.3
3	SENIOR HIGH SCHOOL	20	66.7

Amount	30	100
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Source: Primary Data After Processing, 2025

Based on table 6, most respondents have a high school education due to limited access to higher education or college because they have to go to other places or cities, such as Ternate City, Tobelo City, Ambon City and others to continue their education.

c. Characteristics of the Number of Respondents' Family Dependents

The more family members, the greater the needs that must be met. The number of family members directly affects the amount of basic needs such as food, clothing, and shelter. The characteristics of respondents based on the number of family members can be seen in table 7.

Table 7. Characteristics of the Number of Family Dependents

No	Family Dependencies	Number of Respondents (People)	Percentage %
1	2-5	22	73.3
2	6-8	8	26.7
	Amount	30	100

Source: Primary Data After Processing, 2025

Based on table 7, the most dominant number of family dependents is from 2-5 dependents, automatically the fewer family dependents, the less expenditure incurred by the head of this family. Respondents can utilize family members as labor in the family to help with agricultural activities or other businesses.

d. Land Area Characteristics

Land area refers to the entire area used as a place for farming. This land area data can be used for various analyses, such as calculating agricultural productivity. The characteristics of respondents' land area can be seen in table 8.

Table 8. Characteristics of Land Area Owned

Land Area (Ha)	Number of Respondents (People)	Percentage (%)
1-4	10	33.3
5-8	20	66.67
Amount	30	100

Source: Primary Data After Processing, 2025

Based on table 8, from the remaining land, respondents use it to plant agricultural products such as coconut, cocoa, cloves, betel nut, tubers, bananas, toman and many other vegetables that are used by respondents to cultivate the land they have so that they can generate income that can help their families. With this, agricultural products such as vegetables and spices are sold back to the IWIP company for the canteen and food for employees who work at the IWIP Company. Other agricultural products are also sold to certain places such as

coconuts that have been processed into copra and sold to figures who buy the goods.

So, everything that the respondents planted by managing their remaining land, all produced sufficient income.

Table1. Characteristics of Land Area for Sale

Land Area (Ha)	Number of Respondents (People)	Percentage (%)
1-3	21	70
4-5	9	30
Amount	30	100

Source: Primary Data After Processing, 2025

Based on table 10, from the land sold by respondents to companies containing nickel and gold, which has been checked by the company to be ready to carry out company activities on the land that has been sold.

2. Positive Impact of Mining Companies

Lelilef Village located in the Halmahera region, North Maluku is known as an area close to mining activities, especially by companies such as PT Indonesia Weda Bay Industri Park (IWIP) which is a nickel-based industrial area. From the results of interviews with respondents of heads of families whose land was purchased by the company, they stated that:

From the Weda Bay Industrial Park (IWIP) company, we can improve family fields, economic growth and access to health services for us as Lelilef people.

It can be seen from the interview statements according to respondents that the Weda Bay Industrial Park (IWIP) company has several positive impacts that can have a good influence on the community in Lelilef Village, Weda District. Therefore, from several interview statements, the positive impacts of companies/mines are as follows:

a. Increased Employment Opportunities

Large companies open up many job opportunities, both directly in the company and indirectly, for example SMEs, transportation services, catering, and others.

1. Lelilef Village residents who previously only depended on agriculture and fishing now have the option of working in industry.
2. Job opportunities also open doors for people from outside the village which can have an impact on local economic growth.

b. Local Economic Growth

With the flow of funds from workers' salaries and new economic activities

1. Many stalls, grocery stores and local businesses began to develop in Lelilef Village and this greatly increased the income of the local village, all of this was the impact of the company's presence.
2. Farmers or small business owners can sell their products to many people and will certainly sell much better than before the company existed.

c. Access to Social and Health Services

Companies also participate in funding or building social and health services.

1. Clinic, the company funds a clinic, a health post for the local community and workers in Lelilef Village to help them if they are sick or have health problems. In Lelilef Village because there is a lot of dust, people who live there often get sick and are known for skin diseases, that's why the company helps fund health services so that people don't have to bother going to another city to get treatment at the hospital.
2. Apart from the above, there are also health programs such as vaccination, free medical treatment, and health education to always monitor the health of residents in Lelilef Village.

d. Negative Impact of Companies

The presence of PT Indonesia Weda Bay Industrial Park (IWIP) in Lelilef Village, Central Halmahera has brought various negative impacts to the community and the surrounding environment.

1. Air pollution

Residents in Lelilef Village and its surroundings reported a decline in air quality, marked by thick fog and previously unprecedented dark red skies. This condition raises concerns about health impacts, such as shortness of breath and respiratory diseases.

2. Public Health Impact

Exposure to air and water pollution has increased the risk of disease among residents, including respiratory, heart and skin diseases. Children and the elderly are the most vulnerable groups to these impacts.

3. Ecosystem Damage and Flooding

Land reclamation for industrial facilities has damaged local ecosystems, including forests and coral reefs. In addition, changes in river flows due to development have caused more frequent flooding in nearby villages.

This situation shows the need for a comprehensive evaluation of the impact of the mining industry in the area, more specifically Lelilef Village, as well as the protection of the rights of local communities.

The Weda Bay Industrial Park (IWIP) company, although it has positive impacts, we, the community, also experience negative impacts such as air pollution, health impacts and ecosystem damage. We hope that the company will pay attention to the community in Lelilef Village, especially those around the company.

e. Social Aspects

Industry has a great influence on commodities to cause changes in society. Industrial development not only changes the function of agricultural land use, but also brings changes to the structure of farming society from an undeveloped society to an advanced society in their socio-cultural and political aspects. With the presence of the IWIP company, many people come to work there, and the local community has provided a place to stay such as boarding rooms for newcomers who work at the IWIP company. Not only boarding rooms, in Lelilef

Village there is also a traditional market that sells vegetables, fish, spices and other equipment.

f. Company Activities and CSR (Corporate Social Responsibility) Programs

a. Industrial Area Development

1. Agricultural land purchased by PT IWIP in Central Halmahera, North Maluku, was converted into an integrated nickel processing industrial area. This transformation includes the construction of industrial facilities and other supporting infrastructure.

b. CSR Program for Agriculture

1. As part of its corporate social responsibility, IWIP has launched programs that support the agricultural sector, such as providing agricultural equipment and training to local farmers.
2. Development and improvement of infrastructure such as village roads and health facilities.
3. Support for education through assistance with facilities and infrastructure and scholarship programs.
4. Skills training for local workers to improve their competitiveness

c. Partnership With Local Farmers

1. PT IWIP has established cooperation with the Central Halmahera Agriculture Service to supply monthly crops from local farmers. This initiative aims to provide a stable market for local community agriculture and encourage local economic growth. Through these steps, PT IWIP seeks to integrate its industrial activities with social development and environmental preservation in the Central Halmahera region.

d. Environmental Conservation

As part of its commitment to the environment, PT IWIP does several things to preserve the environment.

1. Planting 1 million mangroves in the coastal area of Central Halmahera to maintain the ecosystem and reduce carbon emissions.
2. Construction of a sanctuary or safe place covering an area of 11.5 hectares as a conservation center for endemic flora and fauna of North Maluku.

Table 10. The relationship between social factors and land area

	T (Score)	R (Score)	Average
T	8	12	20
R	1	9	10
Amount	9	21	30

Source: Primary Data After Processing, 2025

The table above uses the T (High) R (Low) cross tabulation method and gets the highest score of 9 while the lowest score is 21, and the average is 30.

The relationship between social factors and land area is taken from the results of research on the community in Lelilef Village, Weda District, Central Halmahera Regency. Why is it that the highest score is in a number that can be said to be less than the high and low, according to the questions I gave them

about the social aspects in Lelilef Village, Weda Tengah District, Central Halmahera Regency, and most of the people I interviewed had the same opinion about this social aspect.

From the results of the research that I conducted on respondents or heads of families in Lelilef Village, Weda Tengah District, Central Halmahera Regency, it was stated that:

With the existence of this company, the community is indeed more prosperous, but they also have to accept several things, such as damaged roads due to large equipment running on the road with a weight that exceeds the road's capacity, resulting in damaged roads, when it rains the roads are muddy, and when it is hot the ash and pollution harm their health.

However, the company has provided health services for the community to treat people who are sick due to ash and pollution, as well as other illnesses.

g. Economic Aspects

The economic aspect of the company towards the community in Lelilef Village is that with the presence of the IWIP company which has purchased part of the local community's land, the local community develops their economy by opening businesses such as boarding houses for every newcomer, huts, figures, restaurants and others to turn their economy around.

With the businesses they build, people creatively have ideas to benefit their lives and families, and improve their economy.

1. Actions Taken By The Company After Purchasing Land

The actions taken by Companies on land they have purchased from communities can vary depending on the company's objectives.

2. Land Conversion

After being purchased from a company, agricultural land is usually converted into industrial areas, housing, commercial plantations, mining, or other infrastructure as needed.

3. Eviction and Land Clearing

Companies may demolish old crops, buildings, or agricultural infrastructure to make way for new facilities.

4. Facility Development

After cleaning, the company builds facilities such as factories, offices, and housing if the project is property or industrial.

5. Implementation of Security Systems and Access Restrictions

Land that has been purchased is usually guarded, fenced, and access is limited for operational or security purposes.

6. Tenant or Joint Operation

Some companies do not use their land directly, but instead lease it back or work with third parties to manage it.

PT Indonesia Weda Bay Industrial Park (IWIP), Central Halmahera, North Maluku, has carried out various activities that have an impact on the agricultural land of the surrounding community.

Table 11. The Relationship Between Economic Factors and Land Area

	T (Score)	R (Score)	Average
Tall	20	9	29
Low	0	1	1
Amount	20	10	30

Source: Primary Data After Processing, 2025

The table above uses the T (High) R (Low) cross tabulation method and gets the highest score of 20 while the lowest score is 10, and the average is 30.

According to the table above, the relationship between economic factors and land area of economic factors, taken from the results of research and the community in Lelilef Village, Weda Tengah District, Central Halmahera Regency answered according to the questions given. The results of the study turned out to have more high scores because they agreed with what I asked about economic factors.

Generally, respondents answered that the existence of the company caused an increase in the economic aspect. This means that there was an increase in their income with the presence of the company in the village. From the results of interviews with respondents, heads of families whose land is used by their companies stated that:

For example, not only local people, but also people from outside Halmahera, such as from Ambon, Manado, Makassar, Jakarta and others also come to look for work in Lelilef Village, Weda Tengah District, Central Halmahera Regency. This means that with the presence of the company, there will be an increase in economic aspects and employment opportunities.

e. Utilization of Agricultural Land by IWIP Company

After PT Indonesia Weda Bay Industrial Park (IWIP) purchased agricultural land from local farmers in Lelilef Village, the agricultural land generally experienced a conversion from the agricultural sector to the industrial sector.

1. Land Conversion

From plantations to industrial areas, land previously used for spice plants such as nutmeg, cloves, and coconuts has been converted into a nickel mining area, industrial processing and refining facilities (smelters), steam-powered power plants (PLTU), offices and dormitories for employees, and also coal and other material storage buildings.

2. Land Use for Industrial Development

IWIP has developed industrial areas that require large areas of land. Some of the land previously used by the community for agriculture and plantations has been converted for industrial purposes.

3. Public Health Improvement

In the health sector, IWIP has built an Inpatient Health Center in Lelilef Waibulan Village and provided oxygen gas cylinders for the health center. The company also handed over three ambulances to facilitate access to health services in Central Halmahera and East Halmahera.

4. Improving Access to Clean Water

IWIP has built a Water Intake and Water Treatment Plant (WTP) that supplies 15,000 cubic meters of clean water per day for the community around the industrial area. In addition, the company also provides financial assistance and infrastructure buildings to the Central Halmahera Regency government in order to improve clean water services.

f. Land Area Used by the Company

PT Indonesia Weda Bay Industrial Park (IWIP) has used 4,024.67 Ha of land for the construction of industrial facilities in the Lelilef Village area, Weda District, Central Halmahera Regency. This land includes various infrastructure such as a nickel ore processing plant, power plant, port, airport, and other supporting facilities. In addition, there is an additional expansion plan by IWIP with a total land target of 15,517 Ha, which means there will be an addition of around 11,489.33 Ha from the area currently used.

g. Compensation for Crops on Land

If a company buys a land that already has plants, then by law the company is obliged to provide compensation not only for the land, but also for the plants on it. This compensation is usually separate and calculated based on the objective value of the plants. Likewise, the IWIP company located in Lelilef Village, Weda District, Central Halmahera Regency, applies this.

In purchasing, there are several components included in it:

1. Land: based on the land area and price, the Company will pay according to how much is purchased, for example, 1 Ha at a price of Rp. Rp. 100,000,000, then the company must pay the specified price.
2. Plants: based on the type of age, in this case, we can see, if in the land purchased by the company there are already plants, and the plants are of the type coconut then they will calculate per tree. For example, in 1 ha of land there are 100 coconut trees, and each tree is sold at a price of Rp. 10,000 then the company will pay compensation for all coconut trees in the land purchased by the company. Also seen from the age, if it is close to harvest time, it will be more expensive.
3. Buildings, if there are buildings inside then the company must pay the price of the building.

IWIP Company bought land to build their company, in the land they bought from the local community if there are plants or buildings, then the company must pay according to the agreement. Because the community also does not want to harm themselves if there is no compensation if there are plants that they have planted and have taken care of, especially when it is almost nearing harvest time.

h. Mining Activities on Land Purchased by the Company

PT Indonesia Weda Bay Industrial Park (IWIP) is an integrated industrial area that focuses on nickel development and processing activities in Central Halmahera, North Maluku.

a. Open-Pit Mining

IWIP, through its subsidiary PT Weda Bay Nickel (WBN), operates open-pit nickel mines in several locations such as Kao Rahai Sake River, Sake West,

Nuspera, and Uni-Uni. This method involves excavating the topsoil to extract nickel ore and laterite that is rich in nickel content.

1. Total population

Table 12. Distribution and Income of Population of Research Locations in 2018-2022

No.	Village	Amount (Soul)	An area (Km2)	Density (People/Km2)
1.	Lelilef Waibulan	3,639	36.6	20
2	Lelilef Sawai	3.243	108.12	33
	Total	6,882	144.72	48

Source. Weda Tengah District in Figures 2022

Table 13. Population Development of Research Locations in 2018-2022

No	Year	Resident Soul	Development Soul	Growth %
1	2018	2,519	-	-
2	2019	2,537	18	0.17
3	2020	3,577	1,040	29.07
4	2021	4,782	1.205	25.20
5	2022	6,882	2.100	30.51

Source. Central Halmahera Regency in Figures 2022

2. Respondent Characteristics

Table 14. Respondent Age Characteristics

No	Age (Years)	Number of Respondents (People)	Percentage (%)
1	29-64	29	20
2	>64	1	23.3
	Amount	30	100

Source: Primary Data After Processing 2025

Table 14. Respondent Characteristics

No	Last education	Number of Respondents (People)	Percentage %
1	SD	3	10
2	JUNIOR HIGH SCHOOL	7	23.3
3	SENIOR HIGH SCHOOL	20	66.7
	Amount	30	100

Source: Primary Data After Processing, 2025

Table 15. Characteristics of the Number of Family Dependents

No	Family Dependencies	Number of Respondents (People)	Percentage %
1	2-5	22	73.3
2	6-8	8	26.7
	Amount	30	100

Source: Primary Data After Processing, 2025

Table 16. Characteristics of Land Area Owned

Land Area (Ha)	Number of Respondents (People)	Percentage (%)
1-4	10	33.3
5-8	20	66.67
Amount	30	100

Source: Primary Data After Processing, 2025

Table 17. Characteristics of Land Area for Sale

Land Area (Ha)	Number of Respondents (People)	Percentage (%)
1-3	21	70
4-5	9	30
Amount	30	100

Source: Primary Data After Processing, 2025

3. Social Aspects

Company Activities and CSR (Corporate Social Responsibility) Programs

Table 18. The relationship between social factors and land area

	T (Score)	R (Score)	Average
T	8	12	20
R	1	9	10
Amount	9	21	30

Source: Primary Data After Processing, 2025

4. Economic Aspects

Table 19. The relationship between economic factors and land area

	T (Score)	R (Score)	Average
Tall	20	9	29
Low	0	1	1
Amount	20	10	30

Source: Primary Data After Processing, 2025

companies experiencing improvements in economic aspects and employment opportunities

A. Overview of the Lelilef Urban Area Research Location

A brief history of the development of the Iwip Company in Central Halmahera Regency Indonesia Weda Bay Industrial Park (IWIP) is an integrated heavy metal processing company located in the village, Weda District, Central Halmahera Regency, North Maluku Province and was established on August 30, 2018. IWIP is a national priority based on Presidential Regulation No. 18 concerning the National Medium-Term Development Plan for 2020-2024. Has the status of a National Vital Object based on Presidential Decree No. 63 of 2004. One of the National strategic projects of President Joko Widodo through the ratification of Presidential Regulation of the Republic of Indonesia No. 109 of 2020 concerning the Third Amendment to Presidential Regulation Number 3 of 2016 concerning the Acceleration of the Implementation of National Strategic Projects.

Overall, the location of land management for mining industry activities carried out by the Iwip Company is located in Weda Tengah District and Weda Utara Regency with a total land area of 5,000 Ha, while the mining product management factory is located in Weda Tengah District, precisely in the Lelilef urban area.

Weda Bay Industrial Estate has a vision and mission to carry out sustainable industrial activities and reduce greenhouse gas emissions by adhering to the principle of "Green Industry to build The Greener Future". The vision and mission of the Iwip company include:

1. Building a world-class nickel-based industrial area.
2. Building an efficient and profitable business for shareholders and clients.
3. Creating sustainable and responsible businesses in the transformation of the earth's resources.
5. Developing superior human resources (having integrity, capacity, honesty and trustworthiness); and
6. Contribute to world, national and local development.

Visualization of the Location of the Mining Product Management Industry Center by PT IWIP in the Lelilef Urban Area, Weda Tengah District, where several images above show: (A & B) Visualization of the PT IWIP smelter, (C) PT IWIP port area (D) Location of nickel stamp piles.

1. Research Location Limitations

This research was conducted around the mining industrial area of PT. IWIP located in Weda Tengah District, Central Halmahera Regency which is physically focused on two village administrative areas, namely Lelilef Waibulan Village with an area of 167.61 Ha, and Sawai Village with an area of 177.34 Ha where the total area of the research location is 344.95 Ha. The first reason the urban area was used as the research location in this study is because strategically the location of the Lelilef Urban area is very close to the location of the PT IWIP mining industry center compared to other areas in Central Halmahera Regency, and is also the capital of Weda Tengah District with a fairly large population compared to other areas in Weda Tengah District, and is a place of settlement for one of the indigenous people of Halmahera Island known as the Sawai tribe.

2. Total Population

a. Population Distribution and Density

The population at this research location includes two villages, namely Lelilef Sawai Village and Lelilef Waibulan Village. The population of Lelilef Waibulan Village in 2022 is 3,639 Jia with a population density of 20 people/km² and Sawai Village 3,243 people with a population density of 33 people/km². For more details, see table 4.

b. Population Growth

Population growth in the Lelilef urban area has increased quite significantly every year compared to other areas in Central Halmahera Regency outside the Regency Capital, which has the largest growth within the Regency. The largest population growth in the Lelilef urban area occurred in 2021-2022, which was 2,200 people. While the lowest population growth occurred between 2018-2019, which was 18 people. For more details, some are shown in table 5.

3. Educational Aspects

Lelilef Village in Weda Tengah District, Central Halmahera Regency, North Maluku Province, has several educational institutions that play an important role in supporting the development of local community education. Here are brief profiles of several schools in the village:

1. SD GMIH Lelilef is a public elementary school that was established on January 5, 1949 with accreditation B. It uses the Independent Curriculum and has a Principal, Alman Abubakar.
2. SD Inpres Lelilef is a public elementary school established on January 1, 1975 with B accreditation and implementing the Merdeka Curriculum. The current principal is Sahril Rasid.
3. SMKN 2 Central Halmahera is a high school that plays an important role in providing access to quality education for students in Lelilef Village.

In addition to formal educational institutions, PT Indonesia Weda Industrial Park (IWIP) located in Lelilef Village also contributes to the field of education through corporate social responsibility programs. The program includes providing scholarships, eradicating illiteracy, and providing learning facilities for various levels of education in Central Halmahera and East Halmahera. Collaborative efforts between educational institutions and support from the industrial sector in Lelilef Village are expected to continue to improve the quality of education and provide significant benefits to the local community.

4. Health Aspects

Lelilef Village in Weda District, Central Halmahera Regency, North Maluku Province, has various health facilities and programs that support the welfare of the local community. Here are some important aspects related to health services in the village

A. Lelilef Health Center

Lelilef Health Center acts as the main health service center for residents of Lelilef Village and its surroundings. This health center provides two main types of services:

1. In-house services: Includes individual health services provided directly at the Community Health Center.

2. Services outside the building: Implemented through integrated health posts (posyandu) which are routinely held every month in the community. These services include examinations of pregnant women, weighing of babies and toddlers, immunizations, and other health services. For residents who cannot attend the integrated health posts or health centers, health workers make home visits to check their health conditions.

B. Elderly Posyandu Program

Lelilef Health Center also routinely holds elderly health posts in Lelilef Wobulen Village and Lelilef Sawai Village. This activity involves around 30 elderly patients, with an average age of over 60 years. The purpose of this program is to monitor and improve the health of the elderly in the community.

C. Lelilef Health Center Accreditation

In 2023, Lelilef Health Center successfully achieved full accreditation, which is the highest predicate in assessing health facilities. This achievement shows the Health Center's commitment to improving the quality of health services for the community.

D. Support from PT Indonesia Weda Bay Industrial Park (IWIP)

As part of its social responsibility program for change, PT IWIP has provided various supports for the health sector in Lelilef Village, including:

1. Construction of the Lelilef Inpatient Health Center: Implemented in stages to improve health service facilities in the village.
2. Medical Equipment Assistance: Including distribution of 10 gas cylinders for Lelilef Health Center to improve health quality.

E. Referral Health Facilities

For health services that require further treatment, the people of Lelilef Village can be referred to the Weda Regional General Hospital (RSUD). This RSUD provides various medical services and is located on Jalan Raya, Were, Weda District, Central Halmahera Regency.

5. Economic Aspect (Work)

Lelilef Village in Weda District, Central Halmahera Regency, North Maluku Province, has experienced significant changes in its economic structure along with the development of the mining industry in the region. Here are some of the main aspects that affect the economic conditions and employment in Lelilef Village:

A. The presence of PT Indonesia Weda Bay Industrial Park (IWIP)

PT IWIP is an integrated industrial area that focuses on nickel mining and processing, located in Lelilef Village. This company has created new jobs for the local community, both directly through workforce recruitment and indirectly through supporting business opportunities. The contribution of the processing industry sector, including PT IWIP, drove the economic growth of North Maluku by 13.73% in the fourth quarter of 2024, with this sector contributing 24.69% of the Gross Regional Domestic Product (GRDP).

B. Impact on Traditional Livelihoods

Before the presence of the mining industry, most of the residents of Lelilef Village relied on agriculture and fisheries as their main source of livelihood. However, land expansion for mining activities has caused the conversion of

agricultural land and fishing areas, which has an impact on the shortage of agricultural products and fish catches for local communities.

C. Socio-Economic Changes in Society

Research shows that PT IWIP's mining activities have affected the socio-economic dynamics in Lelilef Village. The community faces challenges in adapting to these changes, including adjusting to the loss of traditional livelihoods and the need for new skills that are in line with the needs of the mining industry.

D. Challenges and Opportunities

Although the presence of PT IWIP brings economic opportunities through job creation and increasing regional income, there are also challenges that need to be overcome, such as:

E. Workforce Skills Enhancement

Local communities need to receive appropriate training and education to meet the qualifications required in the mining industry sector.

F. Economic Diversification

Economic diversification efforts are needed to reduce dependence on the mining sector and ensure the long-term sustainability of the village economy.

G. Environmental Impact Management

It is important to ensure that industrial activities do not damage the environment and natural resources that support people's lives.

Overall, Lelilef Village is at a crossroads between maintaining traditional livelihoods and adapting to changes brought by industrialization. Collaboration between government, companies, and communities is essential to ensure that economic development provides equitable and sustainable benefits to all villagers.

6. Transportation Aspects

Lelilef Village in Weda Tengah District, Central Halmahera Regency, North Maluku Province, has various transportation aspects that support population mobility and economic activities. Here are some important points related to transportation in the village.

Accessibility to Lelilef Village:

1. To reach Lelilef Village from Jakarta, there are travel options: Flights to Ternate: The journey from Jakarta to Ternate takes approximately 3 hours and 20 minutes.
2. Sea Transportation to Sofifi: From Ternate, the journey continues by speedboat from Semut Mangga Dua to Sofifi port for 30 minutes.
3. Overland Journey to Lelilef: From Sofifi, the overland journey to Lelilef Village takes about 4 hours.

A. Lelilef Port

Lelilef Port functions as a public port that supports activities in the Indonesia Weda Bay Industrial Park (IWIP). In August 2024, the Ministry of Transportation granted concession rights to PT. Weda Bay Port to manage port services at Lelilef Port for 40 years.

B. Land Transportation and Road Infrastructure

The presence of IWIP has increased land transportation activities in Lelilef Village. Many transportation drivers have experienced increased income due to the increasing demand for transportation.

However, several villages in Weda Tengah District, including Lelilef Village, face challenges related to road infrastructure conditions. Severe road damage, especially during the rainy season, makes it difficult for residents to access transportation. The community hopes that companies operating in the area can contribute to improving road infrastructure.

C. Impact of Disasters on Transportation

In July 2024, floods hit several villages in Central Halmahera, including Lelilef Waibulen Village. The floods disrupted economic activities and cut off transportation access, causing difficulties for residents of the mining area.

Overall, transportation in Lelilef Village includes a combination of land and sea access that is important for population mobility and industrial activities. Despite challenges related to road infrastructure and the impact of natural disasters, collaborative efforts between the government, companies, and communities are expected to improve the quality and accessibility of transportation in this area.

2. Respondent Characteristics

1. Respondent Age Characteristics

Age is the life of the respondents until the time the research was conducted expressed in years. A person's age is usually determined by their ability to carry out activities and maturity in a person's actions or deeds. The characteristics of respondents based on age in Lelilef Village, Weda District, Central Halmahera Regency can be seen in table 6.

Based on table 6, the research results can be presented with the support of tables, graphs or images arranged in the form of phrases (not sentences) concisely. According to the research results of Arvianti (2016), workers in the agricultural sector are on average old (40 years and over), while young workers prefer to work as industrial workers rather than farm workers. The underlying phenomenon is because the workforce (parents) lack or do not have skills.

Respondents aged 29-64 years are included in the productive age. Respondents who are still able to carry out farming efforts, or other efforts such as entrepreneurship well so that there is an increase in production.

In the table that can be seen above, there is one respondent who is 64 years old, that age still wants to work, because respondents with that age already have a lot of experience, and they get income from selling land to build mining including a large nominal so they prefer to be successful farmers who can be categorized as relaxed work. And to work in a company with an age that is categorized as elderly with a high school diploma is too hard to do.

2. Characteristics of Education

According to Asih (2007), a higher level of education significantly affects an entrepreneur's ability to run their business, because it provides them with knowledge and skills that enable a person to be more rational in taking risks that are managed. The characteristics of respondents based on their level of education

in Lelilef Village, Weda District, Central Halmahera Regency can be seen in Table 7.

Based on table 7, most respondents have a high school education due to limited access to higher education or college because they have to go to other places or cities, such as Ternate City, Tobelo City, Ambon City and others to continue their education.

3. Characteristics of the Number of Respondents' Family Dependents

The more family members, the greater the needs that must be met. The number of family members directly affects the amount of basic needs such as food, clothing, and shelter. The characteristics of respondents based on the number of family members can be seen in table 8.

Based on table 8, the most dominant number of family dependents is from 2-5 dependents, automatically the fewer family dependents, the less expenditure incurred by the head of this family. Respondents can utilize family members as labor in the family to help with agricultural activities or other businesses.

4. Land Area Characteristics

Land area refers to the entire area used as a place for farming. This land area data can be used for various analyses, such as calculating agricultural productivity. The characteristics of respondents' land area can be seen in table 9. Based on table 9, from the remaining land, respondents use it to plant agricultural products such as coconut, cocoa, cloves, betel nut, tubers, bananas, toman and many other vegetables that are used by respondents to cultivate the land they have so that they can generate income that can help their families. With this, agricultural products such as vegetables and spices are sold back to the IWIP company for the canteen and food for employees who work at the IWIP Company. Other agricultural products are also sold to certain places such as coconuts that have been processed into copra and sold to figures who buy the goods.

So, everything that the respondents planted by managing their remaining land, all produced sufficient income.

Based on table 10, from the land sold by respondents to companies containing nickel and gold, which has been checked by the company to be ready to carry out company activities on the land that has been sold.

3. Positive Impact of Mining Companies

Lelilef Village located in the Halmahera region, North Maluku is known as an area close to mining activities, especially by companies such as PT Indonesia Weda Bay Industri Park (IWIP) which is a nickel-based industrial area. From the results of interviews with respondents of heads of families whose land was purchased by the company, they stated that:

From the Weda Bay Industrial Park (IWIP) company, we can improve family fields, economic growth and access to health services for us as Lelilef people.

It can be seen from the interview statements according to respondents that the Weda Bay Industrial Park (IWIP) company has several positive impacts that can have a good influence on the community in Lelilef Village, Weda District.

Therefore, from several interview statements, the positive impacts of companies/mines are as follows:

A. Increased Employment Opportunities

Large companies open up many job opportunities, both directly in the company and indirectly, for example SMEs, transportation services, catering, and others.

1. Lelilef Village residents who previously only depended on agriculture and fishing now have the option of working in industry.
2. Job opportunities also open doors for people from outside the village which can have an impact on local economic growth.

B. Local Economic Growth

With the flow of funds from workers' salaries and new economic activities

1. Many stalls, grocery stores and local businesses began to develop in Lelilef Village and this greatly increased the income of the local village, all of this was the impact of the company's presence.
2. Farmers or small business owners can sell their products to many people and will certainly sell much better than before the company existed.

C. Access to Social and Health Services

Companies also participate in funding or building social and health services.

1. Clinic, the company funds a clinic, a health post for the local community and workers in Lelilef Village to help them if they are sick or have health problems. In Lelilef Village because there is a lot of dust, people who live there often get sick and are known for skin diseases, that's why the company helps fund health services so that people don't have to bother going to another city to get treatment at the hospital.
2. Apart from the above, there are also health programs such as vaccination, free medical treatment, and health education to always monitor the health of residents in Lelilef Village.

4. Negative Impact of Companies

The presence of PT Indonesia Weda Bay Industrial Park (IWIP) in Lelilef Village, Central Halmahera has brought various negative impacts to the community and the surrounding environment.

1. Air pollution

Residents in Lelilef Village and its surroundings reported a decline in air quality, marked by thick fog and previously unprecedented dark red skies. This condition raises concerns about health impacts, such as shortness of breath and respiratory diseases.

2. Public Health Impact

Exposure to air and water pollution has increased the risk of disease among residents, including respiratory, heart and skin diseases. Children and the elderly are the most vulnerable groups to these impacts.

3. Ecosystem Damage and Flooding

Land reclamation for industrial facilities has damaged local ecosystems, including forests and coral reefs. In addition, changes in river flows due to development have caused more frequent flooding in nearby villages.

This situation shows the need for a comprehensive evaluation of the impact of the mining industry in the area, more specifically Lelilef Village, as well as the protection of the rights of local communities.

The Weda Bay Industrial Park (IWIP) company, although it has positive impacts, we, the community, also experience negative impacts such as air pollution, health impacts and ecosystem damage. We hope that the company will pay attention to the community in Lelilef Village, especially those around the company.

5. Social Aspects

Industry has a great influence on commodities to cause changes in society. Industrial development not only changes the function of agricultural land use, but also brings changes to the structure of farming society from an undeveloped society to an advanced society in their socio-cultural and political aspects. With the presence of the IWIP company, many people come to work there, and the local community has provided a place to stay such as boarding rooms for newcomers who work at the IWIP company. Not only boarding rooms, in Lelilef Village there is also a traditional market that sells vegetables, fish, spices and other equipment.

1. Company Activities and CSR (Corporate Social Responsibility) Programs

A. Industrial Area Development

1. Agricultural land purchased by PT IWIP in Central Halmahera, North Maluku, was converted into an integrated nickel processing industrial area. This transformation includes the construction of industrial facilities and other supporting infrastructure.

B. CSR Program for Agriculture

1. As part of its corporate social responsibility, IWIP has launched programs that support the agricultural sector, such as providing agricultural equipment and training to local farmers.
2. Development and improvement of infrastructure such as village roads and health facilities.
3. Support for education through assistance with facilities and infrastructure and scholarship programs.
4. Skills training for local workers to improve their competitiveness

C. Partnership With Local Farmers

1. PT IWIP has established cooperation with the Central Halmahera Agriculture Service to supply monthly crops from local farmers. This initiative aims to provide a stable market for local community agriculture and encourage local economic growth. Through these steps, PT IWIP seeks to integrate its industrial activities with social development and environmental preservation in the Central Halmahera region.

D. Environmental Conservation

As part of its commitment to the environment, PT IWIP does several things to preserve the environment.

1. Planting 1 million mangroves in the coastal area of Central Halmahera to maintain the ecosystem and reduce carbon emissions.
2. Construction of a sanctuary or safe place covering an area of 11.5 hectares as a conservation center for endemic flora and fauna of North Maluku.

The table above uses the T (High) R (Low) cross tabulation method and gets the highest score of 9 while the lowest score is 21, and the average is 30.

The relationship between social factors and land area is taken from the results of research on the community in Lelilef Village, Weda District, Central Halmahera Regency. Why is it that the highest score is in a number that can be said to be less than the high and low, according to the questions I gave them about the social aspects in Lelilef Village, Weda Tengah District, Central Halmahera Regency, and most of the people I interviewed had the same opinion about this social aspect.

From the results of the research that I conducted on respondents or heads of families in Lelilef Village, Weda Tengah District, Central Halmahera Regency, it was stated that:

With the existence of this company, the community is indeed more prosperous, but they also have to accept several things, such as damaged roads due to large equipment running on the road with a weight that exceeds the road's capacity, resulting in damaged roads, when it rains the roads are muddy, and when it is hot the ash and pollution harm their health.

However, the company has provided health services for the community to treat people who are sick due to ash and pollution, as well as other illnesses.

6. Economic Aspects

The economic aspect of the company towards the community in Lelilef Village is that with the presence of the IWIP company which has purchased part of the local community's land, the local community develops their economy by opening businesses such as boarding houses for every newcomer, huts, figures, restaurants and others to turn their economy around.

With the businesses they build, people creatively have ideas to benefit their lives and families, and improve their economy.

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The actions taken by Companies on land they have purchased from communities can vary depending on the company's objectives.

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Companies may demolish old crops, buildings, or agricultural infrastructure to make way for new facilities.

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After cleaning, the company builds facilities such as factories, offices, and housing if the project is property or industrial.

e. Implementation of Security Systems and Access Restrictions

Land that has been purchased is usually guarded, fenced, and access is limited for operational or security purposes.

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Some companies do not use their land directly, but instead lease it back or work with third parties to manage it.

PT Indonesia Weda Bay Industrial Park (IWIP), Central Halmahera, North Maluku, has carried out various activities that have an impact on the agricultural land of the surrounding community.

The table above uses the T (High) R (Low) cross tabulation method and gets the highest score of 20 while the lowest score is 10, and the average is 30.

According to the table above, the relationship between economic factors and land area of economic factors, taken from the results of research and the community in Lelilef Village, Weda Tengah District, Central Halmahera Regency answered according to the questions given. The results of the study turned out to have more high scores because they agreed with what I asked about economic factors.

Generally, respondents answered that the existence of the company caused an increase in the economic aspect. This means that there was an increase in their income with the presence of the company in the village. From the results of interviews with respondents, heads of families whose land is used by their companies stated that:

For example, not only local people, but also people from outside Halmahera, such as from Ambon, Manado, Makassar, Jakarta and others also come to look for work in Lelilef Village, Weda Tengah District, Central Halmahera Regency. This means that with the presence of the company, there will be an increase in economic aspects and employment opportunities.

2. Utilization of Agricultural Land by IWIP Company

After PT Indonesia Weda Bay Industrial Park (IWIP) purchased agricultural land from local farmers in Lelilef Village, the agricultural land generally experienced a conversion from the agricultural sector to the industrial sector.

1. Land Conversion

From plantations to industrial areas, land previously used for spice plants such as nutmeg, cloves, and coconuts has been converted into a nickel mining area, industrial processing and refining facilities (smelters), steam-powered power plants (PLTU), offices and dormitories for employees, and also coal and other material storage buildings.

2. Land Use for Industrial Development

IWIP has developed industrial areas that require large areas of land. Some of the land previously used by the community for agriculture and plantations has been converted for industrial purposes.

3. Public Health Improvement

In the health sector, IWIP has built an Inpatient Health Center in Lelilef Waibulan Village and provided oxygen gas cylinders for the health center. The company also handed over three ambulances to facilitate access to health services in Central Halmahera and East Halmahera.

4. Improving Access to Clean Water

IWIP has built a Water Intake and Water Treatment Plant (WTP) that supplies 15,000 cubic meters of clean water per day for the community around the industrial area. In addition, the company also provides financial assistance and infrastructure buildings to the Central Halmahera Regency government in order to improve clean water services.

3. Land Area Used by the Company

PT Indonesia Weda Bay Industrial Park (IWIP) has used 4,024.67 Ha of land for the construction of industrial facilities in the Lelilef Village area, Weda District, Central Halmahera Regency. This land includes various infrastructure such as a nickel ore processing plant, power plant, port, airport, and other supporting facilities. In addition, there is an additional expansion plan by IWIP with a total land target of 15,517 Ha, which means there will be an addition of around 11,489.33 Ha from the area currently used.

4. Compensation for Crops on Land

If a company buys a land that already has plants, then by law the company is obliged to provide compensation not only for the land, but also for the plants on it. This compensation is usually separate and calculated based on the objective value of the plants. Likewise, the IWIP company located in Lelilef Village, Weda District, Central Halmahera Regency, applies this.

In purchasing, there are several components included in it:

1. Land: based on the land area and price, the Company will pay according to how much is purchased, for example, 1 Ha at a price of Rp. Rp. 100,000,000, then the company must pay the specified price.
2. Plants: based on the type of age, in this case, we can see, if in the land purchased by the company there are already plants, and the plants are of the type coconut then they will calculate per tree. For example, in 1 ha of land there are 100 coconut trees, and each tree is sold at a price of Rp. 10,000 then the company will pay compensation for all coconut trees in the land purchased by the company. Also seen from the age, if it is close to harvest time, it will be more expensive.
3. Buildings, if there are buildings inside then the company must pay the price of the building.

IWIP Company bought land to build their company, in the land they bought from the local community if there are plants or buildings, then the company must pay according to the agreement. Because the community also does not want to harm themselves if there is no compensation if there are plants that they have planted and have taken care of, especially when it is almost nearing harvest time.

5. Mining Activities on Land Purchased by the Company

PT Indonesia Weda Bay Industrial Park (IWIP) is an integrated industrial area that focuses on nickel development and processing activities in Central Halmahera, North Maluku.

A. Open-Pit Mining

IWIP, through its subsidiary PT Weda Bay Nickel (WBN), operates open-pit nickel mines in several locations such as Kao Rahai Sake River, Sake West, Nuspera, and Uni-Uni. This method involves excavating the topsoil to extract nickel ore and laterite that is rich in nickel content.

CONCLUSION AND RECOMMENDATION

1. Social Impact and Economic Impact on the Community: The presence of PT Indonesia Weda Bay Industri Park (IWIP) in Lelilef Village, Weda Tengah District, Central Halmahera Regency, has brought complex social impacts to the community.

Social Impact. Increased Employment and Income: IWIP has opened up employment opportunities for local communities and also outsiders, many of whom previously relied on the agriculture and fisheries sectors. From 2018 to 2024, the company has employed more than 82,000 workers, with 80% coming from the surrounding industrial areas and North Maluku.

Economic Impact. Growth of Micro and Small Businesses. The presence of IWIP encourages small businesses such as food stalls, kiosks, laundries, and boarding houses. For example, a resident of Lelilef Waibulan Village reported an increase in income from IDR 3,000,000 to IDR 7,000,000-10,000,000 per month after opening a boarding house and grocery store.

The impact of the IWIP Company in Lelilef Village, Weda District, Central Halmahera Regency to the community is the guarantee of their economy, which used to only work as ordinary farmers, until now they can farm and open their businesses. So, not a few of them have enough businesses to continue their lives and improve the economy of the community in Lelilef Village, Weda District, Central Halmahera Regency.

2. Land use in Lelilef Village, Weda District, Central Halmahera Regency, is used for the Weda Bay Industrial Area (IWIP) which is an integrated industrial area for heavy metal processing. In the period 2008 to 2023, around 2916 hectares were cleared only for nickel, in Lelilef Village, Weda District, Central Halmahera Regency, there is a company, namely PT IWIP and holds the status of a national strategic project. In addition to Nickel, the IWIP Company also utilizes the Company's land by planting trees (Greening) because there is also PT IWIP which manages wood (Wood Company).

Suggestions

1. Things that need to be considered in the environment are pollution (dust) due to damaged roads that cause public health to decline. The author's suggestion to the company is to seriously repair damaged roads, because according to the author, the roads in Lelilef Village are quite thin with large vehicles so that they are unable to withstand heavy loads.

2. In 2024, a natural disaster (flood and landslide) hit the residents of Lelilef Village because many forests had been cut down for the Company's development, making the residents of Lelilef Village very difficult due to the natural disaster. The author's suggestion to the Company is to reforest the forests that have been cut down so that floods and landslides do not occur again.
3. In Lelilef Village there are elementary schools, SPM, and high schools, but there is no college, so the native people of Lelilef Village have to leave their village to study in another city. The author's suggestion to the company is to cooperate with the government to open a college in Lelilef Village to make it easier for the native people of Lelilef Village.

FUTHER STUDY

This research still has delays, so further studies need to be conducted regarding the topic *The Impact of IWIP Company on the Socio-Economic Community in Lelilef Village, Weda Tengah District, Central Halmahera Regency, North Maluku Province* to enhance this research and broaden the knowledge for the readers.

REFERENCES

- Abd. Rahman Rahim dan Enny Radjab. 2017. *Manajemen Stratei*. Makassar: Lembaga Perpustakaan dan Penerbitan Universitas Muhammadiyah Makassar.
- Ahmadi. (2022). *Arsitektur Rumah Tradisional H. Husein Di Desa Muara Madras*. Jambi: Universitas Jambi
- Asis, P. H., Lampasa, Y., & Ahmad, R. G. (2024). DAMPAK KEBIJAKAN PERTAMBANGAN TERHADAP KETAHANAN MASYARAKAT DESA (Studi Kasus Desa Sanggula Kecamatan Moramo Utara Kabupaten Konawe Selatan). *Journal Publicuho*, 7(3), 1711-1725.
- Asnawati, A., Suhar, S., & Hamzah, M. (2024). Analisis Dampak Sistem Sosial Ekonomi pada Masyarakat Sekitar Perusahaan Tambang Batubara: Studi Kasus PT XYZ Desa Taman Dewa Kecamatan Mandiangin Kabupaten Sarolangun. *JURNAL RISET MANAJEMEN DAN EKONOMI (JRIME)*, 2(3), 312-323.
- Bräuer, Gerd (ed.) (2002): *Body and Language: Intercultural Learning Through Drama Advances in Foreign and Second Language Pedagogy (Volume 3)*. Westport, CT: Ablex Publishing
- Lutzker, Peter (2007): *The Art of Foreign*

Language Teaching: Improvisation and Drama in Teacher Development and Language Learning. Tübingen: Francke

- Darwin, Muhammad et al. (2021). Metode Penelitian Pendekatan Kuantitatif. Bandung: CV Media Sains Indonesia.
- Dewi, 2017. Pengaruh bauran Pemasaran Terhadap Kepuasan Pelanggan Pada UD. Kharisma Jember. Fakultas ekonomi Prodi manajemen Universitas Muhammadiyah Jember.
- Haris, Hardiansyah.2013.Wawancara, Observasi, dan Fokus Groups Sebagai Instrumen Penggali Data Kualitatif.Jakarta: PT Raja Grafindo Persada
- Marsaoly, R. M., Samiun, M. Z. M., Muhammad, N. I., & Kalengkongan, Y. S. (2024). DAMPAK ALIH FUNGSI LAHAN PERTANIAN KE PERTAMBANGAN TERHADAP KEHIDUPAN SOSIAL EKONOMI MASYARAKAT DI DESA LELILEF WAIBULEN KABUPATEN.
- Sefiana, ria rizkia, Ma'shum, M., Padusung, P., & Tejowulan, R. S. . (2022). Tingkat Nilai Konsistensi Tanah pada Berbagai Macam Lahan Terdegradasi di Daerah Kayangan Kabupaten Lombok Utara.
- Sapan, Y. D. A. (2025). DAMPAK PERTUMBUHAN SEKTOR PERTAMBANGAN TERHADAP LINGKUNGAN DAN FAKTOR SOSIAL EKONOMI MASYARAKAT KABUPATEN KOLAKA SULAWESI TENGGARA (Doctoral dissertation, ATMAJAYA YOGYAKARTA).
- Muhid, M. (2022). STUDI IMPLIKASI EKSPLOITASI SUMBER DAYA ALAM PERTAMBANGAN TERHADAP KONDISI SOSIAL EKONOMI MASYARAKAT SEKITAR PT. IWIP KECAMATAN WEDA TENGAH KABUPATEN HALMAHERA TENGAH. In Braz Dent J. (Vol. 33, Issue 1).
- Pambudi, P. A., Utomo, S. W., Soelano, S. W., & Takarina, N. D. (2023). Implikasi Tambang Batubara Pada Kehidupan Masyarakat Lokal. HUMANIS: Jurnal ilmu-Imu Sosial Dan Humaniora, 15(2), 48-58.
<https://doi.org/10.52166/humanis.v1.512.3899>
- Setiawan, T., Absah, Y., & Silalahi, A. S. (2020). International Journal of Multicultural and Multireligious Understanding The Influences of

- Organizational Culture , Job Satisfaction and Motivation on Employee Performances at PT Sumatra Sistem Integrasi Medan. 25–36.
- Sugiyono. (2017). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung : Alfabeta, CV.
- Suritno, F., Purwanto, A., & Waani, F. J. (2022). Dampak Pertambangan Nikel Terhadap Pola Hidup Petani Kelapa Di Desa Waleh Kecamatan Weda Utara Kabupaten Halmahera Tengah. *Jurnal Ilmiah Society*, 2(1).
- Suryani, N., Armansyah, A., & Yetti, H. (2024). Dampak pertambangan batu bara Dampak Pertambangan Batu Bara Terhadap Kondisi Sosial Ekonomi Masyarakat Lokal di Kota Jambi. *UNES Law Review*, 7(1), 345-353.
- Ulfa, S., & Wardhana, A. (2024). Dampak Penambangan Batubara Terhadap Lingkungan dan Ekonomi Masyarakat Batu Kajang Kecamatan Batu Sopang Kabupaten Paser Kalimantan Timur. *JIEP: Jurnal Ilmu Ekonomi dan Pembangunan*, 7(1), 116-123.
- Qomari, R. (2008). Pengembangan instrumen evaluasi domain afektif. *INSANIA: Jurnal Pemikiran Alternatif Kependidikan*, 13(1), 87-109.
- Wahyudin, U. (2020). Analisis Dampak Keberadaan Perusahaan Tambang Batu Bara terhadap Kondisi Sosial Ekonomi Masyarakat. *Jurnal Atsar*, 1(1), 35-45.
- Wiradinata, M. A., Ghifari, A. F., Kamil, E. F., Muzakky, F. N., & Pramasha, R. R. (2025). PENGARUH PERTAMBANGAN BATU BARA TERHADAP DAMPAK SOSIAL EKONOMI DAN LINGKUNGAN DI KABUPATEN TANJUNG ENIM, SUMATERA SELATAN. *Indonesian Journal of Economy and Education Economy*, 3(1), 6-13.