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Community Empowerment Sustainability Strategy in the Gold Mining Area of PT. Indomuro Kencana (PT. IMK) in Murung Raya District, Central Kalimantan Province

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ABSTRACT

The research embarks on a comprehensive analysis to forge innovative strategies for sustainable community empowerment at PT. IMK. Its objective is to define clear strategic priorities and effective implementation models that can drive meaningful change. Utilizing the robust SWOT and MICMAC analysis methods, this study uncovers vital insights. The findings reveal an impressive array of 20 alternative strategies for empowering communities sustainably at PT. IMK, categorized as follows: (1) Strength-Opportunities (S-O) Strategies: elevating local employment opportunities, accelerating infrastructure development, advancing proactive market development and embracing bottom-up management planning to ensure community involvement; (2) Weakness-Opportunities (W-O) Strategies: ensuring access to clean water for all community members, tackling waste management challenges head-on, establishing financial institutions tailored for farmer groups (KT) and community groups (KM), stimulating local economic growth and product innovation and pioneering energy efficiency (EE), green economy (GE), and green industry (GI) initiatives; (3) Strength-Threats (S-T) Strategies: strengthening oversight and control over forest and land clearing practices, establishing fair and agreed-upon profit compensation rates, enhancing the role of PAM Swakarsa to reinforce community governance, elevating human resources through targeted training and educational programs, fostering comprehensive support in education, health, and religious services and maximizing the impact of Corporate Social Responsibility (CSR) programs; (4) Weakness-Threats (W-T) Strategies: undertaking mine reclamation to restore natural landscapes, implementing robust forest and land rehabilitation (RHL) initiatives, empowering traditional institutions to play a crucial role in community decisions, engaging community leaders (TOGA, TOMAS, and TODA) in the decision-making process and preserving invaluable local wisdom, historical sites, and cultural heritage for future generations. The prioritized strategies and implementation models for sustainable community empowerment at PT. IMK are bold and actionable: (1) implementing a transformative bottom-up planning (BUP) management approach; (2) executing comprehensive mine reclamation (REK) efforts; (3) strategically managing mining waste (LIM) to mitigate environmental impact; and (4) advancing infrastructure development (INF) to support community growth

INTRODUCTION

The principle of sustainability, encapsulated in the concept of sustainable development, led to the establishment of the Sustainable Development Goals (SDGs) to guide all nations until 2030. As a result, sustainable development goals have become a central issue at international, national, and sectoral levels, as well as within development programs. The primary concern is finding a balance between nature conservation and human needs. Neglecting either aspect can lead to significant costs and adversely affect human welfare on a broader scale (Fauzi, 2019).

According to Elkington (2020), if a company wants to be sustainable (remain viable and continue), it must pay attention to the 3P principle, namely not only pursuing profit but also making a positive contribution to society (people) and actively participating in preserving the environment (planet). This concept is known as the circle of sustainability.

Several indicators of sustainability, from a social aspect, include: quality of life, education, health, community development, equal and fair employment opportunities, as well as law and ethics. From an economic aspect, including: business ethics, trade, employment rights, government spending, income, growth, long-term planning, cost savings, optimal profits, research and development spending, cost of living, energy efficiency, subsidies/tax cuts, credit carbon. From the environmental aspect, these include: natural resource management, environmental protection, habitat restoration and preservation, environmental law, and public involvement.

Sustainable development goals in the SDGs include 17 main goals. Goal number 1 (one) is to eradicate all forms of poverty (to poverty). The World Bank has determined that community empowerment is one of the strategies for alleviating poverty, because community empowerment is a bottom-up planning approach, where in practice the community is the main object that must have self-sufficiency and independence. This community empowerment strategy needs to continue to be promoted so that local communities can enjoy the results of economic growth and enjoy the fruits of their own earth's wealth. Don't just be a spectator. Not only "tempun pentak manana sare" (meaning having land or land, but farming or doing business on the outskirts). No "tempun kajang, bisa puat"

(meaning you have an awning to cover the goods, but the goods are wet). Not "tikus mati, di lumbung padi" (dead rat, in the rice barn). The meaning of these three proverbs is that local people who live on earth with abundant natural resources and the environment are not becoming more prosperous, but are actually getting poorer.

Law Number 3 of 2020 concerning Mineral and Coal Mining emphasizes that minerals and coal are invaluable non-renewable natural resources and national assets, essential for the welfare of the people, and are under the control of the state.

In Central Kalimantan, PT. Indomuro Kencana (PT. IMK) stands out as a premier gold mining operation, rapidly advancing in its development. Located in the Murung Raya Regency, this company embarked on its construction phase in mid-1993 and achieved initial production in November 1994, remarkable milestones that resulted in an impressive output of 137,986 ounces of gold and 3,429,000 ounces of silver by the end of 1995. PT. IMK was awarded a Work Contract (KK) numbered B-07/Pres/1/1985, dated February 27, 1985, encompassing an extensive area of 47,940 hectares. This contract grants PT. IMK the authority to mine gold in the strategically significant districts of Permata Intan, Murung, and Tanah Siang in North Barito Regency. Initially valid from February 1985 until 2014, this important agreement has been extended up to 2025, underscoring the company's critical role in driving economic growth and delivering prosperity to the region.

During its establishment and operation, PT. IMK has proactively engaged in community empowerment by launching a dedicated task force known as the Community Development (Comdev) team. This team plays a crucial role in fostering sustainable community growth, grounded in the principles of social justice, active participation, and equitable cooperation.

Comdev undertakes a variety of impactful initiatives aimed at uplifting local village communities. These initiatives include programs in vegetable farming, fish farming development, sewing training, computer education, and heavy equipment operation courses. Through these efforts, PT. IMK exemplifies its commitment to Corporate Social Responsibility (CSR), reinforcing the company's obligation to enhance societal welfare and protect the environment.

However, it is essential to address the ongoing tensions between PT. IMK and the local communities situated in the mining area. Historically, these communities have engaged in traditional gold mining long before PT. IMK arrived, and as the company expanded, many residents faced eviction from their ancestral lands. This process has led to instances of violence and persistent protests from the local population. Despite these adversities, some community members remain determined to stay on their traditional mining grounds.

The persistent conflicts between PT. IMK and local communities underscore critical issues that demand rigorous investigation and meaningful solutions. It is imperative to prioritize the sustainability of community empowerment initiatives in the mining area, ensuring that local voices are heard and respected in the decision-making processes that affect their lives and livelihoods.

The evolution of the development paradigm marks a significant transition from a narrow focus on economic growth to a comprehensive emphasis on community empowerment. This shift arises from pressing concerns about poverty and environmental degradation, recognizing that sustainable progress must involve local communities as active participants in reaping the benefits of economic growth, particularly through their agricultural outputs. By prioritizing environmental sustainability, this new paradigm aligns seamlessly with the objectives of the Sustainable Development Goals (SDGs), which advocate for a holistic approach to development.

However, within the gold mining operations of PT. IMK, persistent conflicts highlight the challenges surrounding environmental, social, and economic issues fundamental elements of genuine community empowerment. In light of these pressing challenges, this research is dedicated to:

1. Analyzing and articulating innovative strategies for sustainable community empowerment at PT. IMK.
2. Formulating strategic priorities and practical implementation models for a robust sustainable community empowerment strategy at PT. IMK.

By undertaking this critical analysis, we pave the way for meaningful change that not only uplifts

local communities but also fosters a sustainable future for all.

METHODS

Place and Time of Research

The research was conducted at the renowned gold mine of PT. IMK, located in the Murung Raya Regency of Central Kalimantan Province. Spanning a comprehensive 10-month period from March to December 2023, this study aimed to uncover critical insights into the impact of mining activities. We selected ten affected villages, designated as Ring-1, as our primary sample locations. In each village, we carefully identified 3 to 5 respondents through targeted purposive and snowball sampling methods to ensure diverse and relevant perspectives. Furthermore, to enrich our findings, we engaged 7 respondents from PT. IMK, whose expertise provided invaluable context to our research.

Research Design

1. Alternative Formulation of Community Empowerment Sustainability Strategy PT. IMK; A SWOT analysis was carried out on strategic issue variables, internal and external factors (IFAS and EFAS) to obtain the S-O strategy, S-T strategy, W-O strategy and W-T strategy (Wijayati, (2019), as alternative sustainable strategies for community empowerment PT. IMK.
2. Priority Strategy and Implementation Model for Sustainable Community Empowerment PT. IMK; A sustainability analysis was carried out using the MICMAC method (Khaba, et al., 2018; Leitmann, et al., 2009). The results of this MICMAC analysis will be interpreted as a formulation of strategic priorities and a model for implementing sustainable community empowerment strategy PT. IMK.

RESULTS

Community Empowerment Programs PT. IMK

Community empowerment activities (Table 1) carried out by the most PT. IMK is in the infrastructure program, namely 56 activities. Then followed by an agribusiness program with 45 activities, as well as an education and training program with 25 activities. If these activities are grouped into social, economic and environmental aspects, then in the social aspect there are 7

programs, namely social and cultural programs, education and training, health, Covid-19 assistance, infrastructure, and SDG'S Villages; in the economic aspect of 2 programs, namely the economic independence and agribusiness program; as well as

environmental aspects, there are 3 programs, namely waste management, biogas and reclamation programs.

Table 1. Recapitulation Programs and of Community Empowerment Activities PT. IMK

No.	Programs	Number of Activities	Details in Attachment	Including Aspects
1	Economic Independence	24	5	Economy
2	Agribusiness	45	6	Ekonomy
3	Social and Cultural	8	7	Social
4	Education and Training	25	8	Social
5	Health	11	9	Social
6	Covid-19 Assistance	67 Types of goods	10	Social
7	Infrastructure	56	11	Social
8	SDG'S Village	12	12	Social
9	Waste Management	10	13	Environment
10	Biogas	24	14	Environment
11	Institutional	15	15	Social
12	Reclamation	14	16	Environment

Source: Processed Primary Data (2023)

Overall, the community empowerment programs implemented by PT. IMK is very good. However, because the empowerment programs and activities are mostly carried out by PT. IMK, so this is not yet effective because the community is only an object, not a subject as desired in the community empowerment strategy. Thus, the implementation of the community empowerment strategy by PT. IMK is a Top-Down Planning management approach, not a Bottom-up Planning management approach.

Internal and External Factors PT. IMK

The results of identifying strategic issues (Table 2) contain 20 internal factors, which include 10 strength factors and 10 weakness factors of PT. IMK in implementing community empowerment. Table 3 shows that from the results of the identification of strategic issues there are 20 external factors which include 8 opportunity factors and 12 challenge factors for PT. IMK in implementing community empowerment.

Table 2. Internal Factors of PT. IMK

<u>Strengths (S)</u>	<u>Weaknesses (W)</u>
1. Mineral and Coal Law no. 3/2020	1. Water pollution due to waste
2. Contribution to regional income	2. The mine is open
3. Gold is an export commodity	3. Irreversible (cannot be renewed)
4. Modern processing technology	4. Ecosystem damage increases
5. Big investment	5. Air pollution increases
6. The community has experience mining gold traditionally	6. Soil and land pollution
7. Authority regarding mining is in the hands of the Central Government	7. Regional authority is limited/reduced
8. Gold is a source of foreign exchange	8. Forest clearing occurs
9. Community Empowerment Program (PPM)- Corporate Social Responsibility (CSR) Regulations	9. Increased carbon emissions/Greenhouse Gas Emissions
10. Business is long term	10. Change of mutual cooperation behavior to transactional behavior

Source: Processed Primary Data (2023)

Table 3. External Factors of PT. IMK

<u>Opportunities (O)</u>	<u>Threats (T)</u>
1. Gold prices tend to rise	1. Land conflicts/disputes increase
2. Gold production tends to increase	2. Carrying out Reclamation
3. Public consumption increases	3. Comply with the Environmental Law/Environmental Regulations
4. Opening of isolation	4. Obey customs/culture
5. Open employment and business opportunities	5. Maintain/preserve cultural sites/heritage
6. Poverty is reduced	6. Preserving Local Environmental Wisdom
7. Unemployment decreases	7. Low community skills
	8. Low technological mastery
	9. Low public education

8. People's income increases	10.The quality of public health is low 11.Security and order 12.Comply with Community Empowerment Program (PMM)- Cooperative Social Responsibility (CSR) regulations
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Source: Processed Primary Data (2023)

DISCUSSION

Alternative Sustainability Strategy PT. IMK

With SWOT analysis, 20 alternative strategies for sustainable community empowerment for were obtained PT. IMK, each of which consists of 4

alternative S-O strategies; 5 alternative W-O strategies; 6 alternative S-T strategies; and 5 alternative W-T strategies, as can be seen in Table-4.

Table 4. Alternative Community Empowerment Sustainability Strategy PT. IMK

<p><u>S-O Strategies</u></p> <ol style="list-style-type: none"> Increase local employment Increase infrastructure development Develop a proactive market Implement bottom-up management planning 	<p><u>W-O Strategies</u></p> <ol style="list-style-type: none"> Providing sustainable clean water Safe & useful waste handling Developing financial institutions for Farmer Groups (KT)/KM Community Groups) Develop local economy/products Implementing energy efficiency (EE), Green Economy (GE), and Green Industry (GI)
<p><u>S-T Strategies</u></p> <ol style="list-style-type: none"> Increase supervision/control in forest and land clearing Agree on the profit compensation value Increasing the role of PAM Swakarsa Improving the quality of human resources through training and courses Increase educational, health and religious assistance Optimizing the implementation of PPM-CSR 	<p><u>W-T Strategies</u></p> <ol style="list-style-type: none"> Mine reclamation in accordance with applicable regulations Forest and land rehabilitation (RHL) Increasing the role of traditional institutions Involve TOGA, TOMAS, and TODA in decision making Maintain/preserve local wisdom, sites and cultural heritage

Source: Processed Primary Data (2023)

Priority Strategy and Implementation Model of Sustainability Strategy PT. IMK

Based on the results using the MICMAC method based on the Matrix of Direct Influences (MDI) and Matrix of Indirect Influences (MII), a map of the distribution of sustainability variables for community empowerment at was obtained at PT.

IMK, as can be seen in Figure 1.

Figure 1 shows that the distribution of variables in Square I or key variables (key drivers) that have a big influence (influence) or variables that greatly influence other variables are 4 variables.

Thus, the priority strategy for sustainable community empowerment in the gold mining area of

PT. IMK is paying attention to:

- 1) Bottom-up planning (BUP) variable.
- 2) Mine reclamation variable (REK)

3) Variable waste handling (LIM)

4) Infrastructure development variable (INF).

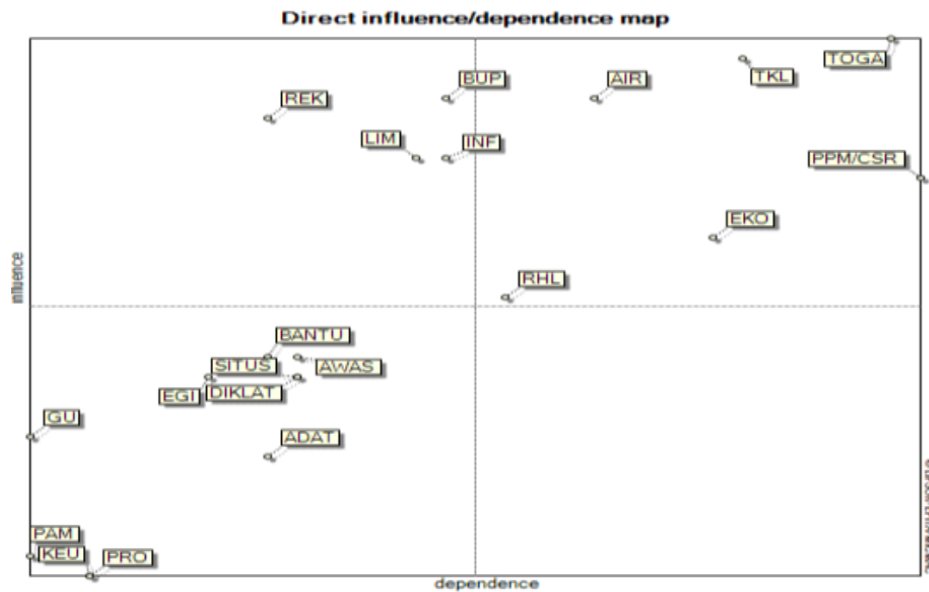


Figure 1. Distribution Map of Community Empowerment Sustainability Variables PT. IMK

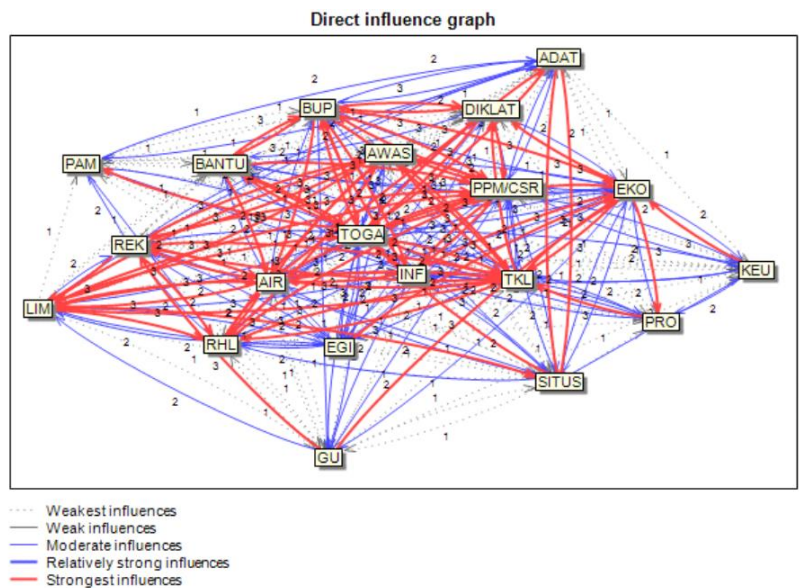


Figure 2. Direct Influence Relationship Between Sustainability Variables PT. IMK

Variables in Quadrants II, III, and IV are not strategic priorities. Based on Figure 1 and Figure 2, the implementation model for community empowerment strategies in the gold mining area of PT. IMK, should:

- 1) Implement a Bottom-up planning (BUP) management approach; Community empowerment is one of the strategies for alleviating poverty, where the bottom up planning management approach is the main focus being practiced. This strategy needs to continue to be promoted so that local communities can enjoy the results of economic growth and enjoy

the fruits of their own earth's wealth. Don't just be a spectator. Not only "tempun pentak manana sare" (meaning having land or land, but farming or doing business on the outskirts). No "tempun kajang, bisa puat" (meaning you have an awning to cover the goods, but the goods are wet). Not "tikus mati, di lumbung padi" (dead rat, in the rice barn). This means that local communities who live on earth with abundant natural and environmental resources are not becoming more prosperous, but are actually getting poorer. So by implementing this BUP management approach, the sustainability of community empowerment in

- the gold mining area of PT. IMK can run well so that the community can enjoy the results.
- 2) Carry out mine reclamation (REK); Reclamation is an activity that aims to improve or organize the use and function of land that is disturbed as a result of mining business activities, so that it can function and be efficient according to its intended purpose. Sustainable environmentally friendly development is an important need for every region and country that wants to preserve natural resources. Therefore, natural resources need to be protected and maintained for the sustainability of human life now, as well as for future generations. In this case, for the sustainability of community empowerment in the gold mining area of PT. IMK, then mine reclamation must be carried out (REK).
 - 3) Carrying out mining waste handling (LIM); Gold mining waste is residual material resulting from the gold mining process, such as: (1) tailings, namely the solid material remaining after gold and silver minerals are separated from the ore. Tailings contain water used in the recovery process and hazardous materials such as arsenic, cadmium, lead, mercury, and cyanide; (2) overburden, namely material removed to gain access to mineral resources; and (3) waste rock, namely leftover material resulting from the mining process. Gold mining waste has a negative impact on the environment, such as polluting drinking water, damaging the environment and endangering human health. Mining waste can be in the form of liquid, solid and gas. To reduce these negative impacts, gold mining waste needs to be managed properly so that it can be used safely. Management of gold mining waste can be done by turning it into building materials or in other ways to reduce

- dangerous substances. Therefore, for the sustainability of community empowerment in the gold mining area of PT. IMK, then one of the important variables to implement is carrying out mining waste handling (LIM).
- 4) Carry out infrastructure development (INF); Infrastructure is the basic facilities and systems that serve the needs of society, both socially and economically. Infrastructure includes a variety of things, such as roads, bridges, and dams; water and sewer systems; airports and ports; power grid; telecommunications network. Infrastructure can be divided into "hard" and "soft" infrastructure. "Hard" infrastructure is a large physical network, while "soft" infrastructure is institutions or institutions that carry out economic, health, educational, social and cultural functions. Infrastructure is important for the economy and people's quality of life. In this regard, for the sustainability of community empowerment in the gold mining area of PT. IMK is required to carry out infrastructure development (INF).

Based on the description that has been put forward, a model/concept for implementing sustainable community empowerment can be created as in Figure 3 as follows:

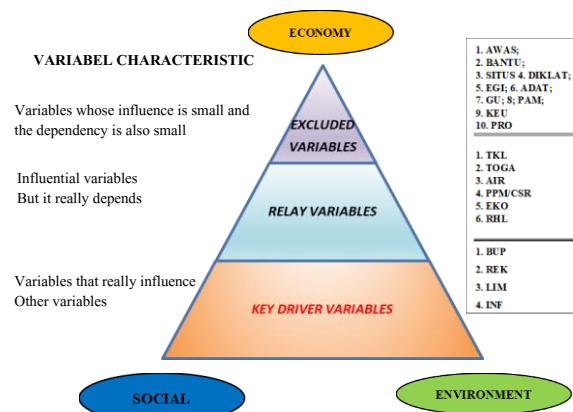


Figure 3. Implementation Model for Community Empowerment Sustainability Strategy (Ganefo, 2024)

CONCLUSION

Obtained 20 alternative strategies for sustainable community empowerment at PT. IMK, each of which consists of: (a) S-O Strategy, includes: Increasing local workforce absorption, Increasing infrastructure development, Developing proactive markets, Implementing bottom-up management planning; (b) W-O strategy, including: Providing sustainable clean water, handling safe and useful waste, developing financial institutions for farmer groups (KT)/community groups (KM), developing local economy/products, implementing energy efficiency (EE), green economy (GE), and green industry (GI); (c) S-T strategy, including: Increasing supervision/control in forest and land clearing, Agreeing on profit compensation rates, Increasing the role of PAM Swakarsa, Improving the quality of human resources through training and courses, Increasing educational, health and religious assistance, Optimizing the implementation of PPM-CSR; (d) W-T strategy, including: Mine reclamation according to applicable regulations, Forest and land rehabilitation (RHL), Increasing the role of traditional institutions, Involving TOGA, TOMAS and TODA in decision making, Maintaining/preserving local wisdom, sites and cultural heritage.

Priority strategies and implementation models for sustainable community empowerment strategies at PT. IMK, are: (a) implementing development planning using a Bottom-up planning (BUP) management approach; (b) carry out mine reclamation (REK); (c) carrying out mining waste handling (LIM); and (d) carrying out infrastructure development (INF).

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