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Article

Policy strategy: Nickel mining contribution to rural development equity and social violence minimization in Kolaka Regency

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Abstract: The lack of attention from mining companies to the majority of areas still affected by mining activities can result in regional economic disparities and high levels of social violence. It is crucial to have policy strategies for mining contributions to rural development equity and social violence reduction through CSR assistance and other aid funds. This research employs the Multi-Criteria Decision Analysis method using the MULTIPOL analysis tool. Recommended action programs include the construction of schools, provision of scholarships, job openings, business capital, and infrastructure development, supported by strong regulations and law enforcement. Cracking down on illegal mining permits is essential to reduce environmental damage. Holistic and sustainable integration policies, alongside effective law enforcement, are necessary to achieve the goals of equitable development and social violence reduction. These steps should be reinforced with incentives for traditional/community leaders and increased police/military presence in villages within the next 2 years, particularly in zones 2 and 3 of the mining areas. Failure to implement these measures could escalate social violence, jeopardize security, and impede the operations of mining companies in Kolaka. The findings of this research support the priority of security and orderliness in development and underscore the importance of diverse research methods for mining area development policies.

Keywords: mining contribution; policy scenarios; rural development; social violence; MULTIPOL

1. Introduction

According to the Republic of Indonesia Law Number 3 of 2020 Article 39 letter m regarding Mineral and Coal Mining, every mining company has an obligation to implement corporate social responsibility or known as corporate social responsibility (CSR). The main objective is to achieve sustainable social and economic development by improving the quality of life, environment, and providing benefits to communities or affected societies (Fordham et al., 2017). Sustainable development needs to be supported by social, economic, and environmental stability (Kaftan et al., 2023; Narula et al., 2017). Regional development equality can reduce economic disparities, improve quality of life, and create a more balanced social environment (Labonne, 1999). Hindered formation and economic growth in a region can impose heavy financial burdens on both public and private sectors, harming the welfare of individuals and society in general (Murshed and Tadjoeddin, 2009).

Low levels of education, low economic status, cultural disintegration, social disparities, and racial issues are triggering factors of social violence (Tadjoeddin, 2002). Social violence can hinder investment, disrupt social order, and harm community welfare (Jones and Rodgers, 2011). Reducing social violence in a region can create conditions conducive to sustainable and stable development, often influenced by differences in economic and educational levels (De Jesus and Hernandes, 2019; Murshed and Tadjoeddin, 2009; Oishi et al., 2022). Equalizing development and minimizing social violence are crucial to achieving social justice, community stability, and sustainable development in rural areas of mining regions in Kolaka district, Southeast Sulawesi province, Republic of Indonesia.

Currently, mining companies in Kolaka district, in carrying out CSR and providing other assistance, only focus on certain rural areas nearby without considering areas still largely affected by mining. This can lead to further economic and social development disparities in rural mining areas, increasing social violence in zones 2 and 3 which do not receive labor absorption and economic social assistance from mining companies (Al Rawashdeh et al., 2016; Wen et al., 2022). Policy strategies to enhance mining contributions are greatly needed for regional equalization in mining areas (Janikowska and Kulczycka, 2021). Prioritization scale and policy actions to reduce social violence and equalize development can contribute to the creation of a fair, peaceful, and sustainable society (Karidio and Talbot, 2020).

Currently, there is no policy in Kolaka district regarding increasing mining contributions for equal development and reducing social violence in rural areas within mining regions. Mining contributions in the form of social assistance have not been distributed evenly, effectively, and efficiently. In-depth research on criteria and steps to maximize the role of mining companies in achieving development equalization and reducing social violence in rural areas is also lacking. Similarly, there is no research on strategies related to policies and priority scale scenarios in the short, medium, and long term to achieve development equalization and reduce social violence in mining areas. This research is crucial and can fill the gap through findings of policy strategy formulations designed to assist nickel mining companies and local governments in achieving development equalization and reducing social violence in all villages within mining areas. Therefore, the main objective of this research is to formulate policy strategies to enhance the contribution of nickel mining companies in achieving rural development equalization and reducing social violence in the nickel mining area of Kolaka district, Southeast Sulawesi province, Republic of Indonesia.

2. Literature review

2.1. Development policy strategy

Development policy strategy serves as a blueprint or guideline crafted by the government or organizations to actualize development aspirations in a country or region (Young and Quinn, 2002). These aspirations encompass equitable development, economic progress, social welfare, political stability, and various other facets (Corlet Walker et al., 2021). The objectives and benefits of the strategy lie in materializing the vision and mission by translating long-term development goals and fundamental principles into practical steps that can be executed (da Silva Neiva et al.,

2021). Moreover, strategies provide clear guidance for all stakeholders involved in the development process (Fuertes et al., 2020). With a strategy in place, resource utilization can be optimized, leading to maximal outcomes. Additionally, strategies enable adaptation to changes and temporal developments (Cattani et al., 2017).

To design a strategy, three key elements must be considered. Firstly, a Situational Analysis must be conducted to comprehend the current conditions, including strengths, weaknesses, opportunities, and challenges. Secondly, goal setting must be undertaken by establishing clear, measurable, and achievable development objectives. Finally, strategy selection must entail choosing the appropriate strategy that aligns with the existing conditions (Carter, 2013; Mintzberg, 1994).

An effective strategy should be detailed, comprehensible by all involved parties, measurable with clear indicators to assess its success (Grant, 2016), realistic in its ability to be implemented with available resources, and flexible to adapt to changing situations (Iazzolino and Laise, 2016). With a well-crafted strategy, the development process can operate more efficiently and effectively, yielding significant benefits for all stakeholders involved (Brundin et al., 2022).

2.2. Mining multiplier effects

Mining is considered to have both positive and negative impacts on development, the economy, environment, and surrounding communities (ElAlfy et al., 2020). Ideally, the mining sector could significantly contribute positively to the economic, social, and environmental sectors, supporting sustainable regional economic development. The mining industry continues to directly and indirectly influence other sectors such as worker incomes, increased production, value addition, employment opportunities, and business profits (Lee, 2008). The implementation of nickel export restrictions aims to fulfill domestic needs, but this also affects the increased multiplier effects of the mining sector. Nonetheless, the nickel sector as a raw material for domestic industries also needs to be increased in quantity to ensure the overall economic development of Indonesia and specifically Kolaka Regency, Southeast Sulawesi Province, can be sustainable.

On a global scale, with the increasing demand for nickel as a raw material and facing sustainability challenges, it is expected that the demand for nickel will continue to grow. Nickel is expected to play a crucial role in more sustainable natural resource management. Such growth could lead to increased economic activity and different demographic and environmental effects over time and space (Batley and Kookana, 2012). Stakeholders' hopes to achieve a neutral balance between positive and negative impacts can pose social and regulatory challenges (da Silva Neiva et al., 2021) or even halt the management of nickel mining resources on a regional and local scale (Lacey and Lamont, 2014). Social licensing challenges tend to be more relevant in the early stages of nickel mining resource exploitation when the welfare impacts on local communities are still uncertain. As the industry enters the operational stage, comparisons between reality and expected changes in community welfare can be evaluated, and social license conditions can be renewed (Moffat and Zhang, 2014). Strong scientific analysis of the exchanges and benefits of mining activities during the early stages of the industry, related to the lack of information or transparency

triggering debates about mining licenses, helps to balance potentially conflicting policy regulations (such as security, economic growth, environmental health, and cultural heritage preservation) (Browne et al., 2011).

Data from various countries show quite significant variations in the perceived costs and benefits of natural resource extraction activities in different regions (Brasier et al., 2011). To measure the economic impact of natural resource processing activities, considerations of several environmental and socio-economic factors influencing regional economic patterns are required. For example, variations in soil characteristics, topography, and climatic conditions can lead to spatial differences in crop and livestock productivity, which in turn affect income from the agricultural sector, employment, and poverty rates (Rupasingha et al., 2002). Factors such as access to private and public services (such as financial services), education levels, and workforce age composition can also affect human labor productivity. Variables affecting the profitability of mining activities, such as interest rates and mineral prices, can also lead to variations in economic activity levels. Although most information about these variables is publicly available, not all relevant explanatory factors can be modeled well. This indicates that unobserved variations at the regional level, such as the results of research and development processes affecting resource productivity, may also encompass important factors affecting economic patterns. Additionally, the economic growth of a region tends to be spatially influenced by positive or negative externalities crossing regional boundaries (for example, labor demand from industrial clusters in neighboring regions) (Sarkar, 2013).

2.3. Rural development in mining areas

Development, fundamentally, is a transformative process aimed at specific goals with planned strategies, and one of the real challenges in development is the regional disparity (Rustiadi, 2001). With mining locations providing corporate social responsibility (CSR) funds and other financial assistance evenly to all directly impacted villages, it is hoped that this can help in efforts to reduce economic disparities between regions. Currently, successful development in rural areas faces more complex challenges than in the past (Agarwal et al., 2009; Pennington et al., 2006). These challenges include external influences such as international issues related to liberalization and global trade, as well as internal issues related to changes in macro and micro conditions domestically. Internal challenges encompass various aspects such as economic restructuring, food security, sectoral and spatial migration, agricultural land issues, capital, human resources, science and technology, environmental issues, and many more (Kuntoro, 2006). Viewing villages as centers of economic activities, we need to change the paradigm about regions by considering villages as the basis for economic activity potential through holistic infrastructure development supporting communities (Ngo and Anh, 2021).

A paradigm shift is needed to help improve Indonesia's economic development in rural areas, which are potential areas for mining activities as an economic base. Internal and external changes demand appropriate policies for villages to develop optimally. Planning and development in rural areas must be tailored to human resources and the availability of natural resources and technology to achieve maximum

results and have a positive impact on community welfare (Khan et al., 2020). The importance of sustainability and resource preservation is emphasized through increasing knowledge or education levels to maintain rural assets in the context of environmentally friendly economic development (Sun et al., 2020). The gap between rural and urban areas occurs due to biases or distortions in development that more promote economic growth in urban areas, thus creating lagging and backward areas (Lagakos, 2020). In order to support economic and social development in lagging regions, rural development programs prioritizing three main aspects are needed, namely improving community economic, enhancing human resource quality, and infrastructure development (Syahza and Suarman, 2013).

In efforts to analyze and plan regional development and growth, regional planners face challenges related to inequality issues, which are the main concerns. Regional disparities can be divided into two types, namely disparities between regions and disparities within a region. These disparities can be explained as inequalities in development between backward, developing, and overly advanced regions. In the context of regional production, these disparities can manifest in the form of income inequality, availability of basic service facilities, job opportunities, as well as dissatisfaction among ethnic/minority groups, and so forth (Acheampong et al., 2021).

In research conducted by Zabsonré et al. (2018), Loayza and Rigolini (2016) exploring various mining activities, it is noted that these activities have positive impacts on socio-economic outcomes and investigations. One of the main impacts is creating employment opportunities where the presence of mining can increase household incomes (Benshaul-Tolonen et al., 2019; Kotsadam and Tolonen, 2016). Direct social investments by companies in production areas can also help improve access to various infrastructure and social and basic services, especially in mining areas. This may include establishing schools, health centers, providing water, roads, and electricity. Overall, the analysis of these research findings finds some generally small positive impacts, highlighting the difference between the expected positive outcomes of mining extraction activities and the realities on the ground (Zabsonré et al., 2018).

2.4. Social violence in mining areas

Efforts for development equalization and poverty reduction have positive effects on social harmony. According to research conducted by Tadjoeddin and Murshed (2007), there is a non-linear relationship that depicts an inverted U-shaped curve between the level of violence and the stage of development in terms of income and education. Initially, the level of violence increases with the rise in income or education, but then decreases with the further increase in income or education (Tadjoeddin and Murshed, 2007).

Conflicts and social violence often arise as a result of competition in the distribution of benefits from mining activities (Arellano-Yanguas, 2012; Orihuela, 2012). Interestingly, most evidence from case studies tends to overlook concerns regarding distribution by suggesting that social violence is more likely to occur among wealthier, highly educated, and urban populations rather than in poor rural communities. In some cases, educational attainment, relative wealth, proximity to

urban areas, and social capital are identified as key factors in local development (Walter and Martinez-Alier, 2010). Communities with higher levels of education and urbanization may be more inclined to interpret conflict in the context of environmental and social justice, allowing the issue to transcend local, national, and international boundaries, thus increasing the chances of success (Urkidi and Walter, 2011). However, statistical analysis tends to show that poverty (and therefore distribution issues) is closely related to social conflict (Ponce and McClintock, 2014).

Regions experiencing mining activities have overall higher standards of living compared to non-mining areas, in terms of employee numbers, poverty gap levels, and household expenditures. However, the presence of mines can also exacerbate local economic inequality in mining-affected areas. These findings underscore the need for proactive policy adoption by governments to reduce negative impacts on welfare across regions affected by mining activities (Zabsonré et al., 2018).

Social violence can be seen as a barrier in the development process because one key aspect of sustainable development is the creation of security and order aligned with the socio-economic conditions of the community itself. The rapid advancement of development and increasing human needs are the main triggers for various social issues, such as conflicts and violence, caused by competition and conflicting interests, as well as the practice of thuggery, often using tribal and religious symbols. Inequality in socio-economic access, rising unemployment, poverty, inequality, lack of protection for the rights of local communities, shifts in values, increasing numbers of vulnerable groups, population growth, weakening social control, health issues, and environmental degradation also play a role in creating conflict and violence (Purba, 2002). According to Fisher et al. (2001), conflict refers to interactions between two or more parties (both individuals and groups) who believe they have conflicting goals. Conflict is considered an inevitable part of life, and sometimes can provide creative impetus. Conflict arises when there are differences in goals among individuals or groups. Imbalances in social relationships, such as unequal social status, economic disparities, and unequal access, can create conflict and increase the risk of discrimination and social violence. The combination of economic recession, low incomes, and poor quality of human resources can create vulnerability and tension in society that can easily escalate into violent conflict (Tadjoeddin and Murshed, 2007).

Violence can occur due to various influencing factors, including individual and group factors (Tadjoeddin, 2002). Coser, as mentioned in research by A Kinseng (2021) explains that individual violent behavior is actions carried out by individuals triggered by social pressure, environmental, economic, or internal pressures such as mental disorders, such as psychopathy, stress, depression, and drug influences. On the other hand, social factors at play include conflicts within households, cultural aspects, and the influence of mass media.

Social violence refers to concrete forms of actions carried out by individuals or groups at a specific time and place, which include destruction, murder, looting, assault, arson, brawls, hostage-taking, and other forms of violence (Tadjoeddin, 2002). Social violence is defined as actions, speech, attitudes, or systemic structures that cause physical, mental, social, or environmental damage, or hinder someone from reaching their full potential (Fisher et al., 2001).

3. Methodology

3.1. Overview of research location

This research was conducted in the mining area of Kolaka Regency, Southeast Sulawesi Province, Republic of Indonesia, which is divided into zones 1, zone 2, and zone 3. Based on data from the Central Statistics Agency and the Police of Kolaka Regency, Southeast Sulawesi Province, so far, rural areas in the mining area of zone 1 are the closest to the mines and routinely receive CSR funds and other assistance, thus having better levels of development, economy, and social conditions. Zone 2 consists of rural areas that do not receive CSR funds but still receive other assistance from mining companies. Meanwhile, rural areas in zone 3 do not receive any assistance from mining companies. The level of rural development in zone 1 is better and has relatively low cases of social violence. Conversely, rural areas in zone 2 and zone 3 mining areas have low levels of development and high cases of social violence. The map of rural areas in the mining area of Kolaka Regency based on the social violence index from the data of the Indonesian National Police from 2014 to 2023 can be seen in **Figure 1**.

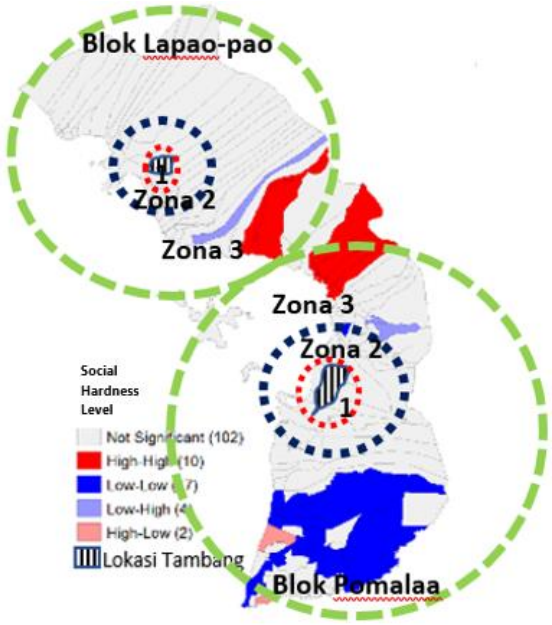

Figure 1. Map of Mining zone areas in Kolaka Regency.

3.2. Method of analysis

With the uneven development across the mining zones and the high level of conflict in zones 2 and 3 of the mines, a policy strategy is needed. In this study, the formulation of the strategy is conducted using the MULTIPOL analysis tool (Godet, 2001; Strategi, 2013). MULTIPOL is a decision-making analysis tool based on the principles of Multi-Criteria Decision Analysis (Fauzi, 2019), developed by Godet (2001). One of the main differences between MULTIPOL and other multi-criteria analysis tools is that MULTIPOL integrates a stakeholder participatory approach in the criteria assessment process and evaluates the interaction of three components in multi-criteria (action, policy, and scenario) (Fauzi, 2019). MULTIPOL generates two

types of evaluations (Stratigea, 2013): 1) Action-based policy evaluation; and 2) policy-based scenario evaluation. The interaction of the three components in the MULTIPOL analysis stage is depicted in **Figure 2**.

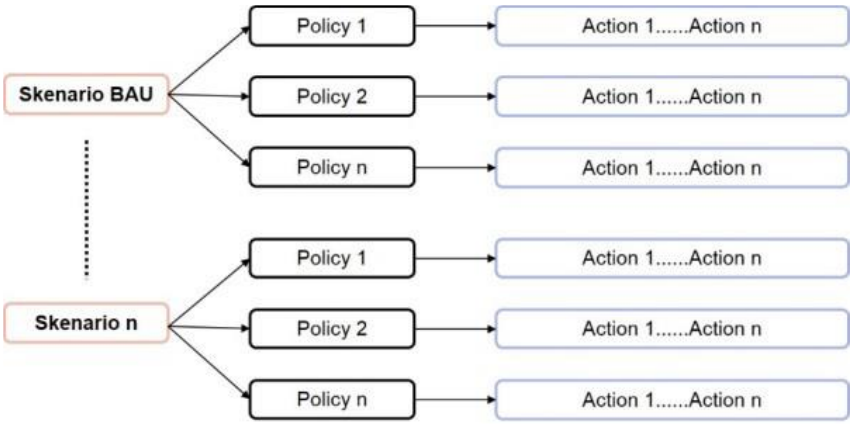

Figure 2. MULTIPOL analysis stage.

The strategic planning to maximize the mining sector's contribution to reducing social violence and promoting rural development in mining areas involves various stakeholders through Focus Group Discussions (FGD) to establish evaluation and assessment criteria. Some stakeholders involved in the FGD process include: 1) The Kolaka District Government, represented by the Department of Education. 2) Academics, including experts in economics, development, social and political sciences, and culture. 3) Non-governmental organizations and print media journalists. 4) Village heads. All the mentioned entities will participate in the FGD to make decisions regarding evaluation and assessment criteria in framing the strategy. According to some literature on FGD (Purwanto, 2008), the ideal number is 7–11 individuals. The approach in selecting FGD participants uses the expert use method, involving and soliciting their views based on their experience in the research topic to recommend suitable participants for FGD participation. The participants in the FGD consist of 11 individuals: 1) Head of the Education Department, 2) Geography Lecturer from USN Kolaka, 3) Law Lecturer from USN Kolaka, 4) Member of Meambo NGO, 5) Kolaka POS Journalist, 6) Head of Towua Village, 7) Head of Huko-huko Village, 8) Head of Pomalaa Village, 9) Head of Sani-sani Village, 10) Traditional Figure from Wundulako Village, and 11) Religious Figure from Baula Village.

In the initial step (step 1), the process begins by conducting a Focus Group Discussion (FGD). Key questions in the FGD are used to generate evaluations, weights, and scores needed to establish criteria, action policies, and scenarios. All input components are entered into the MULTIPOL software as shown in **Figure 3**. The next step (step 2) involves confirmation with stakeholders consisting of the Sub-district Head of Pomalaa, the Head of the Mining Department of Kolaka district, and the Head of the Social Affairs Department of Kolaka district. This confirmation process is crucial to ensure that score changes align with the desired objectives, such as policy hierarchy, actions, and policy frameworks.

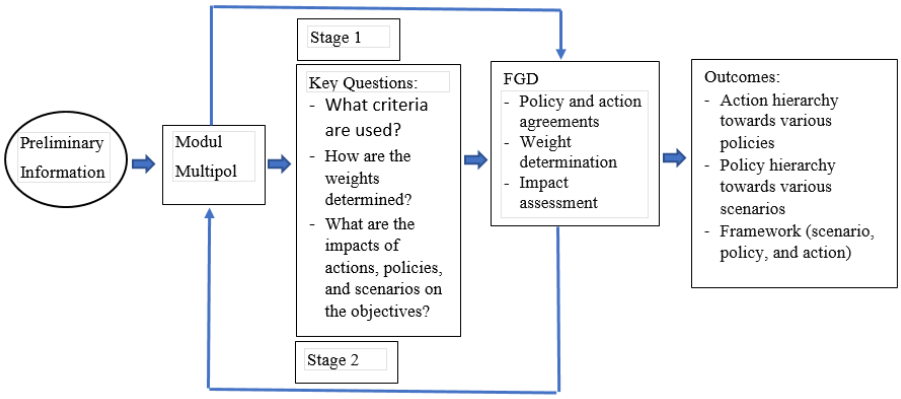

Figure 3. MULTIPOL framework (Fauzi, 2019).

In this study, four fundamental inputs associated with the objectives of formulating rural development equalization policies and programs are established, namely: 1) Evaluation criteria, which are measurable aspects based on assessments from stakeholders. 2) Scenarios, which are structured future developments where objectives can be achieved. 3) Policies, which are strategies related to social, economic, institutional aspects, and others to achieve these objectives. 4) Actions, which encompass potential interventions to implement policies. For the criteria, the analysis results are based on: 1) Policy and action assessment values, where higher values indicate better quality. 2) The best combination outcomes between policies and actions, characterized by high values and low standard deviations. 3) The proximity map between policies and actions, as well as between scenarios and policies.

4. Result

4.1. Action evaluation in relation to policy

The results of the Focus Group Discussions (FGD) and confirmation from stakeholders revealed several expected criteria, including a decrease in social violence in villages, an increase in the role of religious, traditional, and educational figures in villages, even development across villages, improved accessibility to education and health services in villages, and a reduction in environmental damage/pollution. During the FGD, policies and action values were formulated and presented in **Table 1**.

The ranking results of action values in relation to policy, as shown in **Table 1**, column number, indicate that the highest score was obtained by establishing new schools, with a score of 9, including elementary, middle, and high schools in zone 3 of the mining area, which is still underdeveloped. This was followed by providing scholarships for university students, with a score of 8, in zones 2 and 3 of the mining area, which are still underdeveloped. The next highest order is providing capital (with a score of 7) for farmers and fishermen directly affected in all villages in the mining area evenly. Opening up job opportunities (scoring 6) for residents in zones 2 and 3 who have not had access to employment in mining companies so far. Infrastructure development actions (scoring 5) such as opening up road access in several isolated villages in zone 3 of the mining area in Kolaka Regency. Adding personnel (police/military) (scoring 4) in each village to guide and legally process any social

actions by the community that violate the law. Providing incentives (scoring 3) for traditional and religious leaders to assist village heads and security forces in resolving conflicts and social violence at the village level. Reafforestation actions (scoring 2) to replant in all areas that have been deforested for land exploitation purposes in zone 1 of the mining area. Lastly, providing assistance and mentoring for village-owned enterprises (BUMDES) (scoring 1) so that village-owned companies can grow and sustainably operate as platforms for making villages more self-sufficient.

Table 1. Evaluation of actions related to policies.

	Varian CSR	**MiningPerm**	**localReg**	**LegalAffai**	**VillageReg**	**MinisteReg**	**Moy.**	**Ec. Ty**	**Number**
military/p	10.4	7.6	10	13.6	10.8	9.6	10.7	1.6	4
Incentives	10.4	7.2	8.8	15.2	9.6	8	10.1	2.6	3
BUMDES	6.6	6.1	6.7	7.7	4.9	6	6.3	0.9	1
Loker	12	8.4	13	13.6	16.2	13.8	13.5	2	6
School	15.2	11.2	17.2	16	18	18	16.6	1.8	9
Scholarshi	13.6	12.4	13.8	14.4	16.6	14.2	14.5	1.3	8
Infrastruc	11.2	9.2	14.2	8.8	14.4	15.6	12.7	2.6	5
Reforestat	8	12.4	6.8	6	6.8	6.4	7.2	1.6	2
Funding	12.8	8.8	13.6	14.8	16.8	14.4	14.2	2	7

In **Table 1** above, the value of the action of establishing new schools needs to be supported by a policy in the form of ministerial regulations (MinisteReg) with a score of 18. For the action of providing scholarships, it needs to be supported by village regulations (VillageReg) with a score of 16.6, where this policy is needed to determine the criteria required for residents in villages to qualify for assistance. The action of providing funding for farmers and fishermen directly affected by mining activities needs to be supported by village regulations (VillageReg) with a score of 16.8, where there is a need for regulations to determine who is most eligible to receive funding assistance. The action of opening up job vacancies needs to be supported by village regulations (VillageReg) with a score of 16.2, which relates to the type of workforce recommended to be opened by mining companies in accordance with the local community's conditions. Infrastructure development actions need to be supported by ministerial regulation policies (MinisteReg) with a score of 15.6, where this policy is needed to expand the reach of CSR funds and other infrastructure assistance to zones 2 and 3 of the mining area, especially in disadvantaged villages. Police/military actions need to be supported by law enforcement policies (LegalAffai) with a score of 13.6, where this policy is related to providing socialization and investigation related to the enforcement of positive law in Indonesia, especially regarding violence and other social violations. Providing incentives needs to be supported by legal affairs policies (LegalAffair) with a score of 15.2, where these incentives are given to traditional and religious leaders to assist the village head in enforcing customary and religious law that violates social norms in the village before proceeding to the realm of positive law/state law. Reforestation actions need to be supported by mining permits with a score of 12.4, where this policy is intended to minimize forest damage, thus stricter

nickel mining permits are needed and a reassessment of all nickel permits for mining companies, as well as legal action against illegal mining companies engaged in exploitation. Village-owned enterprise (BUMDES) actions need to be supported by law enforcement (LegalAffai) with a score of 7.7, where this is needed to avoid and provide punishment for fund managers, thereby minimizing corruption in BUMDES fund assistance distributed through village governments so that the goal of village self-sufficiency through village-owned enterprises can be achieved. The data input into MULTIPOL then found the closeness of actions and policies presented in the Closeness map in **Figure 4** below:

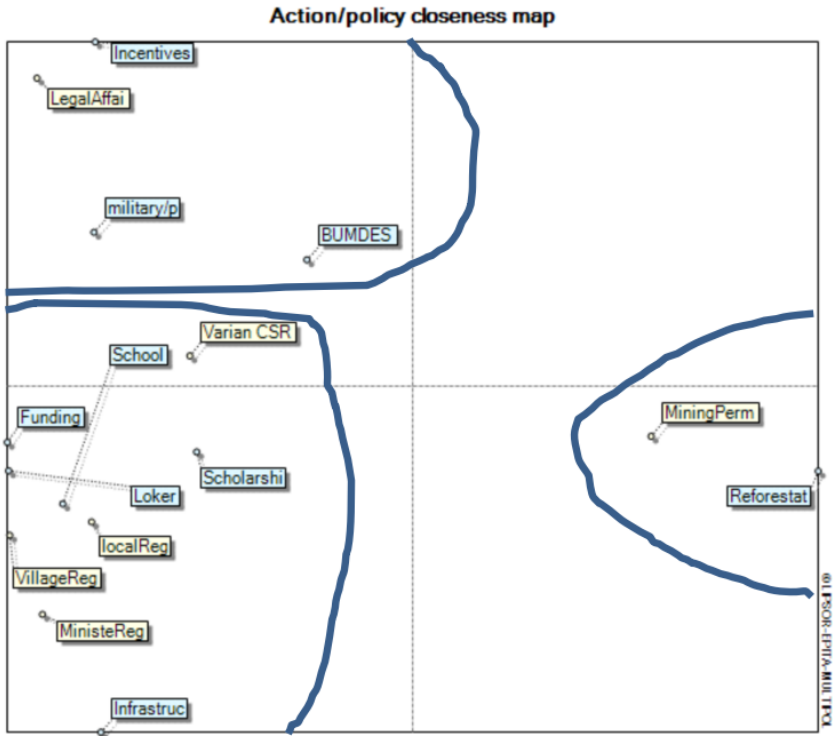

Figure 4. Map of proximity of actions/policies.

The closeness of actions and policies is grouped into 3 categories, consisting of groups that encompass the actions of school, funding, scholarship, job vacancies (loker), and infrastructure, which have closeness or support from policies such as village regulations, regional regulations, ministerial regulations, and CSR variants. The group of actions involving incentives, military/police, and Village-Owned Enterprises (BUMDES) has strong closeness or support from law enforcement policies. The reforestation action group has closeness or support from policies related to mining permit regulation.

4.2. Policy evaluation in relation to scenarios

Based on the assessment results by the FGD participants, which were confirmed through stakeholders, a matrix containing policy scores related to scenarios was found. This matrix aims to obtain the priority scale of policies and scenarios. The calculation utilizes the set of weights from the policy evaluation matrix related to criteria to the scenario matrix. Additional information such as averages, standard deviations, and policy rankings based on scenarios can also be found in **Table 2** below.

Table 2. Policy evaluation related to scenarios.

	2 years	5 years	10 years	Moy.	Ec. Ty	Number
Varian CSR	20	20	20	20	20	20
MiningPerm	16	16.5	19	16.7	1.1	1
LocalReg	21.2	22.8	24	22.2	1	4
LegalAffai	21.5	19	15	19.6	2.3	2
VillageReg	23	24.2	24.8	23.7	0.7	6
MinisteReg	22	24.2	26.2	23.5	1.6	5

In **Table 2** above, it can be seen in the "number" column that the policies with high scores, or those that should be prioritized, are village regulations with a score of 6, followed by policies related to ministerial regulations with a score of 5, regional regulations with a score of 4, CSR variant policies with a score of 3, law enforcement policies with a score of 2, and finally, mining permit policies with a score of 1. **Table 2** also shows the relationship between policies and scenarios, consisting of policies related to regulations tending to be included in the 10-year program scenario with the highest score of 24.8. Policies related to ministerial regulations need to be included in the 10-year scenario with a score of 26.2. Policies related to regional regulations are included in the 5-year scenario with a score of 22.8. CSR variant policies are included in the 10-year score because all scenarios show no urgency for this scenario part. Law enforcement policies are included in the 2-year scenario with a score of 21.5. Mining permit arrangement policies are included in the last 10-year scenario. In **Table 2**, the relationship between policies and scenarios above can demonstrate inter-variable connections, thus requiring further grouping of variables as presented in **Figure 5** below.

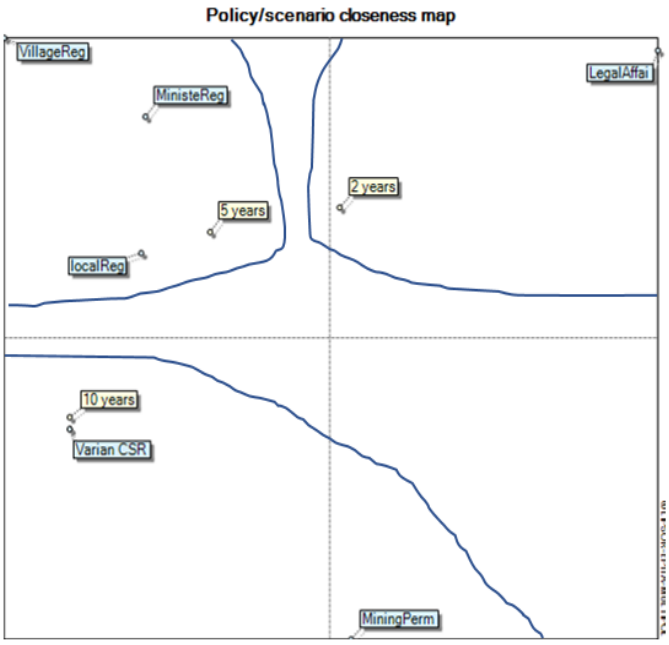

Figure 5. Policy/scenario proximity map.

Grouping based on the proximity between policy data and scenarios reveals three parts. The first part consists of scenarios that should be implemented within the next 2 years, focusing on law enforcement. The second group encompasses scenarios to be executed within the next 5 years, including village regulations, regional regulations, and ministerial regulations. The third group involves scenarios for the next 10 years, covering policies related to the addition of CSR variants and mining permit arrangements.

5. Discussion

5.1. Analysis of actions and policy strategies in enhancing the role of nickel mining companies in Kolaka Regency

This study provides answers to actions and policies based on a priority scale that must be undertaken by mining companies and local governments for rural development equalization and the reduction of social violence in rural areas within mining regions. The mining contribution can be made through evenly distributed, effective, and efficient social assistance to all villages in mining areas. The research identifies policy strategies to enhance the role of mining, consisting of 5 expected criteria: 1) Reduction of social violence rates in villages. 2) Increased roles of religious and traditional leaders in villages. 3) Evenly distributed village development. 4) Increased accessibility in villages to education and health. 5) Reduction in environmental damage/pollution.

The data processing results in **Table 1** show that out of several existing action programs, 3 programs with the highest scores are: 1) Establishing new schools in zone 3. 2) Providing scholarships for villagers in zones 2 and 3. 3) Providing capital to farmers/fishermen affected by mining areas. This is highly relevant to previous research findings regarding triggers of social violence by Tadjoeddin (2002), stating that factors such as low education levels, low economic levels, cultural disintegration, and social disparities trigger social violence. Additionally, it aligns with the opinion of Rustiadi (2001) that one of the real challenges in development is the gap between regions. The economic and social development reality in villages in zone 3 of Kolaka mining area, based on police and BPS data from 2014–2023, indicates high cases of social violence and low economic and development levels in zone 3.

Several action programs, such as establishing new schools, providing scholarships, opening job vacancies, providing business capital, and infrastructure development, need to be supported by policies such as village regulations, regional regulations, ministerial regulations, and the addition of CSR variants. Implementation of policies at the grassroots level requires support in the form of village regulations, with the aim of minimizing misuse of village government authority and avoiding corruption, collusion, and nepotism in the implementation of action programs so that targeted programs can be realized. Additionally, higher-level policies are needed, such as ministerial regulations to detail the expansion of zone 1 areas to reach wider rural areas impacted, ensuring that CSR distribution does not only reach a few affected villages.

Action programs providing incentives for traditional/religious leaders, providing

assistance for Village-Owned Enterprises, and adding police and military personnel throughout mining areas are crucially important and related to law enforcement policies to realize a safe and prosperous community. Providing incentives for traditional/religious leaders aims to assist village heads in implementing and enforcing customary law as local wisdom applicable in their areas, thus maintaining the sustainability of existing social/cultural sanctions. The numerous cases of aid provided to Village-Owned Enterprises being misappropriated by government officials require law enforcement to have a deterrent effect on village development crimes, enabling self-reliant villages to be well-established. The provision of police/military personnel in each village aims to provide assistance and law enforcement for state law that cannot be regulated through customary law to minimize crime or social violence.

Reforestation programs require policies such as mining permit regulations. Many cases in the field involve numerous illegal nickel mining companies that can certainly harm the country and often conduct illegal mining without regard to environmental damage and irresponsibly reforesting damaged land in the exploitation process. Serious crackdowns on illegal mining are essential because illegal nickel mining companies are not responsible for environmental damage and do not contribute to CSR implementation for the surrounding community.

5.2. Policy scenario analysis in the mining area of Kolaka district

Through the Focus Group Discussion (FGD), six policies were agreed upon, including the procurement of CSR variants, mining permit arrangements, village regulations, regional regulations, ministerial regulations, and law enforcement. Additionally, three scenarios were identified: a 2-year scenario, a 5-year scenario, and a 10-year scenario. The data processing results from the FGD using multi-criteria (MULTIPOL) revealed that the highest priority policy was village regulations, as indicated by its highest score. Village regulations are fundamental as the technical implementation of all action programs hinges on the village level, necessitating clear rules regarding program implementation. The second priority policy is ministerial regulations, essential for clarifying the scope of zones eligible for CSR and other aid, as mining companies have previously focused only on zone 1 and neglected CSR assistance to villages in zones 2 and 3. The third priority policy is regional regulations, aimed at specifying the amount of CSR funds allocated to villages and regulating transparent and accountable mechanisms for CSR and other payments from mining companies. The fourth priority policy is the procurement of new CSR variants, specifically targeting isolated areas or villages with low economic levels in zone 3 of the mining area. This policy can help reduce regional disparities and social violence resulting from low economic and educational levels. The fifth priority policy is law enforcement, prioritizing customary law as part of local wisdom in resolving social violence, followed by involvement of the police (positive law) if issues cannot be resolved through customary law. The sixth priority policy is mining permit arrangements, which can effectively reduce state losses caused by illegal mining companies, such as land damage and environmental pollution due to irresponsible environmental remediation, as well as losses in unpaid taxes and CSR assistance to affected areas.

From these six policies, three scenario groupings were identified: 1) The 2-year scenario group includes law enforcement policies, which are urgent and crucial for ensuring the social security and order of all villages in the mining area. This can be supported by action programs providing incentives for traditional/religious leaders and increasing police/military presence in villages. According to Jones and Rodgers (2011), social violence can hinder investment, disrupt social order, and harm community welfare. Additionally, De Jesus and Hernandes (2019), Oishi et al. (2022), and Murshed and Tadjoeddin (2009) assert that reducing social violence in an area can create conditions conducive to sustainable and stable development. 2) The 5-year scenario group includes policies related to village regulations, regional regulations, and ministerial regulations, which can support action programs such as establishing schools in isolated zone 3, providing scholarships for the less fortunate in zones 2 and 3, offering business grants for affected farmers and fishermen, opening job vacancies for communities in zones 2 and 3, and developing infrastructure in underprivileged villages in zones 2 and 3 of the mining area. 3) The 10-year scenario group includes policies for adding CSR variants and regulating mining permits, which can support action programs aimed at rehabilitating land damage through reforestation.

6. Conclusion

This study provides a comprehensive analysis of strategic policies aimed at promoting equitable development and reducing social violence in the mining areas of Kolaka Regency. It was found that the roles of nickel mining companies and local governments are crucial in ensuring equitable and effective contributions through social assistance to all villages within the mining areas. The necessary strategic policies encompass enhancing the role of mining with a specific focus on mitigating social violence, promoting equitable development, facilitating access to education and healthcare, and addressing environmental degradation. Recommended action programs include the establishment of new schools, provision of scholarships, job creation, provision of business capital, and infrastructure development, all of which should be underpinned by robust regulations and enforcement mechanisms. Additionally, cracking down on illegal mining permits is deemed essential to curbing environmental damage. To achieve equitable development and reduce social violence in mining areas, holistic and sustainable integration strategies, alongside effective law enforcement, are imperative. Enforcement policies are critical and should be implemented within the next two years to ensure social security and orderliness across all villages in the mining areas. These efforts can be bolstered through action programs such as offering incentives to traditional or religious leaders and bolstering police/military presence in villages, particularly those in zones 2 and 3 of the mining areas, where violence tends to be more prevalent compared to zone 1. Failure to implement such action programs may result in an escalation of social violence in zones 2 and 3, potentially spreading to zone 1 and jeopardizing the security and sustainability of mining operations in Kolaka. The findings of this research align with previous studies (Jones and Rodgers, 2011) underscoring security and orderliness as pivotal factors in supporting sustainable development. The research methodology involved the utilization of the MULTIPOL analysis tool with data input obtained through FGDs.

Future research endeavors may yield diverse and enriching outcomes if data collection employs questionnaire methodologies or other techniques aimed at policy development in the realms of development and social violence reduction within mining areas.

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