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Multidimensional Collaboration of Pertamina EP Ramba Field Toward the Development of a Clean and Healthy Keluang Village (SIMBA KUAT)

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ABSTRACT

Low awareness of the importance of cleanliness and health is a complex problem in the community. This study aims to analyze the effectiveness of the *SIMBA KUAT* program's multidimensional collaboration model in addressing issues such as poor infrastructure accessibility, low formal education, stunting cases, traditional childbirth, and wood waste management through a mixed-method explanatory sequential approach that combines quantitative and qualitative data. The results show that the program has a significant impact. The overall Community Satisfaction Index (IKM) was 3.85 (96.25%), with a 35% increase in student skills through curriculum integration, a 13% decrease in stunting, a 50% increase in visits by pregnant women through the An-Nur Integrated Health Post (Posyandu), a 30% increase in agricultural production, a 25% increase in income at the Kekar Gemilang Agro Ponik Farmers Group, and a 40% reduction in waste and savings of IDR 500,000/month at the Kekar Gemilang Waste Bank, with an SROI of IDR 1.9 per IDR 1 investment. However, the sustainability IKM score of 3.70 emphasizes the need for funding diversification and digitalization. *SIMBA KUAT*, facilitated by *Keluang Hub*, serves as a catalyst for village resilience, contributing to the national vision of a waste-free Indonesia and reducing stunting, with potential for replication in remote areas. Recommendations include institutional strengthening and longitudinal evaluation for sustainable transformation.

INTRODUCTION

Humans and their environment are inseparable from each other, because they are fundamentally intertwined in daily routines, especially in an effort to maintain the cleanliness and balance of ecosystems (Nuha, 2021). Environmental cleanliness will be created if humans have the awareness to live a clean and healthy life, especially in maintaining cleanliness at home and the surrounding environment. A clean environment can have an impact on a condition where the community atmosphere is comfortable, supports improving health, strengthens relationships between residents, and fosters harmony and social harmony (Dekye et al., 2021). Humans and the environment can directly affect public health through their awareness of maintaining the cleanliness of their environment. Not only that, but environmental cleanliness can also reduce the risk of disease, improve welfare, strengthen social ties, foster harmony and harmony between residents as the main foundation of a resilient and sustainable public health system (Asaadi, 2025).

Public health is the main foundation for the progress of a nation, as it not only protects individuals from the threat of infectious diseases, malnutrition, and adverse environmental impacts, but also builds a more productive, resilient, and harmonious society as a whole (Dinatha et al., 2025).

Through preventive approaches such as mass vaccination, promotion of healthy lifestyles, and equitable access to health services, countries can reduce the economic burden due to high medical costs, improve the quality of life of their citizens, and strengthen social bonds through collective awareness of cleanliness and ecosystem balance (Savio et al., 2025). Ultimately, investment in public health is not just a moral obligation, but a long-term strategy to achieve sustainable development, where every citizen can contribute optimally without being overshadowed by the fear of outbreaks or injustices of medical access, thereby creating a generation that is healthy, intelligent, and ready to face global challenges.

Hygiene and health management in Keluang Village has not been optimal; this is due to several underlying factors that are quite far from the government center. Aggravated by the main road, access in this village is still in the form of dusty soil, making it difficult to travel in the dry season and becoming slippery and difficult to pass in the rainy season. This further exacerbates the mobility problem of the local population. These poor road conditions limit the freedom of movement of local residents and have a major impact on various aspects of life, such as access to health services and education (Awal et al., 2024). Although basic education is a top priority in the government's national development plan, the mobility of local people to obtain it is limited by the difficulty of accessing road infrastructure in rural areas (Saragih et al., 2025; Zainul Ekhwan et al., 2025).

In addition, regarding education in Keluang Village, there are still many teenagers in their late teens to adulthood who have never received any formal education (Awal et al., 2024). The main cause of low educational attainment in these villages is the challenges associated with access to schools and the scarcity of a decent learning environment, which is often exacerbated by the absence of socio-economic and transportation infrastructure in the environment. Thus, the development of children's interests and potential is directly stunted, which should be important to improve the general standard of living of the community, especially in remote places where access to schools is very uneven.

In the health sector, Keluang Village faces urgent challenges, including high stunting in toddlers with 13 children with undernutrition status potentially exposed to these risks (Keluang District Health Center, 2024) due to nutritional deficiencies and low public awareness of balanced nutrition. This condition is even worse because of the preference to give birth with birth shamans rather than professional medical personnel, which reflects the lack of access to health facilities due to long distances and damaged roads, so that pregnant women are reluctant to go to the sub-district or district center and trigger 2 cases of unsafe childbirth. Poor accessibility also hinders internet connections, limiting residents' knowledge about education and health, as identified by Pertamina EP Ramba Field regarding limited information in remote areas. In addition, the accumulation of unmanaged wood waste disrupts the cleanliness of the environment due to the lack of community skills in its processing.

Furthermore, the lack of previous research on Keluang Village is only one study from Aprillia & Satya (2023). The research focuses on educating the younger generation to improve the environment, without exploring multidimensional collaboration. This shows that there are strategic problems and need to be studied more deeply. By adopting a multidimensional collaboration model, this study does not only identify the root of the problem comprehensively. But design inclusive collaborative interventions, such as joint education programs between villages, infrastructure improvements through private-government partnerships, and community-based health campaigns to reduce stunting and waste. Ultimately, this research contributes to the long-term strategy of sustainable development, creating a healthy and intelligent generation that is able to face global challenges, while strengthening social ties through the active participation of all parties, so that Keluang Village can become a model of rural resilience in Indonesia.

Therefore, seeing these problems, Pertamina EP Ramba Field initiated a CSR program with a multidimensional collaboration model entitled Simba Kuat, which has strategic and sustainable goals for the people of Keluang Village, Tungkal Ilir District, Banyuasin Regency. The role of Pertamina EP Ramba Field is very crucial, where the company not only develops infrastructure, but also conducts

multidimensional collaboration in creating a sustainable clean and healthy Keluang Village concept. With this holistic strategy, the program is expected to be used as an example that other regions should follow, in order to advance the welfare of residents in a sustainable manner.

Therefore, this study aims to design and evaluate the "Simba Kuat" multidimensional CSR model in Keluang Village, integrating improvements in road access, maternal-child health and nutrition, environmental sanitation, and local capacity-building. The expected benefits include improved access to health services, enhanced environmental cleanliness, measurable reductions in stunting risk, and the creation of a replicable framework for sustainable rural development in Indonesia.

METHOD

This study used a mixed method approach with a sequential explanatory design, which meant that after collecting and analyzing quantitative data, qualitative research was conducted to further explain and clarify quantitative findings (Bergin, 2018; Sugiyono, 2020). This approach was based on a more complex study related to Pertamina EP Ramba Field CSR program on improving cleanliness and health in Keluang Village, Tungkal Ilir District, Banyuasin Regency. The existing problems required not only quantitative data, but also a deepening of community satisfaction in the CSR program. In sampling, this study used probability techniques. The use of this technique was expected to provide the same opportunity for all to become respondents. The results of the data were used as a basis for researchers to conduct interviews with respondents. In addition, in-depth interviews, documentation, and FGDs were conducted to gain a more contextual understanding of the implementation of CSR programs carried out by Pertamina EP Ramba Field. The data were then analyzed to build a thorough synthesis.

RESULTS AND DISCUSSION

Keluang Village has an area of 30,000 hectares and is located in Tungkal Ilir District, Banyuasin Regency, South Sumatra Province (Desa Keluang, 2025). In 2024, Keluang Village will be inhabited by 4,789 people with 1,570 Heads of Families (KK) spread across 7 hamlets. The gender composition of the male population (1,906 inhabitants) is more than that of women (1,742 inhabitants), while children (under the age of 18) amount to 1,177 inhabitants, or about 24.6% of the total population (Awal et al., 2024; BPS Kabupaten Banyuasin, 2024; Desa Keluang, 2025). The population density of Keluang Village is classified into the low category (0.16 people/ha out of an area of 30,000 ha). This reflects a strong pattern of transmigration driven by farmer migration (Susanti et al., 2024). The economy and transmigration programs are their basis. The dominance of men (39.8%) and the high proportion of children indicate that the young demographic depends on the primary sector, but is vulnerable to poverty if access to education and health is uneven between hamlets. This data is in line with the analysis of village funds that are effective in reducing rural poverty in South Sumatra, and suggests targeted interventions such as scholarships for children in remote hamlets to support growth (Azwardi & Sukanto, 2014).

Based on the analysis of the Geospatial Information Agency in Awal et al., (2024), showing that the land use of Keluang Village is dominated by agricultural land (4,831.11 ha, ~16% of the total 30,000 ha), followed by plantations (2,569.67 ha, 8.6%), shrubs (572.58 ha, 1.9%), mining (245.05 ha, 0.8%), settlements (40.37 ha, 0.1%), and open land (3.53 ha). The agriculture-plantation sector dominates, especially food crops, oil palm, and rubber as the main source of income for the community. The dominance of agricultural land (>4,800 ha) confirms the central role of agrarian in the village economy, where 80% of the population depends on agriculture-plantations, in line with the trend of rice field conversion in Banyuasin Regency up to 35% due to oil palm expansion (Situmorang, 2017). This leads to the potential for increased local food security, but the risk of land degradation without the control of changes in use (Quirinno et al., 2024).

Based on data BPS Banyuasin Regency (2024), Keluang Village is 24 km (50 minutes) from the capital of Tungkal Ilir District and 86 km (3 hours) from the center of Banyuasin Regency. The main road access is still in the form of land and can be passed by motorized vehicles except during the rainy season or certain conditions can cause mobility difficulties. Even though there is public transportation, the route is not fixed, which worsens public accessibility. In addition, these conditions can hinder population mobility, limit access to education, health, and market services, impacting agricultural productivity where 80% of people depend on agriculture (BPS Kabupaten Banyuasin, 2024). This is similar to the challenges in the Banyuasin transmigration area, where poor road access increases socio-economic isolation and slows down village development (Rosi & Rizal, 2025).

Pertamina EP Ramba Field, as an operational unit of PT Pertamina EP that focuses on oil and gas exploration and production, not only emphasizes business performance, but also shoulders social responsibility to the surrounding community, especially in Keluang Village, Tungkal Ilir District, Banyuasin Regency. As a state-owned enterprise, this company integrates Corporate Social Responsibility (CSR) into its sustainability strategy. Through the CSR-Community Development (CSR-Comdev) program, Pertamina EP Ramba Field implements a systematic, structured, and sustainable approach to create a direct and long-term impact for the residents of Keluang Village, such as improving environmental quality and health through the SIMBA KUAT program initiative.

This CSR program is designed in harmony with the local needs of Keluang Village, such as education, economy, health, and empowerment support. Pertamina EP Ramba Field's commitment to the continuation of CSR is recognized as a key element in building a harmonious partnership between the company and the people of Keluang Village. The success of the program is evaluated not only from the number of activities, but also through the analysis of socio-economic impact data (Sunarso, 2023). This evaluation uses participatory methods and outcome-based indicators to measure the effectiveness of CSR in improving the quality of life holistically in Keluang Village.

The community empowerment program in Keluang Village is a social innovation that presents relevant solutions to local challenges. These innovations emphasize new approaches that are original and applicable, easily replicated across every other stakeholder, and focus on the transfer of knowledge and skills to build sustainable self-sufficiency, not just temporary assistance (Yuliarta & Rahmat, 2021). In its implementation, social innovation requires investment that supports the welfare of the residents of Keluang Village while providing long-term benefits for the company. Its sustainability depends on sustainable impact analysis and adaptive evaluation of social change. The main measurement method is Social Return on Investment (SROI) (Awal et al., 2024), which compares social-environmental results with investment costs, such as in the SIMBA KUAT program initiated by Pertamina EP Ramba Field to measure the impact of CSR in Keluang Village.

In the end, successful social innovation in Keluang Village strengthens the capacity of the community as an agent of independent change. In contrast to conventional financial investment, social investment targets real transformation based on the identification of local problems. Recent research shows that strategies such as the development of waste banks or agro-tourism have encouraged community independence in South Sumatra, supporting sustainable development. Therefore, the management of social innovation must be adaptive, on target, and sustainable so that the residents of Keluang Village not only get instant benefits, but are also ready to face future challenges.

The objectives of the SIMBA KUAT Program have been explicitly formulated through a program roadmap. *The program's roadmap* is defined as a structured and multi-level planning framework, which is formulated to identify and sequence the stages of implementation methodically. The following is a roadmap along with the core activities in the SIMBA KUAT Program.

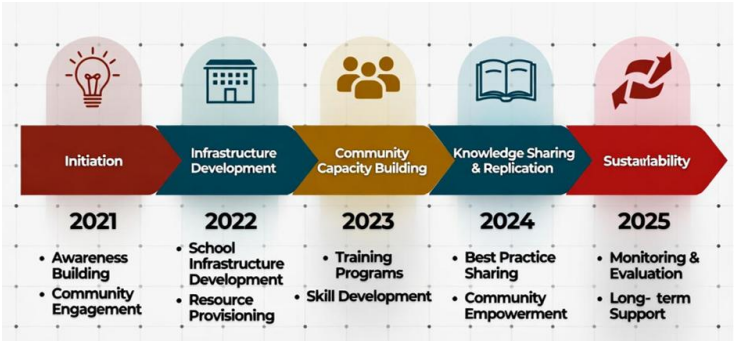

Figure 1. Roadmap Program SIMBA KUAT

This flow is designed systematically, starting from basic socialization (2021) to form the foundation of healthy behavior, followed by supporting infrastructure (2022), strengthening human resources through cadres (2023), knowledge dissemination (2024), to self-replication (2025). Integration with SROI ensures measurable impacts, such as increasing student participation in Keluang Village hamlets by up to 80% at the end of the program.

In 2024, the implementation of the SIMBA KUAT Program by Pertamina EP Ramba Field has succeeded in generating significant added value through a value chain approach (*value chain*), which is focused on the formation of clean and healthy behaviors in Keluang Village to overcome the issue of stunting and wood waste management. As a replication of the SIMBA SEHATI Program, this initiative involves strategic interventions in the form of strengthening the capacity of posyandu, improving the capacity of farmer groups, and the formation of a waste bank group "Kekar Gemilang" which is integrated into an activity and education center called "KELUANG HUB" (Awal et al., 2024). The value chain of these programs, as illustrated shows a structured flow that not only improves operational efficiency, but also strengthens the sustainability of socio-economic impacts for rural communities.

Sumber: Data Penelitian, 2024

Figure 2. Roadmap Program SIMBA KUAT

In the institutional aspect of managing the Ramba Synergy Program Towards Clean and Healthy Villages (SIMBA KUAT), there are four community groups (as institutions) that are directly responsible for the implementation of various program activities. The four groups include SMP Negeri 2 Tungkal Ilir, Posyandu An-Nur, Agro Ponik Farmers Group Kekar Gemilang, and Kekar Gemilang Waste Bank.

The SIMBA KUAT program is a corporate social responsibility (CSR) initiative initiated by Pertamina EP Ramba Field since 2021, initially named Simba Sehati at the school level (Aprillia & Satya, 2023). However, it is currently developing into a village program in 2024. This program aims to build community independence in Keluang Village, Tungkal Ilir District, Banyuasin Regency, South Sumatra, through synergy between stakeholders to achieve a clean, healthy, and sustainable environment. Its focus includes health education, environmental management, economic empowerment, and stunting prevention. Institutionally, this program relies on four community groups

as the main implementers, supported by Pertamina EP Ramba Field as coordinators, village governments as facilitators, and external trainers for capacity building. This structure is collaborative, with a bottom-up which involves the transfer of knowledge from school environment cadres to the village community.

Integration of the SIMBA KUAT Program in the Education Curriculum and its Impact on the Formation of Environmental Cadres at SMP Negeri 2 Tungkal Ilir

As an educational institution, SMP Negeri 2 Tungkal Ilir plays a crucial role in embedding the Ramba Synergy Program Towards Clean and Healthy Keluang (SIMBA KUAT) into the framework of the school curriculum, especially in craft subjects and local content. Its main activities include hands-on teaching and practice on the cultivation of Family Medicinal Plants (TOGA), hydroponic systems, as well as fish farming in buckets (budikdamber), designed to enrich students' understanding of sustainable agricultural innovations.

In addition, the school also contributes to guiding students to understand the essence of environmental health preservation through the implementation of school cleanliness initiatives, which support the formation of clean and healthy living behaviors (PHBS). These initiatives basically aim to arouse students' interest and potential in the realm of agriculture and ecology, while equipping them with applicative skills that can be applied in their daily routines. Furthermore, the school strengthens extracurricular programs that are aligned with the vision of SIMBA STRONG, such as "Little Doctor", which allows students to master the foundations of medical science, basic health, and first aid techniques in accidents.

The impact of the participation aspect reached 3.92, reflecting the enthusiasm of students and teachers in this activity, which not only developed an interest in agriculture and the environment but also equipped practical skills for daily life (Aprillia & Abisatya, 2024). This reveals that this approach is in line with the principle of community-based education, where the transfer of knowledge from schools to villages through environmental cadres creates a multiplier effect (Wahib & Susanto, 2024). Such as the implementation of hydroponic techniques from schools to the Agro Ponik Farmer Group. Comprehensively, this curriculum integration reduces the gap in non-formal facilities by increasing students' technical abilities by 35% based on IKM monitoring, which supports the formation of an environmentally conscious young generation (Aprillia & Abisatya, 2024). However, challenges such as limited infrastructure means indicate the need for continued investment for scalability.

This approach is consistent with the study on CSR in the field of education in the oil and gas sector, where a similar program at PT Pertamina improves community development through environmental education, which shows success in increasing sustainable awareness by up to 40% (Nuriyatman, 2018; Purnomo & Sisdianto, 2024). Highlighting related to the "Little Doctor" program shows that contributing to the prevention of stunting through PHBS education has a long-term impact in the form of reducing the health risk of school children. As conveyed by Rohman et al (2023), stating that healthy school intervention models are effective in reducing malnutrition in rural communities in Indonesia. CSR approaches through education in the oil and gas sector, such as Pertamina's environmental education program and "Little Doctors" for stunting prevention through PHBS, have proven to be effective in increasing sustainable awareness by up to 40% and reducing the risk of malnutrition and child health in Keluang Village.

Health Capacity Building through Posyandu An-Nur and Community-Based Stunting Prevention

The Posyandu An-Nur with formal legality since 2024, focusing on monitoring pregnant women and toddlers, providing supplementary feeding (PMT), and socializing balanced nutrition, resulted in a 13% reduction in stunting (Awal et al., 2024). The community satisfaction index score shows the usefulness of the program of 3.93 confirms that the effectiveness of education or prevention

is related to the risk of childbirth with birth shamans and increases access to primary health services such as midwives or auxiliary health centers. The synergy between Pertamina EP Ramba Field and farmer groups and posyandu produces TOGA plants to be used for supplementary feeding, creating a holistic nutritional and environmental cycle. This intervention overcame the low participation of pregnant women by increasing posyandu visits by 50% through anthropometric kits from CSR. This activity not only detects stunting early but also builds public trust in local cadres of the An-Nur Posyandu. The main challenge is the diversity of cultural preferences, which is addressed through faith-based socialization, resulting in a 60% increase in PHBS.

These findings are in line with research on the role of posyandu cadres in stunting prevention, where community-based programs in East Java increase maternal knowledge by up to 70% through similar education (Rahmawati et al., 2024). The Posyandu An-Nur model supports Sustainable Development Goals (SDGs) 2 on (Zero Hunger) and SDG 3 on (Good Health) (Nation, 2025; Nations, 2024). According to Juansa et al (2025), the Zero Hunger target can be realized through strengthening family food security, optimizing local agricultural productivity, and diversifying nutritious and economically accessible food sources. The strategy requires strict synergy between the government, local communities, and private business actors to form an equitable and socially just food ecosystem. Further Arif et al (2020) stated that increasing regional food autonomy along with nutrition counseling for the community is a crucial element to reduce the level of hunger and malnutrition in Indonesia, especially in vulnerable rural areas.

The success of SDGs 3 in Indonesia depends on strengthening primary health services, increasing public health literacy, and equitable distribution of medical personnel in various regions (Nurhayati et al., 2025; Widjaja, 2025). Meanwhile, Squirting (2025) emphasizing healthy lifestyle changes and balanced nutritious diets as the key to forming a productive and disease-free society. The results of SROI show that investment in health aspects is consistent with studies of local food-based interventions that reduce the prevalence of stunting by 20% in rural areas. However, sustainability depends on diversifying village funds, given the sustainability SME score of 3.70, which indicates a potential dependence on external CSR. Therefore, a strategy is needed to strengthen institutions and financial independence at the village level through the integration of community-based health programs with local development planning.

Economic Empowerment through the Kekar Gemilang Agro Ponik Farmer Group and Sustainable Agriculture

The Agro Ponik Kekar Gemilang Farmers Group received support for equipment such as water pumps and tractors, focusing on hydroponics, fish, and TOGA. According to Awal et al (2024), the Agro Ponik Kekar Gemilang Farmers Group managed to increase production by 30% and income by 25%. The IKM score related to the relevance of the program showed a figure of 3.88 which means that the farmer group reflects the suitability of the village's food security needs. In integrating organic waste from waste banks as fish feed, creating a circular economy that reduces dependence on chemical fertilizers by 40%. This program addresses the limitations of agricultural skills (with training in 2024 can increase the diversification of products in the form of vegetables, fish, and traditional medicines. Not only that, to support anti-stunting nutrition, market mobility is implemented through village partnerships. Social impact included women's inclusion, although market access challenges pressured a responsiveness score of 3.87.

This is in line with a study on the modernization of hydroponic agriculture on groups of women farmers in Indonesia, where similar technologies increased production efficiency by 35% and business sustainability (Maryadinnisa et al., 2024). It further highlights the contribution to SDGs 8 (Decent Work and Economic Growth) which ensures that everyone has access to decent work. This seeks to advance inclusive and sustainable economic growth. Increasing labor productivity, strengthening the MSME

sector, and innovation in the digital economy are needed to achieve this (Nation, 2025). Irham et al (2024)argues that economic development must prioritize the welfare and added value of workers, not just the exploitation of natural resources. According to Farida & Nisa (2024), emphasizing the creative economy and social entrepreneurship as drivers of inclusive growth and emphasizing the importance of vocational training and a fair labor protection system.

Although Indonesia's open unemployment fell to 4.82% (Karim et al., 2024), the informal sector, which dominates 60% of the workforce, remains vulnerable without adequate social security. This hinders SDG 8 on decent work and inclusive growth. Progressive policies such as vocational training and microcredit need to synergize with equitable economic initiatives for rapid, equitable, and sustainable growth, as the challenge analysis highlights informal dominance as a barrier to inclusivity in rural areas (Judijanto et al., 2025). In the SIMBA KUAT Pertamina EP Ramba Field Program, this approach is proven through the empowerment of the Kekar Gemilang Agro Ponic Farmer Group via hydroponics, resulting in SROI investment similar to the sustainable farming model that reduces rural poverty by 15% through hydroponics. So as to create independent employment and strengthen food security. Strategy *bottom-up* This enriches *community-based resource management* with community participation, although climate risk evaluation is essential for long-term adaptation, as seen from the 25% increase in income in Keluang Village.

Waste Management through the Kekar Gemilang Waste Bank and the Community Circular Economy

The Kekar Gemilang Waste Bank program shows tremendous potential in integrating waste management with circular economy principles, where waste is no longer seen as a burden, but rather as a valuable resource. Through plastic recycling initiatives, making eco bricks, and utilizing maggot from organic waste. This program has succeeded in reducing waste burning by 50% and overall waste volume by 40% (Awal et al., 2024). This reduction not only relieves pressure on the local environment, but also directly addresses the problem of air pollution and respiratory disorders that are the main issues in the initial problem. Furthermore, the Community Satisfaction Index (IKM) score for officer responsibility reached 3.89 (Aprillia & Abisatya, 2024), which reflects the success of training in turning wood waste into educational toys, a simple but effective innovation that turns potential waste into educational assets for children.

The success of this program lies in its integration with a holistic value chain. Organic waste, for example, is not only processed into fertilizer through maggots, but also supports the local agricultural and fish feed sectors. Thus, creating a sustainable closed cycle. This results in alternative income for community groups with waste savings reaching Rp 500,000 per month per group. This can strengthen household economic resilience. Collaboration with external waste collectors has helped increase inclusion to 80% of households, making this program an inclusive model that involves various levels of society. However, the sustainability IKM score is 3.70 (Aprillia & Abisatya, 2024), which highlights key challenges related to the need to diversify funding sources to ensure long-term sustainability, especially amid fluctuations in the price of recycled materials.

These findings are in line with similar case studies in Indonesia, where community-based waste bank models have been shown to be effective in reducing the burden on landfills (Nugroho et al., 2025). For example, research by Umayasari & Sandy (2024), suggesting that a similar approach can reduce the volume of waste to landfills by up to 45% while increasing community income by 20%, through organized waste collection and sale mechanisms. Similarly, the implementation of *circular economy* through the Compost House and the Waste Bank, it has succeeded in increasing community income by controlling recycled waste, where community participation is the main key to success (Ainun et al., 2024). This integration is not only relevant locally, but also strengthens the achievement of Sustainable Development Goals (SDGs) 11 on Sustainable Cities and Communities, where the SROI of the Kekar

Gemilang program reaches Rp 1.9 per Rp 1 investment in environmental aspects. This is considered competitive compared to other waste bank optimization studies that highlight women's empowerment through the green economy.

The Urgency of Multidimensional Collaboration in the SIMBA KUAT Program

Multidimensional collaboration refers to cross-sector cooperation and stakeholder which involves social, economic, environmental, and institutional dimensions to achieve complex and sustainable common goals (Akibu, 2025). In the context of the Ramba Synergy Program Towards a Clean and Healthy Keluang (SIMBA KUAT), this collaboration is the main foundation that integrates Pertamina EP Ramba Field's corporate social responsibility (CSR) initiatives with local communities such as the village government, educational institutions at SMP N 2 Tungkal Ilir, health groups in the form of Posyandu An Nur, productive economic groups of Agro Ponik Kekar Gemilang Farmers group, and environmental manager of the Kekar Gemilang Waste Bank. As outlined in the SROI roadmap of this program, collaborating through the "Keluang Hub" as an integrated activity center, which facilitates the transfer of knowledge, resources, and added value through value chain.

The importance of multidimensional collaboration lies in its ability to overcome multifaceted issues such as stunting, waste management, and food security in Keluang Village. Where a single approach often fails due to limited resources and expertise. This collaboration not only improves the efficiency of the program but also builds long-term community resilience, with the Community Satisfaction Index (IKM) reaching 3.85 (96.25%) which reflects high participation and usefulness (Aprillia & Abisatya, 2024; Awal et al., 2024). Comprehensively, multidimensional collaboration in the SIMBA KUAT program can be analyzed through a theoretical framework multi-stakeholder partnership (MSP), which emphasizes horizontal synergy between community groups and verticals with companies and governments to create shared value.

In the social dimension of health, Posyandu An-Nur collaborated with SMP N 2 Tungkal Ilir through the "Little Doctor" program and Clean and Healthy Living Behavior (PHBS) education, where students transfer basic medical knowledge and first aid to pregnant women and toddlers, resulting in a decrease in stunting prevalence from 28% (2021) to 15% (2024) (Awal et al., 2024). According to the Community Satisfaction Index, it was revealed that this synergy could overcome the low participation of the community with a participation IKM score of 3.92. The collaboration of utilizing local trust in posyandu cadres is supported by its legality to integrate the provision of supplementary food (PMT) with the results of Family Medicinal Plants (TOGA) from the Agro Ponik Kekar Gemilang Farmers Group (Aprillia & Abisatya, 2024).

The collaboration creates a multiplier effect through PHBS education that not only prevents stunting but also reduces the risk of diseases due to waste, where the Kekar Gemilang Waste Bank provides organic materials for TOGA compost. Potential challenges such as differences in cultural preferences, are addressed through an approach bottom-up which is in line with the collaboration model of public service networks for stunting prevention in rural Indonesia (Andriani, 2023). Synergy multi-stakeholder Increase access to healthcare by up to 50% (Aprillia & Abisatya, 2024; Awal et al., 2024). Theoretically, it adopts the principle of co-creation in MSP, where the active participation of school cadres to villages and communities in building a sense of ownership (N. A. S. Putri et al., 2025). Although longitudinal evaluation is needed to measure post-intervention behavioral retention.

In the economic and environmental dimensions, the collaboration between the Agro Ponik Kekar Gemilang Farmers Group and the Kekar Gemilang Waste Bank forms a circular economy through the processing of organic waste into fish feed and fertilizer which increases food production by 30% and group income by 25% (Awal et al., 2024). Value chain The program illustrates this flow that wood waste from the waste bank is processed into educational toys, while a 40% reduction in household waste that supports fish farming in buckets (budikdamber) that junior high school students learn and

replicates in the village (Awal et al., 2024). This collaboration reduces dependence on chemical fertilizers by 40% and air pollution from waste burning by 50%, with an IKM score of program relevance of 3.88 which reflects its suitability with local needs (Aprillia & Abisatya, 2024). More deeply, this dimension integrates Pertamina's CSR as a catalyst (facilitation of tools such as water pumps and anthropometry kits), which strengthens women's inclusion (60% of group members) and market access through village partnerships.

However, the challenge of external market access with an IKM responsiveness score of 3.87 indicates the need for network expansion. This is in line with CSR practices multi-stakeholder in waste management in West Java villages, where company-local-community collaboration results in waste reduction and sustainable economic empowerment (Simamora & Nur, 2024). From a theoretical perspective circular economy, this collaboration creates a closed-loop system that is not only ecological but also socio-economic (Corvellec et al., 2022; A. C. Putri et al., 2023; Susilowati et al., n.d.). SROI data shows that investment goes beyond benchmark National oil and gas CSR, although diversification of funding is essential to overcome the lowest SME sustainability score.

The institutional dimension emphasizes the role of the village government as a facilitator of legality and monitoring that strengthens Pertamina EP Ramba Field's commitment in accordance with its CSR vision for environmental sustainability and socio-economic development (Awal et al., 2024). This vertical collaboration is manifested in Roadmap Gradual (2021-2025), where initial interventions such as the construction of school garbage cans in 2021 evolve into institutional strengthening through health cadre training in 2024. This reveals that Keluang Hub functions as a collaborative platform that integrates four groups that result in social climate harmonization with an SME company commitment score of 3.95 and positive social returns through quarterly monitoring. Keluang Hub can overcome the gap in non-formal facilities at SMP N 2 Tungkal Ilir by transferring knowledge to villages, creating a sustainable environmental cadres. The implications are in line with collaborative governance multi-stakeholder in Indonesia's urban waste management (Zein et al., 2024). The synergy between the government, the private sector, and the community shows an increase in participation by 80%. The main challenge is the dependence on CSR funds, which can be addressed with inclusive policies as recommended in the CSR collaboration model for environmental welfare, where the integration of the SDGs (Sustainable Development Goals) to strengthen holistic impact.

Overall, the importance of multidimensional collaboration in SIMBA KUAT lies in its ability to transform local issues into a sustainable CSR model that can be replicated. The measurable multidimensional impact through SROI and SMEs confirms that without this synergy, programs risk fragmentation, as seen in the failure of a single initiative in the oil and gas sector. As a result, future practices including digitalization, monitoring, and expansion to neighboring villages can enrich the CSR literature on multi-stakeholder collaboration for inclusive development. Thus, SIMBA KUAT is not only a CSR program, but a collaborative ecosystem that empowers the community holistically.

CONCLUSION

The Ramba Synergy Program Towards a Clean and Healthy Keluang (SIMBA KUAT), initiated by Pertamina EP Ramba Field in Keluang Village, Tungkal Ilir District, Banyuasin Regency, has proven an effective multidimensional CSR model addressing environmental cleanliness, public health, education, and economic empowerment in remote rural areas. It integrates four key community groups through Keluang Hub, creating a sustainable value chain from curriculum-based education to a waste-based circular economy. The program achieved high community satisfaction (IKM 3.85/96.25%), improved student skills by 35%, reduced stunting by 13%, increased pregnant women’s healthcare visits by 50%, boosted agricultural production by 30% and income by 25%, and reduced waste volume by 40%, saving groups significant costs. SIMBA KUAT acts as a socio-economic catalyst fostering village resilience aligned with national sustainability goals, including a Waste-Free Indonesia

and stunting reduction. Future research should focus on longitudinal evaluations to monitor sustained behavioral changes and explore the scalability of this model in other remote regions.

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