

Women's Empowerment through Independent Agricultural Programs in Villages: A Case Study of PT Pertamina EP Asset 2 Adera Field and the "PERMATA" Program in Pengabuan Village

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ARTICLE INFO	ABSTRACT
Keywords: women; empowerment; collaboration	This research aims to examine the implementation of women's empowerment programs in the context of upstream oil and gas corporations and rural communities, with a case study at PT Pertamina EP Adera Field through the Resilient Village Independent Agriculture (PERMATA) program in Pengabuan Village, Penukal Abab Lematang Ilir (PALI) Regency, South Sumatra Province. PT Pertamina EP Adera, established as an oil and gas exploitation and production unit in the Abab, Dewa, Raja, and Benuang Structure working areas, recorded an average production of 2,184.74 BOPD of oil and 9.33 MMSCFD of gas during the January–June 2024 period. Through the PERMATA program, women in the village received skills training, production facilities, and access to raw materials to develop agricultural and herbal product businesses. The program results showed a Community Satisfaction Index (IKM) of 3.77 (94.28%) in the very good category, along with the preparation of a Social Return on Investment (SROI) analysis that demonstrated significant social, economic, and environmental contributions. However, there was an indicator of increased income with an IKM value of 2.82 (70.59%), which is still in the good category, indicating room for improvement in marketing and product quantity. This study also links program implementation to literature on women's empowerment in rural areas, which shows that social capital, transformational leadership, and access to resources and markets are crucial for strengthening the effectiveness of empowerment.

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INTRODUCTION

The issue of poverty in Indonesia is still found in rural areas. Conditions of structural poverty often place women in vulnerable positions due to limited opportunities, such as access to decent education, adequate health services, and economic empowerment (Al-Shami et al., 2021; Dixit et al., 2023; Soharwardi & Ahmad, 2020; Tiwari & Malati, 2023). The lack of access has an impact on issues such as early marriage, the double burden of maintenance that women must carry out, low quality of reproductive health, and limitations in public services.

If women do not get adequate education, the knowledge and skills needed to get decent work are lacking, which can then encourage early marriage as a "solution" to the family but instead reinforce the cycle of poverty and economic dependence (Agbeno et al., 2022; Brown et al., 2021; Lewis et al., 2023). The inability to obtain adequate health services makes women

more vulnerable to complications of pregnancy, childbirth, maternal/child death, sexually transmitted diseases, cervical cancer, and so on (Adedokun et al., 2023; Brown et al., 2021; Mastylak et al., 2023; Rizkianti et al., 2020).

On the other hand, the dual burden of livelihood — work in the informal sector with low wages as well as domestic responsibilities — leads to physiological and psychological exhaustion and a decrease in quality of life. Limited access to women-friendly public services further exacerbates conditions, as women struggle to obtain social assistance and protection, which isolates them from the opportunity to develop and participate fully in society.

Women's empowerment has long been recognized as the foundation of sustainable development. Beyond their traditional role in household management, women are increasingly contributing to economic growth, social stability, and societal resilience. However, despite global progress, rural women continue to face structural barriers, including limited access to markets, limited participation in decision-making, and cultural expectations that limit them to the domestic sphere. These challenges underscore the paradox that while rural women are important to household survival, their contributions are often underappreciated, both in policy and in studies. (Elvia et al., 2025)

The combination of these factors forms a cycle that is difficult to break, hindering women's empowerment and gender equality in various aspects of life. The long-term impact affects not only individual women, but also family resilience, including the risk of stunting in children: when women as caregivers and breadwinners do not have adequate access to education and health, their ability to provide optimal care, both from a nutritional and holistic health aspect, becomes limited. In such conditions, women who work to support the family economy while doing domestic work reduce attention to the nutritional needs of children.

Previous studies have highlighted the importance of community-based empowerment programs, such as microfinance and skills training, in enhancing women's agency and economic participation (Elvia et al., 2025). Research by Kertamukti et al. (2025) also emphasizes the role of transformational leadership and social capital in facilitating sustainable empowerment, particularly within rural women's groups. However, most existing studies tend to focus on standalone initiatives, with limited exploration of integrated, corporate-led empowerment models that combine agricultural development, environmental sustainability, and women's economic inclusion within the framework of national and global development goals such as the SDGs.

This study aims to address this research gap by examining the implementation of the “PERMATA” (Resilient Village Independent Agriculture) program, a corporate social responsibility (CSR) initiative by PT Pertamina EP Adera Field in Pengabuan Village, South Sumatra. The novelty of this research lies in its holistic analysis of how a multi-year, multi-stakeholder empowerment program—incorporating agricultural training, herbal product development, and environmental education—can contribute to women's economic independence and align with SDGs 1 (No Poverty) and 5 (Gender Equality). By evaluating the program's outcomes through both the Community Satisfaction Index (IKM) and Social Return on Investment (SROI) analysis, this study offers a comprehensive assessment of its social, economic, and environmental impacts.

The purpose of this research is to provide an in-depth understanding of the strategies, challenges, and outcomes associated with the PERMATA program, and to derive actionable insights for designing more effective and sustainable women's empowerment initiatives in similar rural contexts. The findings are expected to benefit various stakeholders, including policymakers, corporate CSR divisions, and NGOs, by offering evidence-based guidance on enhancing women's roles in rural economies, strengthening local food security, and promoting environmentally sustainable practices. Furthermore, this study contributes to the academic discourse on gender-responsive development by illustrating how coordinated efforts between the private sector, local government, and community groups can create meaningful and lasting change for rural women.

METHOD

This study used a qualitative design with a case study approach to examine the implementation and impact of the "PERMATA" women's empowerment program in Pengabuan Village. Data collection was carried out through in-depth interviews with 15 key informants (members of KWT Selaras Alam, village officials, and facilitators), participatory observation of agricultural activities and herbal product processing, focus group discussions (FGDs), as well as program report documentation studies, Community Satisfaction Index (IKM) surveys, and Social Return on Investment (SROI) analysis. Data was analyzed interactively including data reduction, data presentation, and conclusion drawn, with thematic analysis to identify empowerment patterns and descriptive analysis for SME data, the entire process was carried out by upholding the principles of research ethics including participant consent and informant confidentiality.

RESULTS AND DISCUSSION

PERMATA Company and Program Profile

PT Pertamina EP Asset 2 Adera Field is one of the operating units of PT Pertamina EP, which is a subsidiary of PT Pertamina (Persero) engaged in the upstream oil and gas sector. PT Pertamina EP Adera Field was formed in 2009 under the name UBEP ADERA and on March 1, 2013 PT Pertamina EP reorganized; PT Pertamina EP UBEP ADERA changed to PT Pertamina EP Asset 2 Adera Field. PT Pertamina EP Asset 2 Adera Field is one of the implementing units for oil and gas exploitation and production activities for the Abab, Dewa, Raja, and Benuang Structures working area located in Penukal Abab Lematang Ilir Regency (PALI), South Sumatra Province. Oil Production of PT Pertamina EP Asset 2 Adera Field averaged 2,184.74 BOPD and Gas 9.33 MMSCFD (Jan-June 2024 data) (IDX, 2023)

One of the strategic locations related to PT Pertamina EP Adera Field is Pengabuan Village located in Abab District, Penukal Abab Lematang Ilir Regency (PALI), an oil and gas producing area located in the regional area of Sumatra 1. In 2021, Pertamina EP Adera Field conducted social mapping in Pengabuan Village and the results of the social mapping highlighted two strategic issues, namely poverty and unemployment. Unemployment is caused by low human resources (HR), limited job opportunities and the quality of human resources which are dominated by the population who have the last elementary education/equivalent, with a population of 1,635 people (42.14%). The low level of human resource (HR)

qualifications indicates a lack of understanding and skills that hinder finding a job and exploring economic opportunities. In addition, the limited number of jobs in Pengabuan Village is also one of the impacts of high unemployment. Capital resource constraints are also one of the problems, limited capital is an obstacle in starting and developing a business due to limited access to finance (Studi et al., 2024).

The PERMATA program is one of the community empowerment initiatives that has been implemented by Pertamina EP Adera Field which aims to overcome environmental and socio-economic problems of the community in Pengabuan Village. This program focuses on environmentally friendly family medicine and vegetable farming along with the development of product diversification. By establishing KWT Selaras Alam, the PERMATA Program facilitates village women in increasing their capacity, skills, and economic independence through the Cultivation of Family Medicinal Vegetable Crops (TOSGA) and diversification of their derivative products and provides opportunities for women to process agricultural products into herbal products such as simplicia and herbal drinks so that they can contribute to improving family welfare and the quality of public health (Studi et al., 2024).

Since its inception in 2022, the PERMATA Program has experienced significant development through various activities carried out every year, ranging from group formation, socialization of basic herbs and pastry activities, as well as the development of the cultivation of Family Medicinal Vegetable Plants (TOSGA). In 2023, it focuses on adaptation and mentoring activities related to organic farming, diversification of herbal products, and the development of drip irrigation systems for agriculture. In 2024, the program focuses on developing superior varieties of climate-resistant rice seedlings, and developing dry houses as agricultural drying houses. The PERMATA program can also be a model of community empowerment integration that is able to solve environmental problems while maintaining the values of local wisdom (Studi et al., 2024).

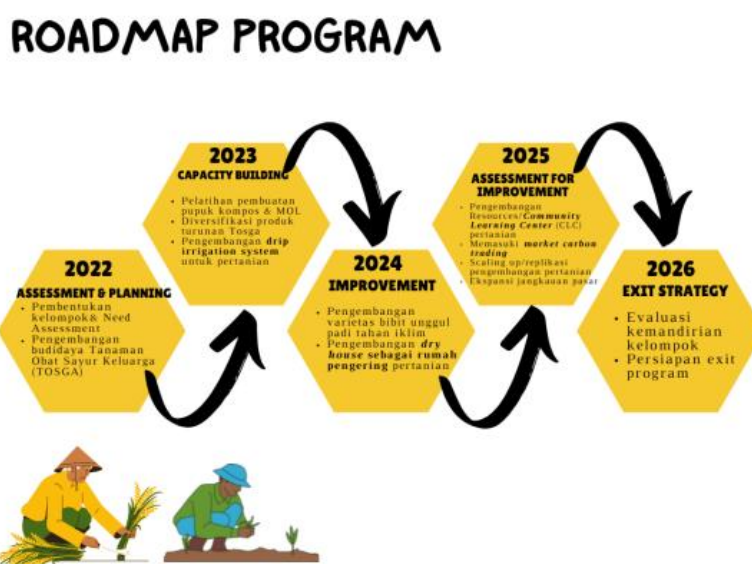


Figure 1. Infrastructure or Agricultural Activities in the PERMATA Program in Pengabuan Village

Source: Pertamina EP Adera Field CSR Strategic Plan for 2022-2026

The PERMATA program implemented in Pengabuan Village aims to empower women — especially through women's business groups — with the support of skills training, the provision of production facilities, and access to raw materials. Through this program, it is hoped that women's business groups will be able to produce value-added products, increase family income, strengthen family resilience, and reduce the risk of stunting in children.

Results of the Community Satisfaction Index (IKM)

Based on the results of data processing and observations carried out on the Resilient Village Independent Agriculture Program (PERMATA), there are several conclusions that can be drawn. Here are some conclusions from the assessment of the IKM of the PERMATA Program as follows (Permata & Pengabuan, n.d.)

First, the PERMATA Program (Independent Agriculture of Tangguh Village) implemented in Pengabuan Village received an IKM score of 3.77 or equivalent to 94.28% with a very good category. This means that the implementation of the PERMATA Program is in accordance with the needs of the community, potential, opportunities, and problems in Pengabuan Village related to toga and rice crop farming.

Second, the success of the PERMATA Program is not only due to the implementation of the program that is in accordance with the needs, opportunities, and problems faced, but also influenced by the existence of CDOs and technical assistants who have the capabilities to facilitate the program, and the commitment of companies that get an IKM score of 4.00 each or equivalent to 100% with the very good category

Third, in the PERMATA Program, the lowest IKM score is in the increase in income which gets a score of 2.82 or equivalent to 70.59% with a good category. This is because the results of simplicia products that have been produced by the group have not been widely marketed and only a small number of products are available, so the income generated from these sales has not been stable. Thus, the value of IKM indicators that need improvement need to be followed up in order to improve the quality of the program.

Hasil Social Return on Investment (SROI)

The Tangguh Village Independent Agriculture Program (PERMATA) initiated by Pertamina EP Adera Field in Pengabuan Village has made a significant contribution to overcoming various social, economic, and environmental challenges faced by the community through comprehensive trainings such as land management, organic fertilizer production, waste sorting, and herbal product processing. The PERMATA program has increased public knowledge, skills, and awareness about the importance of organic agriculture and environmental sustainability. Some of the achievements include reducing carbon emissions, saving operational costs, and increasing local entrepreneurial capacity—especially for KWT Selaras Alam, , and the Barokah Farmers Group (Studi et al., 2024).

The PERMATA program has succeeded in strengthening community participation through cross-sectoral cooperation between the village government, the NGO Carios, the PALI Regency Agriculture Office, and the Sriwijaya State Polytechnic. In addition, the PERMATA Program not only increases people's income through the production and marketing of organic products, but also contributes to saving costs for chemical fertilizers and pesticides. On the

other hand, people's welfare is increased through access to healthy and halal-labeled products and increased consumer loyalty to local products (Studi et al., 2024).

However, challenges in the PERMATA Program still exist in terms of increasing wider community participation in waste sorting and independent land management. Structural constraints, limited facilities in several regions and cultural resistance to changing habits are problems that must be overcome in an ongoing manner (Studi et al., 2024).

The Relevance of the PERMATA Program and the Study on Women's Empowerment

One of the efforts to minimize inequality and disparities is through empowerment programs. According to Law No. 20 of 2008 concerning the principles and objectives of empowerment, empowerment which aims to improve the people's economy in order to increase income and community welfare and expand employment opportunities for the alleviation of the people from poverty problems, according to Article 21 and Article 27 of the 1945 Constitution guarantees equal rights and obligations for the population regardless of whether they are men or women, in the fields of work, health, politics, and law, as well as individual rights. Women, as citizens and as human resources for development, have the same rights, obligations and opportunities as men in all areas of the nation's life and in all development activities (Mulyati & Suhaety, 2021).

The women's empowerment program is an effort to provide equal roles and fair opportunities to women in society. As explained by (Marwanti, 2012); (Hanis & Marzaman, 2020) women's empowerment is an effort to realize equal roles, access, and control between women and men in all fields of development by developing family entrepreneurship so that a balanced role is realized. Furthermore, the results of the study (Kuncoro & Kadar, 2016) show that women's empowerment in the micro scope is a step taken to obtain added value that is useful for humans. Then (Tjiptaningsih, 2017) also explained that women's empowerment plays an important role in the sustainability of the family, both related to the moral development of children, and the fulfillment of the family's economic needs as one of the main pillars of the sustainability of family life. Thus, women's empowerment is very important in society, and is an important agenda to improve family welfare (Pasaribu et al., 2024).

In the rural context, the role of women goes beyond just generating income, including maintaining family resilience in times of economic uncertainty. Recent studies have highlighted the potential of community-based empowerment programs—such as microfinance, cooperative groups, and skills training—to strengthen women's agency and economic participation (Elvia et al., 2025).

The potential of women in rural communities to lead transformative initiatives, reshaping social and economic dynamics by harnessing local resources and creating participatory environments. These practices contribute directly to the Sustainable Development Goals (SDGs), in particular Goal 5 (gender equality) and Goal 1 (poverty alleviation). By integrating a localized participatory approach with transformational leadership principles, this model ensures that empowerment efforts are not only impactful but also sustainable (Kertamukti et al., 2025).

Sustainable Development Goals (SDGs), a global development agenda that contains 17 goals and is divided into 169 targets that are interrelated, influential, inclusive, and integrated

with each other, universal or not missed by anyone, with a period of achievement until 2030. The SDGs are a commitment of the international community, a new milestone in the development of the millennium of countries, continuing the Millennium Development Goals (MDGs), for better human lives.

The 17 goals are as follows: 1) Eradicate poverty 2) End hunger 3) Good health and well-being 4) Quality education 5) Gender equality 6) Access to clean water and sanitation 7) Clean and affordable energy 8) Decent jobs and economic growth 9) Infrastructure, industry and innovation 10) Reduce inequality 11) Sustainable cities and communities 12) Responsible consumption and production 13) Address climate change 14) Safeguard ecosystems 15) Safeguarding terrestrial ecosystems 16) Peace, justice and strong institutions 17) Partnerships to achieve the

The goal of sustainable development is not only to address measurable changes in people's welfare, the economic development of countries and the environment for the betterment of the world, but also the ways in which these changes must be induced so that they can be achieved properly. A participatory process will allow stakeholders to voice the needs and interests of the people they represent, allowing for more planned and more informed initiatives. No one is left behind or left behind, as "governments, international organizations, the business sector and other non-state actors and individuals must contribute." (Fu'adah, 2024).

The Tangguh Village Independent Agriculture Program (PERMATA) initiated by Pertamina EP Adera Field in Pengabuan Village is a real implementation of women's empowerment in rural areas. This is very much in line with the Sustainable Development Goals (SDGs), especially Goal 5 (gender equality) and Goal 1 (poverty alleviation).

CONCLUSION

The Adera Field, operating across the Abab, Dewa, Raja, and Benuang Structures, produced an average of 2,184.74 BOPD of oil and 9.33 MMSCFD of gas from January to June 2024. Through the PERMATA program, women in Pengabuan and East Pengabuan Villages received training, production facilities, and access to raw materials to develop agricultural and herbal product businesses. The program achieved a high Community Satisfaction Index (IKM) of 3.77 (94.28%), indicating very good community approval, complemented by a Social Return on Investment (SROI) analysis showing positive social, economic, and environmental impacts. However, the revenue increase indicator (IKM 2.82 or 70.59%) suggests potential improvements in marketing and product volume. Linking this to rural women's empowerment literature highlights the importance of social capital, transformational leadership, and market access in enhancing program success. Future research could explore specific strategies to boost market penetration and sustainable income growth for women participants in similar rural empowerment initiatives.

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