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INITIATION OF ECONOMIC TRANSFORMATION AT BRAJA GEMILANG BASED ON PRA: EMPOWERMENT MODEL FOR SUSTAINABLE DEVELOPMENT

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Abstract

Background. Braja Gemilang, Braja Selehah, East Lampung, has great natural and social resource potential but has not been explored optimally.

Aims. Participatory Rural Appraisal (PRA) was applied as the main approach to explore the potential for an environmentally friendly local economy, form business groups, and develop partnership networks.

Methods. Activities conducted in July – August 2025 included participatory mapping, focus group discussions, and comparative study visits

Result. Partnership facilitation for three priority ventures: Mocaf/Tiwul, cassava-based flour production, organic fertilizer, and Sumatran rhino food plant nursery.

Conclusion. The initial output includes the formation of business groups (MOCAF House), and initial collaboration.

Implementation. The PRA-based mentoring model and approach showed support in both local welfare and conservation.

Keywords: Conservation, Braja Gemilang, cassava, mocaf flour, organic fertilizer, PRA, tiwul, sumatran rhino.



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INTRODUCTION

Braja Gemilang, Braja Selehah, East Lampung, is located adjacent to Way Kambas National Park. It is a village with diverse natural resources. Braja Gemilang holds great potential in the field of natural resources, culture, and community creativity (Rustiati *et al.*, 2015; Rustiati *et al.*, 2019). However, this potential has not been fully utilized because the village development approach has not been grounded in local potential and has not involved all elements of society, including children, women, and marginalized groups. Therefore, systematic and continuous efforts are needed to explore and develop the village's overall potential. This process is expected not only to improve the community's welfare but also to strengthen the village's identity and independence. This proposal was prepared to formulate an effective strategy in exploring the local potential of Braja Gemilang Village to support inclusive and sustainable village development (Alimudin *et al.*, 2021).

Most rural communities depend on conventional agriculture for their livelihoods, which still faces various limitations, such as reliance on seasons, price fluctuations, and limited access to

appropriate technology (Wahyono, pers. comm.). On the other hand, the community has not explored many alternative economic opportunities, such as processing Non-Timber Forest Products (NTFPs), environmentally friendly agriculture, or inclusive community-based tourism. The ability to cultivate crops, including cassava, has economic potential for processing into mocaf/cassava flour, livestock, and non-timber forest products (NTFPs). Way Kambas National Park is the natural habitat of wildlife, including the Sumatran rhino (*Dicerorhinus sumatrensis*) (Asean Centre for Biodiversity, 2025). Functional proximity to the conservation area presents a dual opportunity: on the one hand, it supports ecosystem services and biodiversity, and on the other hand, it provides a material basis for conservation-based local economic development strategies. However, empirical evidence from protected areas suggests that anthropogenic pressures are increasing and affecting the vulnerability of national parks, so interventions that combine conservation with improved local livelihoods are critical. A study of human pressure mapping in protected areas in Indonesia shows a trend of increasing human footprint around national parks, underscoring the need for a planned, participatory buffer development strategy.

Although this potential is real, its utilization is often constrained by the scarcity of participatory information (potential mapping carried out with the community), local entrepreneurial capacity, business management institutions, and limited access to markets and financing. Participatory methods such as Participatory Rural Appraisal (PRA) and participatory mapping have been identified as practical approaches to exploring local knowledge, visualizing resources, and building community-owned development priorities — thereby enabling more relevant and legitimate interventions by local actors. In addition, the experience of studies applying scenario-building and participatory mapping shows that participatory processes can help negotiate conservation-development trade-offs and formulate joint strategies between communities and institutions. Therefore, strengthening participatory mapping capacity and facilitating multi-stakeholder dialogue are prerequisites for sustainable local economic planning.

A Community-Based Economic Development (CBED) approach that aligns conservation goals with local livelihood strategies and agrifood value chains offers an operational framework that bridges ecological and economic interests (Green *et al.*, 1992). The latest literature in Indonesia emphasizes that sustainable conservation programs must be integrated with local agrifood systems, account for the diversity of local economies, and avoid implementing one-way market solutions without strengthening local capacity. Extensive analysis of the factors that

mediate the success of community-based conservation also suggests that interventions that combine education, technical capacity, institutional alliances, and economic incentives are more likely to produce positive outcomes for both humans and nature. In other words, a mentoring model that combines PRA to identify local needs with technical components (production training, quality control) and market intermediaries (partnership networks) has the potential to improve the sustainability of conservation area buffer village businesses. Companionship was conducted to describe the PRA-based mentoring model implemented in Braja Gemilang, identify potential local economic programs, and provide supporting recommendations for strengthening the model.

METHODS

Under the BLU Unila 2025 fund, companionship in Braja Gemilang, Braja Selehah, East Lampung, was conducted in July-August 2025. The focus group discussion and direct survey frameworks based on PRA as a participatory method, CBED, and Sustainable Livelihoods Framework were conducted to formulate economic concepts to assess the socio-economic and environmental sustainability of the interventions implemented (Selvia *et al.*, 2023; Subejo & Supriyanto, 2021). The main approach is Participatory Rural Appraisal (PRA), combined with the principles of Community-Based Economic Development (CBED). The stages of the activity include: (1) preparation & coordination with the village government, (2) participatory mapping of economic potential, (3) identification of conservation-based priority businesses, (4) Plan preparation for technical and managerial training (*learning-by-doing*), (5) facilitation of the formation of business groups and commitment agreements, (6) preparation network development & product quality testing through partners. The main participants are representatives of village officials, community leaders, women's groups, youth, and prospective members of business groups.

RESULTS AND DISCUSSIONS

The problems faced by Braja Gemilang include a lack of mapping of local economic potential. There is significant economic potential that the community has not recognized or fully utilized. An introductory meeting was held at the Braja Gemilang headquarters in Braja Selehah, East Lampung, to discuss the program (Figure 1) for introducing the administrative staff and representatives of community members. The Sustainable Livelihoods Framework (SLF) is a

framework used to understand and analyze people's livelihood strategies, especially in rural areas. The SLF considers the various household assets —human, social, natural, physical, and financial—and how these assets are affected by external policies, institutions, and processes. Gani (2021) showed that the capture-fishermen group was at a low level of sustainable livelihood, while the fish-farming and farmer groups were at a higher level. In addition, Kunjuraman (2024) developed an SLF framework for community-based ecotourism in Sabah, Malaysia. This research reveals that community-based ecotourism ventures have transformed local communities into ecotourism entrepreneurs, though challenges persist that hinder the sustainability of their livelihoods. In Braja, Gemilang showed that some of the programs are still at the initiation level, i.e, Mocaf and Tiwul production of the Sumatran rhino food plant.



Figure 1. Initial meeting in Braja Gemilang headquarter, Braja Selehah, East Lampung

Five local potentials were proposed. Those are the initial home cassava- based production of mocaf flour and tiwul (cassava rice), the traditional manufacture of solid and liquid organic fertilizers made from livestock dungs, the garden for sumatran rhino food plants, the puppet craft, and the fish ponds. Visiting the potential location was done continuing the meeting to learn the prospect. The sumatran rhino food plant garden was initiated under Yayasan Badak Indonesia (YABI). It is currently not active and needed for the seedling to be planted (Figure 2). Demonstration Plot will be built in Dusun Baru Semi, Braja Gemilang.



Figure 2. The potential locations visited sumatran rhino food plant seedling garden

Kurlillah *et al.* (2023) examined the economic transformation of the community in East Aceh through the use of palm frond waste in handicrafts, which has a positive impact on waste reduction and the creation of economic opportunities. The puppet craft is individual/homemade owned by Sudarno Sabdo Carito, Dusun Baru semi, Braja Gemilang, and has been growing for its daily life income (Figure 3). The companionship will be planned separately. The fish pond is planned for the village park, but it is currently not working.



Figure 3. Visiting the puppet craft Dusun Baru semi, Braja Gemilang

The organic fertilizer is owned by Suparman, Dusun Baru Dadi, Braja Gemilang. It is made from goat dung and urine (Figure 4).

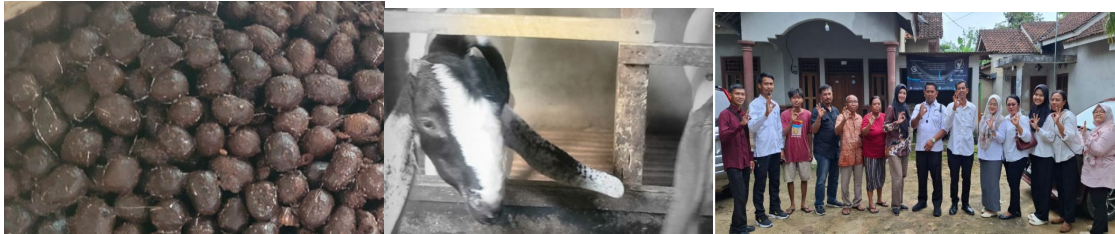


Figure 4. Visiting the organic fertilizer at Dusun Baru Dadi, Braja Gemilang

Braja Gemilang's main local activities are agriculture, including cassava (*Manihot utilissima*); however, the challenge faced by farmers is low prices. Therefore, the by-products of cassava, such as mocaf flour and tiwul/cassava rice, are proposed. Training on Mocaf flour and Tiwul will be initiated by inviting the neighborhood village trainer, Misbakhul Munir, from Braja Harjosari, Braja Selehah, East Lampung.

In FDG, the activity aims to explore and develop the potential of a sustainable, conservation-based local economy. Braja Gemilang is located around the conservation area of Way Kambas National Park, which is a natural habitat for endangered animals such as Sumatran tigers, Sumatran elephants, and Sumatran rhinos. Assistance is carried out with a Participatory Rural Appraisal (PRA) approach, which actively involves the community in potential mapping, business team formation, and strengthening programs and partnership networks. Despite having abundant natural and agricultural resources, such as cassava and livestock, this potential has not been optimally utilized due to limited entrepreneurial knowledge and market access.

After the enrichment of the program by the Biology team, the companionship agreement with the Department of Biology, FMIPA Universitas Lampung, is signed (Figure 5), and the most promising project is selected: cassava-based mocaf flour, tiwul, organic fertilizer, and a Sumatran rhino food plant garden. For each program, a three-person work team is formed. Through a participatory survey, the community chose three flagship programs as the focus of assistance: the production of cassava-based mocaf flour and the tiwul team, led by Sugiyono, Daryanto, and Muhammad Wahyudi. Petrik, Ida Bagus Sujanike, and Suparman will lead the production of organic fertilizers from livestock dung. The construction of the Sumatran rhino food plant garden was led by Suwarno, Muhammad Ibumaulana, and Briyan Suhendra (Figure 6).



Figure 5. The program enrichment and collaboration signing during the FGD in Braja Gemilang headquarters



Figure 6. The work team of three program in Braja Gemilang

In the short term, the Biology team will assist the product quality analysis process by involving partners from the Department of Agricultural Product Technology Unila, the Indonesian Rhino Foundation/Sumatran Rhino Sanctuary, and Askha Jaya souvenir business actors in Bandar Lampung. This program targets the sustainability of community businesses. The success of the assistance in Braja Gemilang Village is expected to serve as a model for empowering village communities through conservation and an inclusive, independent, and sustainable green economy.

CONCLUSION

The initiation of local potential exploration has been completed, and three programs were selected: cassava-based MOCAF flour, tiwul, organic fertilizer, and a Sumatran rhino food plant garden. Building collaboration and partnership is proposed.

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