Synergy Between Village-Owned Enterprises (BUMDesma) and the Geothermal Industry: A Community Empowerment Approach through Local Institutional Strengthening (Case Study: BUMDesma Sugih Alam Lestari)

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ABSTRACT

The development of geothermal energy, as mandated by Law No. 21/2014 on Geothermal Energy and aligned with Indonesia's national energy transition agenda, must be closely integrated with the socio-economic sustainability of surrounding communities. Active participation of local stakeholders—particularly through structured institutions such as Village-Owned Enterprises (BUMDesma), as stipulated in Law No. 6/2014 on Villages—plays a critical role in ensuring an inclusive and equitable transition. This approach is further aligned with the principles outlined in the IFC Performance Standards, particularly PS1 on the Assessment and Management of Environmental and Social Risks and Impacts, which emphasizes meaningful stakeholder engagement and community empowerment.

This paper examines such a synergy through a case study of the institutional strengthening program of BUMDesma Sugih Alam Lestari, a consortium of village enterprises from three villages near the Patuha geothermal site in West Java. Facilitated by PT Geo Dipa Energi (Persero) in collaboration with the Anwar Muhammad Foundation (AMF), the program aimed to transform BUMDesma into a professional, competitive, and sustainable business entity capable of managing local economic potential linked to the geothermal industry, in accordance with Presidential Regulation No. 112/2022 on the Acceleration of Renewable Energy Development.

Adopting a participatory, capacity-building, and multi-stakeholder approach consistent with IFC PS1 standards, the program was implemented through four key stages: (1) initial assessment and preparation, (2) development of institutional training modules, (3) a five-day training and technical assistance, and (4) evaluation and program closure. The training modules emphasized defining corporate values and strategic plans, establishing standard operating procedures (SOPs) for communication and coordination, and strengthening financial planning and legal compliance. This approach positioned community members as active agents in economic development rather than passive recipients of corporate social responsibility.

The program succeeded in enhancing institutional capacity, aligning business visions and missions, strengthening governance structures, and fostering emerging collaborations between BUMDesma and geothermal operations. Identified opportunities for economic integration included agricultural processing, village-based tourism, and local supply chain participation within the geothermal ecosystem.

However, several structural and cultural challenges were identified, including weak internal communication, insufficient capital contributions from village governments, uneven technical capabilities among participants, and a lack of clear business direction. These challenges underscore the importance of ongoing mentorship and a sustained capacity-building commitment, in line with the adaptive management principles advocated by IFC Performance Standards.

In conclusion, the synergy between BUMDesma and the geothermal industry demonstrates a practical model for linking clean energy development with community empowerment. The Sugih Alam Lestari case highlights that a structured, participatory, and adaptive institutional approach can strengthen the role of villages as active development actors while enhancing the social legitimacy of renewable energy projects. With appropriate local adaptations and consistent stakeholder engagement, this model offers a replicable framework for other geothermal regions.

1. INTRODUCTION

Large infrastructure and energy projects in rural areas require long-term synergy between companies and local communities to ensure sustainable operations and equitable benefits. In Indonesia's geothermal sector, a critical vehicle for community development is the Badan Usaha Milik Desa (BUMDes) or Village-Owned Enterprise, which is a community business entity owned and managed by one or multiple villages. BUMDes are envisioned to drive rural economic growth and social welfare, aligning with Indonesia's decentralization and Village Law policies (Sukarja D., 2022). However, many BUMDes face challenges in governance, capacity, and legal status. National data show that out of tens of thousands of BUMDes formed, only about 10% had obtained formal legal entity status by 2022, due to bureaucratic hurdles (Wikipedia, 2025). Common issues include limited management skills, lack of financial literacy, and unstable organizational structures, which often render BUMDes ineffective or unprofitable. These challenges highlight a need for institutional strengthening interventions to realize the full potential of BUMDes as engines of local development.

PT Geo Dipa Energi (Persero), a state-owned geothermal developer, operates the Patuha geothermal power plant in Ciwidey, West Java. Recognizing the importance of community empowerment around its operations, PT GDE initiated a partnership with the joint BUMDes of the nearby villages. The BUMDes bersama (jointly owned by multiple villages) Sugih Alam Lestari was established in

2022 by three villages – Alamendah, Panundaan, and Sugihmukti – through an inter-village deliberation (Musyawarah Antar Desa) and joint village regulation (AMF and PT GDE, 2024). The BUMDesma was created to coordinate and optimize local economic potential (agriculture, hot spring tourism, etc.) across the villages and to achieve economies of scale in business ventures. PT GDE's community development program aimed to strengthen this nascent BUMDesma into a mature, competitive, and sustainable enterprise that can meaningfully participate in and benefit from the geothermal project's presence. In late 2023, PT GDE engaged a social development consultant (Anwar Muhammad Foundation) to implement a structured capacity-building initiative for BUMDesma Sugih Alam Lestari. The program, conducted from November 2023 to March 2024, encompassed legal assessment, training modules, and mentoring, with the specific goal of transforming the BUMDesma into a well-governed, financially viable institution capable of improving village welfare and supporting the geothermal project's social license to operate (AMF and PT GDE, 2024).

This paper rewrites and expands the initial findings of that program, situating them within broader academic and policy perspectives. We focus on how institutional strengthening of BUMDesma Sugih Alam Lestari was pursued as a collaborative CSR strategy and how it aligns with national regulations and international best practice standards. We conduct a gap analysis between the actual practices in Patuha (the interventions and current state of the BUMDesma) and the expectations set by Indonesian policy (Village Law and related regulations) and international frameworks (ADB's Safeguard Policy Statement and IFC's Performance Standards). To enrich the analysis, we compare the Patuha case with best practices from other regions, especially instances where corporations have successfully empowered BUMDes or similar local institutions. The results provide insights into effective models of corporate–community partnerships in the geothermal industry and rural development, highlighting lessons learned, remaining gaps, and recommendations for sustaining long-term geothermal-community synergies.

2. CASE BACKGROUND: BUMDESMA SUGIH ALAM LESTARI AND PT GDE PATUHA

2.1 Case Background: BUMDesma Sugih Alam Lestari and PT GDE Patuha

The establishment of BUMDesma Sugih Alam Lestari in early 2022 was driven by several factors identified in the legal assessment:

- Local Initiative: The idea came from the heads of the existing BUMDes in each village (each village already had its own single-village BUMDes prior). They saw value in creating a joint entity that could serve as a coordination forum and larger business vehicle for all three communities.
- Common Potentials: The villages share similar economic potentials – agriculture (potatoes, tomatoes, chili, celery, strawberries, etc.) and tourism (hot spring baths and nature tourism) are prominent in all three. A joint enterprise could better aggregate and market these products and services.
- Geographical Proximity: The villages are neighboring (though administratively in three different sub-districts), which eases collaboration.
- Scale and Capacity: A combined BUMDes was expected to have greater financial and operational capacity than the individual BUMDes – more capital, broader business reach, and professional management – thus able to take on bigger ventures and compete in wider markets.

In November 2023, GDE and Anwar Muhammad Foundation (AMF, a Jakarta-based social development foundation) signed an agreement for an "Institutional Strengthening Services for BUMDesma Sugih Alam Lestari". The program's specific objectives were to "strengthen the institutional capacity of the BUMDesma so that it becomes a well-established, competitive, and sustainable business entity that can play a strategic role in improving village welfare". The scope of work was carried out in four stages:

1. Preparation Stage (Nov 2023): Formation of the implementation team, initial stakeholder meetings, and a Pre-Assessment. A Kick-off Meeting was held on 27 Nov 2023 with participants from GDE and AMF to align understanding and share data (minutes of this meeting note setting up a shared Google Drive for data and a WhatsApp group for communication). The preparation culminated in an Inception Report outlining the strategy, steps, and methods to be used by the team.
2. Assessment & Module Development (Dec 2023 – Jan 2024): The AMF team conducted a thorough diagnosis of the BUMDesma's condition – reviewing legal documents, interviewing the management, and identifying gaps in organizational capacity. Based on this, they developed a set of training modules and SOPs tailored to the BUMDesma's needs. The modules created (as listed in the final report and attachments) included: (a) Corporate Values and Strategic Planning, (b) Standard Operating Procedures for Communication, Coordination, and Stakeholder Relations, (c) Business Planning and Financial Planning, and (d) Legal Aspect Assessment. Each module was documented as a handbook in Indonesian for the BUMDesma. The content drew from both regulatory standards and practical management concepts.
3. Training & Assistance Implementation (Feb 2024): A series of training workshops and mentoring sessions were held with the BUMDesma management and stakeholders. The methodology was notably participatory – the program adopted a Participatory Action Research (PAR) approach, meaning the BUMDesma's board members were engaged in identifying problems and formulating solutions interactively rather than being passive recipients of lectures. Over multiple sessions, the AMF facilitators guided the participants to formulate a new vision and mission, articulate their corporate values, draft a strategic plan (3–5 years), and develop SOPs for key processes. For example, one SOP established was for internal and external communication: it outlined how BUMDesma officials should coordinate among themselves (internal communication) and with external parties like village governments, GDE, and other partners. Another SOP delineated the process for preparing annual work programs in a structured way (starting from community input, to board drafting, to approval in a members meeting) to ensure transparency and planning discipline. Business planning exercises were carried out, including SWOT analysis and identifying potential new business units for the BUMDesma. Financial management training introduced basic accounting templates suitable for BUMDes operations (cash flow records, profit-loss statements for each unit, etc.). Throughout this stage, GDE's community relations staff participated as well, strengthening trust between the company and BUMDesma.
4. Closing & Handover (Mar 2024): The final stage included evaluating the training outcomes and handing over all documents and recommendations to both BUMDesma and PT GDE. A closing meeting or seminar was conducted where the BUMDesma presented its newly developed strategic plan, SOPs, and other outputs, symbolizing the "graduation" of the

program. The final report (Laporan Akhir) was delivered, containing findings, an evaluation of progress, and a set of recommendations for follow-up (discussed in Section 5).

By the end of the program, BUMDesma Sugih Alam Lestari had several tangible outputs: a Corporate Values & Strategic Plan document (2024–2028), revised AD/ART drafts (to accommodate changes like legal entity status and new vision/mission), a Business Plan and Financial projections, and a set of SOPs codifying processes for communication, planning, asset management, and accountability. These were compiled in a "module compendium" that serves as a reference for the BUMDesma going forward. Table 2 (next section) will highlight some before-and-after aspects of the BUMDesma's institutional capacity due to the program.

3. INSTITUTIONAL STRENGTHENING INITIATIVES AND OUTCOMES

The core components of institutional strengthening for BUMDesma Sugih Alam Lestari can be categorized into improvements in (a) governance and organizational values, (b) planning and financial management, (c) standard operating procedures, and (d) stakeholder engagement capacity.

3.1 Corporate Governance and Values

Prior to the intervention, the BUMDesma had a nominal vision and basic rules, but these were not widely internalized by its management. The training facilitated a collective rethinking of the corporate vision, mission, and values of the BUMDesma. Through workshops, the management and village representatives defined core "Corporate Values" that reflect both local wisdom and business principles (for instance, values like integrity, cooperation (gotong-royong), innovation, and sustainability were discussed). A unified vision and mission statement was then formulated, aligning with the chosen values and the geothermal context. This exercise not only produced documents but also helped the team build a shared identity and purpose. The Articles of Association (AD) needed amendments to incorporate the new vision/mission and to adjust to PP 11/2021 norms (e.g., explicitly stating the BUMDesma's status as a legal entity and its relationship with village governments). The program delivered a draft revised AD and Bylaws (ART). Additionally, principles of Good Corporate Governance (GCG) were introduced: accountability (clear definition of roles), transparency (open reporting), responsibility (compliance with laws), independence (professional management decisions), and fairness (equitable treatment of members). The importance of GCG was emphasized as crucial for the BUMDesma to gain trust from stakeholders (villagers, company, banks). This aspect was reinforced by sharing best practice examples – e.g., how other successful BUMDes ensure community oversight and routine audits. By the end, the BUMDesma's leadership committed to implement regular management meetings, maintain records of decisions, and produce annual reports to the member villages, which were not systematically done before.

3.2 Strategic Business Planning

The strategic plan crafted (covering 3–5 years) is a roadmap for the BUMDesma's enterprise development. Initially, the BUMDesma did not have a formal medium-term plan; activities were on an ad-hoc annual basis. The program guided them through a Participatory SWOT Analysis to assess internal strengths/weaknesses and external opportunities/threats. Key strengths identified included the abundance of local natural resources (high-value crops, tourism attractions) and the support from PT GDE, while weaknesses were the limited experience in marketing and low working capital. Opportunities included the growing tourist flow to the area (which could be tapped via services or product sales) and potential partnerships (e.g., with agri-buyers or tour operators), whereas threats included competition and price volatility in agriculture. Based on this, strategic objectives were set, such as "establish a processing center for agricultural products to increase value-add" and "develop village tourism packages in collaboration with the geothermal site." The strategic plan then outlines phases: Year 1 focus on capacity building and pilot projects, Years 2–3 expanding business units (e.g., opening a farm supply store or village cooperative shop, developing a tourism venture), and Years 4–5 pursuing larger partnerships or investments. To support this, a Business Plan was formulated for each proposed venture with basic financial projections. The financial planning training covered budgeting, simple accounting, and projecting cash flows. Many BUMDes falter due to lack of financial discipline, so templates for monthly financial statements and budgeting were provided. The outcome was that the BUMDesma produced a consolidated 2024 Work Plan and Budget that incorporates learnings from the training – including realistic revenue targets and expense controls for each activity. This is a significant improvement from previous practice where plans were vague and not backed by financial analysis. The BUMDesma also learned to identify risk and mitigation in business (e.g., what if crop yields fall, or tourist visits decline, and how to respond).

3.3 Standard Operating Procedures (SOPs)

Institutional robustness often lies in having standard processes rather than ad-hoc operations. The program developed several SOP documents in collaboration with the BUMDesma team. Notable SOPs include: **(i) Communication and Coordination SOP** – this maps out how internal communication flows (e.g., between the Director and unit managers, between BUMDesma and Village Heads) and how external communications are handled (for instance, if there's a need to liaise with PT GDE or government agencies, who initiates and how to document it). Clear communication lines ensure transparency and keep all stakeholders fully informed. **(ii) SOP for Work Plan Preparation** – detailing steps and timelines for preparing the annual program and budget of BUMDesma, including community consultation (so villagers can suggest ideas that BUMDesma might take up as business or services) and endorsement by the inter-village forum. **(iii) SOP for Asset & Finance Management** – delineating how to handle BUMDesma assets and capital. This includes procedures for using PT GDE's grants or village capital injections (e.g., requiring an approval from the Board of Trustees for expenditures above a certain amount), inventory management for any equipment, and guidelines for profit distribution or reinvestment at year-end. **(iv) SOP for Accountability & Reporting** – specifying when financial and activity reports must be generated, to whom they are submitted (Village Heads, GDE, and possibly to a village assembly), and if any audits are to be done. These SOPs serve as an internal control mechanism. By writing these down, the BUMDesma has a reference to ensure consistency despite potential changes in personnel. As a living institution, these SOPs can be updated as needed, but at least they now have a starting point that did not exist before. The program team encouraged the BUMDesma to formally adopt these SOPs via a BUMDesma Board decision and to socialize them among all members/employees.

3.4 Stakeholder Engagement and Partnerships

A crucial aspect of sustaining the BUMDesma is how it engages with its stakeholders. The training highlighted identifying key stakeholders: the member village governments, the community at large (including farmers, youth groups, etc.), PT GDE, local government agencies (Cooperative Office, Tourism Office, etc.), and other private sector partners (e.g., buyers of produce). A stakeholder mapping was done, and strategies were discussed for each category – for example, maintaining good communication with village governments through regular briefings to the Village Heads (this secures political support and possibly capital contributions); engaging villagers by demonstrating how BUMDesma activities benefit them (this could be through community meetings or tangible examples like hiring locals for projects); leveraging PT GDE's support by aligning BUMDesma projects with CSR focus areas (for instance, if GDE is interested in environmental conservation, BUMDesma could propose a reforestation tourism site, etc.). The SOP on external relations ensures that enquiries or proposals from any external party are responded to systematically. The BUMDesma is now better prepared to handle partnerships. As evidence, during the program itself, linkages were established: the Cooperative Office of Bandung Regency was invited to deliver a session on BUMDes best practices and indicated technical guidance support; a local bank (BRI) was approached about the possibility of microcredit for BUMDesma ventures; and PT GDE committed to exploring a MoU for ongoing mentorship. This is reminiscent of other successful models such as the BUMDes Surya Jaya Abadi in East Kalimantan, which grew through cross-sector collaboration – receiving legal advocacy support from the local prosecutor's office and technical/business coaching from a coal company (PT Berau Coal) (Haryani, S. et al., 2025). In that case, the BUMDes forged partnerships to develop new businesses (like chocolate production, livestock waste management) with the company's help. Sugih Alam Lestari's management learned from such examples the value of networking: they have begun to see PT GDE not just as a donor but as a long-term partner, and are aware of the need to also draw in government and other private players for support. The program encouraged the formation of a multi-stakeholder forum (perhaps convened annually) where the BUMDesma presents its progress to all stakeholders (villagers, government, GDE, etc.) and gathers input for future plans – thereby institutionalizing community participation and transparency.

Table 1. Institutional Capacity of BUMDesma Sugih Alam Lestari: Before vs. After Strengthening

Aspect	Before (2022–2023)	After Program (2024)
Legal Status & Documents	Registered as BUMDesma in 2022 with basic AD/ART and initial workplan. However, AD/ART not fully aligned with new PP 11/2021 requirements (e.g., wording on legal entity) and workplan was 1-year only.	Legal basis strengthened: Revised AD/ART drafted to comply with PP 11/2021 and incorporate new vision/mission. A multi-year Strategic Plan and updated 2024 workplan have been produced, pending formal adoption by an Inter-Village Assembly.
Organization & Governance	Management structure in place (Director, etc.) but roles overlapped and governance practices (meetings, reporting) were ad hoc. Little understanding of GCG principles; no clear separation between village government authority and BUMDesma operations.	Governance improved: Roles and responsibilities clarified, reducing overlap. Board of Trustees and Management now have scheduled coordination meetings. GCG principles introduced – e.g., decisions are recorded, finances are reviewed regularly. Village heads remain as Trustees but commit to letting the BUMDesma management operate professionally, intervening only via formal channels.
Human Resource Capacity	BUMDesma board had enthusiasm but limited skills in business planning, accounting, and stakeholder management. No formal training received prior.	Human capacity built: Board and staff trained in business planning, basic accounting, communication, and negotiation. Confidence increased – managers can now prepare budgets and proposals. A need for ongoing training is recognized (e.g., refreshers or advanced training in marketing) and was recommended to be pursued with GDE or local agencies.
Standard Procedures	Lacked documented SOPs. Operations were run based on informal understanding or the initiative of individuals. This led to inconsistency (e.g., if a manager left, their knowledge went with them).	Institutional memory created through SOP documents for key processes (communication, planning, finance, reporting). These SOPs provide step-by-step guidance, ensuring consistency and easier onboarding of new personnel. The BUMDesma has started to implement these SOPs—e.g., using the communication protocol when engaging with GDE—and will refine them as needed.
Financial Management	Financial records were rudimentary. No clear separation of accounts per business activity; no formal financial reports (only verbal updates to village govts). Difficulty in assessing profitability of activities.	Financial systems initiated: Cash book and ledger introduced. Now each business unit's income and expenses are tracked. A simple Profit-Loss statement format was given, and the treasurer trained to use it monthly. The BUMDesma produced its first formal financial report for Q1 2024 as practice. Transparency improved, with intent to share annual financial statements in village forums (per SPS/PS1 transparency ideals).
External Partnerships	Few partnerships; interactions with PT GDE were mainly for donations or sponsorships. Little engagement with government programs or other BUMDes networks.	Networking enhanced: A closer partnership with PT GDE established, including follow-up mentoring commitments. Connections made with government agencies (e.g., Cooperative Office for training support). BUMDesma now also part of a WhatsApp group of regional BUMDes to exchange ideas (they learned from a Yogyakarta BUMDes success story via such

Aspect	Before (2022–2023)	After Program (2024)
		networks, similar to Surya Jaya Abadi gaining inspiration from others). Future partnership opportunities (with buyers, microfinance, etc.) have been identified and some pursued.
Community Engagement	Villagers' awareness of BUMDesma was low; seen as "village government's business" rather than community's. Minimal communication of BUMDesma plans to villagers, leading to limited local participation.	Community outreach started: BUMDesma conducted a socialization meeting in each village after the training to introduce its new plans and invite community input. Plans for periodic village meetings to involve community in brainstorming economic activities (as done in Surya Jaya Abadi's stakeholder meetings) are in place. A grievance/feedback channel is considered (villagers can drop suggestions or complaints at BUMDesma office or via WhatsApp), aligning with GRM best practices (ADB, 2009).

Overall, the institutional strengthening initiatives have significantly improved the readiness and professionalism of BUMDesma Sugih Alam Lestari. While many of these changes are recent and will require diligent implementation, the BUMDesma is far better positioned in 2024 than it was in 2022. It has a clearer vision, a plan to achieve it, the procedures to guide its operations, and an expanding support network. PT GDE, on its part, has gained a capable local partner which can execute community development projects or joint ventures more effectively than before. This sets the stage for the next phase of geothermal-community synergy – moving from capacity building to actual growth of enterprises and tangible benefits.

4. GAP ANALYSIS: PRACTICE VS. POLICY STANDARDS

Despite the progress made, it is important to analyze remaining gaps between the current practice at BUMDesma Patuha and the ideals outlined in national/international frameworks. This section identifies those gaps and areas for improvement:

In conclusion of the gap analysis, Table 2 synthesizes some key gaps and proposed measures to address them:

Table 2. Identified Gaps and Recommendations for Alignment with Standards

Identified Gap	Implications	Recommendation
Formal adoption of new governance documents pending.	Without formal approval, new vision/AD/ART lack legal force, possibly slowing implementation.	Convene Musyawarah Antar Desa promptly to ratify all changes and issue updated Joint Regulations. PT GDE and subdistrict government should facilitate this meeting to ensure support.
Need for continuous capacity building and succession planning.	Risk of relapse if trained individuals leave or lose motivation.	Establish a mentoring program: PT GDE to provide or fund quarterly coaching sessions for BUMDesma (as recommended in final report). Pair BUMDesma with a more advanced BUMDes as a "sister BUMDes" for knowledge exchange. Plan for involving youth as interns or assistants to groom future managers.
Limited capital for business expansion.	Strategic plans may not materialize due to lack of funds, undermining community expectations.	Secure additional funding: Village governments to allocate some Village Fund to BUMDesma capital (as per law, this is allowed). PT GDE to consider a CSR grant or zero-interest loan for specific viable projects (with proper controls). Explore micro-credit or grants from government programs (e.g., Ministry of Villages grants for BUMDes).
Absence of formal grievance or feedback mechanism for community.	Villagers may not have a clear channel to voice concerns, potentially leading to frustration or rumor if issues arise.	Implement a Grievance Redress Mechanism (GRM) in line with SPS: e.g., dedicate a phone line/WhatsApp for BUMDesma feedback, assign a staff to log and resolve issues, and advertise this to villagers. Integrate this with PT GDE's existing community grievance system to ensure no complaint is overlooked.
No explicit stakeholder engagement plan with targets.	Hard to measure success of engagement or ensure all groups are reached (women, vulnerable groups).	Develop a brief Stakeholder Engagement Plan for BUMDesma-geothermal synergy: set targets (e.g., quarterly multi-stakeholder forums, women's entrepreneurship training once a year, etc.). This plan can be annexed to PT GDE's CSR program and reported on annually, aligning with IFC PS1 monitoring (IFC, 2012).
Monitoring and impact evaluation of BUMDesma's performance.	Lack of KPIs means progress may not be objectively tracked, and success stories or problems might be missed.	Define KPIs such as annual revenue, profit, number of active members, number of partnership MOUs, community satisfaction rate (via survey). PT GDE's Social Safeguard team can help BUMDesma collect data and include it in social performance reports (fulfilling ADB's monitoring requirement). Also, involve the community in participatory evaluation (e.g., end-of-year village meeting to review BUMDesma's report).

By addressing these gaps, the Patuha partnership can move closer to exemplary alignment with both national policy aspirations and international good practices. It is a dynamic process: institutional strengthening is not a one-off achievement but an ongoing journey of improvement and adaptation. The commitment of both BUMDesma and PT GDE to continue this journey will determine the long-term success of their synergy.

5. COMPARATIVE INSIGHTS FROM OTHER BUMDES EMPOWERMENT PROGRAMS

To put the Patuha experience in context, it is useful to compare it with similar rural institutional empowerment initiatives, especially those involving BUMDes and corporate partners. Indonesia has seen a variety of such collaborations, given the emphasis on village development and CSR in recent years. Here we highlight a couple of cases and best practices:

Case 1: BUMDes Surya Jaya Abadi & PT Berau Coal (East Kalimantan). This BUMDes, located in a village within Berau Regency, was supported by a large coal mining company as part of its CSR. According to a 2025 study by Sri Haryani et al., the collaboration focused on applying Good Corporate Governance (GCG) principles and fostering sustainable businesses in the village. The BUMDes engaged in waste management (turning livestock waste into fertilizer) and small industry (batik handicrafts), with the company providing technical consultants to ensure environmental sustainability and product quality. A key feature was the strategic partnerships the BUMDes formed: the local Prosecutor's Office gave legal advisory (ensuring the BUMDes's contracts and agreements are sound), the Regency's Animal Husbandry Service provided training in livestock management, and PT Berau Coal actively coached the BUMDes in developing new ventures like a chocolate production business. The result was a thriving BUMDes that not only generated profit but also managed environmental issues and became a model for others. Importantly, Surya Jaya Abadi involved all village stakeholders in decision-making – through regular meetings that included village council (BPD) members, community leaders, and villagers, they jointly decided on the BUMDes's direction and evaluated progress. This inclusive approach led to broad community support, and villagers saw the BUMDes as a central figure in achieving a sustainable village. The Patuha BUMDesma can learn from this the value of multi-stakeholder involvement and multi-sector partnerships. Already we see parallels: just as Surya Jaya Abadi had Berau Coal's sustained coaching and external network, Sugih Alam Lestari now has GDE's mentorship and is beginning to connect with government agencies and other BUMDes.

Case 2: BUMDes Mekarsari's Bamboo Craft Business (West Java). In a different model, a BUMDes in Garut Regency (West Java) capitalized on local bamboo crafts with support from academic and government programs (not a single corporate CSR, but multiple stakeholders). The empowerment strategy here, as documented by a 2021 study, was to identify a unique local product (bamboo handicrafts), provide training to improve its quality and design, and assist the BUMDes in marketing these products beyond the village (Fahmi R. A., 2025). The local government and an NGO helped the BUMDes form a cooperative of artisans, set up a proper production workshop, and connect to urban markets. Over time, the BUMDes Mekarsari increased village income and became a tourist attraction itself (people visit to see the crafts). The lesson is that focus and specialization can be effective – Patuha's BUMDesma might similarly develop a flagship product or service (for instance, agro-tourism packages that include visiting the geothermal site and local farms). By aligning with something the area is known for (strawberry picking, hot spring tours, etc.) and improving it, the BUMDes can gain a comparative advantage. Corporate partners like GDE can assist by bringing in expertise or funding for such specific projects.

Case 3: Mobilizing BUMDes through CSR in Central Java. Another reference is a concept which argued that CSR funds can be channeled as equity or loans to BUMDes to mobilize their development (Atlantis Press, 2025). Many companies, as noted, have started doing this. For example, some banks and plantation companies in Sumatra have given low-interest loans to BUMDes to run microcredit or small businesses, instead of just donating goods. The advantage of treating CSR as an investment in BUMDes is that it pushes the BUMDes to be accountable and results-oriented (since they handle funds meant to grow, not just spend). PP 11/2021 explicitly allows various forms of CSR support to BUMDes including grants, equity participation, or soft loans. In Patuha's case, PT GDE could consider such approaches for future phases: for instance, rather than directly funding village facilities, channel funds through BUMDesma projects (so the BUMDesma executes, say, a clean water project and is paid for it, building experience and earning a service fee). This ensures CSR is "designed in a targeted and strategic manner so that it can be effective and not just a donation," as recommended by Detania Sukarja. The principle is to make BUMDes a strategic partner in CSR execution. Best practice from companies like PLN (the national electricity company) also shows involving BUMDes in managing rural electricity or tourism spots can yield good outcomes, because the community has a stake in maintaining the project.

Common Success Factors: Across these examples, some recurring themes for success include: strong stakeholder collaboration, where local government, companies, and community all actively contribute; capacity building with follow-ups, not one-off training; clear governance and anti-corruption measures, since any mismanagement can quickly erode trust in a village institution; and alignment with local potential, meaning the BUMDes's businesses are grounded in what makes sense for that area (be it crafts, tourism, agriculture, or services linked to the company's operations). Another factor is peer learning – BUMDes often learn well from each other. In East Kalimantan, Surya Jaya Abadi gained motivation from seeing successful BUMDes in Yogyakarta. Recognizing this, the Ministry of Villages has formed forums for BUMDes and even holds competitions. Sugih Alam Lestari could benefit from participating in such networks, sharing their geothermal partnership story and learning from others.

Finally, it's instructive to consider the sustainability aspect. A best practice is to embed the BUMDes empowerment into the core business cycle of the company. For instance, if PT GDE can integrate BUMDesma into some of its operations (maybe supplying some materials to the geothermal site, managing a parking lot for tourists at the geothermal visitor center, etc.), this provides a steady revenue stream to the BUMDes while reducing project costs or improving relations. Some geothermal companies in Indonesia have done things like hiring local cooperatives for catering or transportation services. If BUMDesma Sugih Alam Lestari can capture such opportunities, it ensures a direct link between geothermal production and community benefit, which is a hallmark of sustainable resource development.

In conclusion, the experiences from other regions corroborate that a collaborative, well-governed, community-based enterprise model can significantly contribute to rural development and simultaneously bolster a company's social license to operate. The Patuha initiative is in line with these practices and, if it continues on its current trajectory, could become a showcase for the geothermal sector on how to do community partnership right.

6. CONCLUSION

The institutional strengthening of BUMDesma Sugih Alam Lestari in partnership with PT Geo Dipa Energi Patuha demonstrates a promising model for achieving long-term geothermal-community synergy. Through a focused capacity-building program, the BUMDesma has evolved from a nascent village enterprise into a more structured and strategy-driven organization that can engage with the geothermal company on an equal footing. This transformation is noteworthy in several dimensions: it aligns closely with Indonesia's national vision for village empowerment under the Village Law and PP 11/2021, and it echoes international best practices for stakeholder engagement as outlined by ADB and IFC.

By grounding the partnership in national regulations, the program ensured legal sustainability – the BUMDesma now stands on a solid legal foundation, which legitimizes its activities and enables it to enter contracts and receive funds formally. The explicit alignment with frameworks like the ADB Safeguard Policy Statement (through emphasis on consultation and grievances) and IFC PS1 (through building a stakeholder engagement mechanism and local capacity) means that the approach not only meets compliance for any international financing but also reflects a corporate responsibility ethos that is globally recognized. In essence, PT GDE's support to BUMDesma operationalizes the principle that projects should share benefits with local communities and involve them in decision-making, moving beyond traditional CSR towards a partnership paradigm.

The gap analysis revealed that while much has been achieved, the journey is ongoing. Key next steps include formalizing the new governance improvements via inter-village agreements, securing resources to implement business plans, and institutionalizing stakeholder engagement (such as setting up feedback channels and tracking impact indicators). Addressing these will help ensure that the initial gains do not plateau but lead to continuous growth. It will be important for PT GDE to remain engaged – not in a dominating role, but as a mentor and facilitator – as the BUMDesma starts operationalizing its strategic plan. The recommendation for GDE to provide follow-up assistance (e.g., on local economic potential mapping, negotiation skills, accounting) is well-placed; this kind of ongoing corporate commitment often marks the difference between short-term project success and genuine long-term capacity development.

Comparative insights from other BUMDes collaborations underscore that Patuha's experience is part of a wider movement towards corporate-community co-development. BUMDes in various regions, when empowered, have revitalized local economies – creating jobs, increasing incomes, and delivering services – while giving companies stable operating environments and community goodwill. The Patuha BUMDesma, in time, could serve as an exemplar for other geothermal projects and industries in Indonesia. It highlights that community institutions, if nurtured, can become reliable partners rather than passive beneficiaries. Moreover, this case contributes to the discourse on benefit-sharing in renewable energy projects: geothermal energy, being location-bound, must invest in local social infrastructure just as it does in physical infrastructure.

In conclusion, the institutional strengthening of BUMDesma Sugih Alam Lestari represents a sustainable development win-win. Villagers gain an enduring capacity to improve their welfare – through an enterprise that they own and govern – and PT Geo Dipa gains a stable social environment and a potential local contractor/ally. The alignment with national and international standards means this model is not only locally relevant but also scalable and reputable. Going forward, stakeholders should focus on consolidating the gains (through formal adoptions and expansions of business activities) and monitoring outcomes to ensure that the BUMDesma achieves tangible improvements in community welfare (e.g., income levels, reduced unemployment, etc.). If the BUMDesma's ventures succeed – for instance, profitable agribusiness, thriving ecotourism, or providing services to the geothermal operation – the synergy will truly be realized: the geothermal resource will be contributing directly to the prosperity of the people living above it, fulfilling both the spirit of the Village Law and the expectations of international sustainable development frameworks.

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