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The Effectiveness of PROPER in Promoting Social Innovation and Sustainable Environmental Management in Indonesia

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Abstract
This study aims to analyze the effectiveness of Indonesia's Environmental Performance Rating Program (PROPER) in fostering social innovation and sustainable environmental governance that contribute to achieving the Sustainable Development Goals (SDGs). Using a qualitative descriptive approach, data were collected through in-depth interviews with Community Development Officers from gold-rated candidate companies in the oil and gas sector, complemented by document analysis of national reports, sustainability disclosures, and PROPER guidelines. Thematic analysis was applied to identify key institutional and organizational patterns shaping corporate sustainability behavior. The findings reveal that PROPER's effectiveness operates through dual mechanisms: institutional pressure (coercive and normative) that triggers compliance and transformation, and signaling mechanisms that enhance reputational legitimacy and internal incentives for innovation. These mechanisms create a self-reinforcing loop that drives companies beyond compliance toward shared value creation. The study highlights PROPER's strategic role as an information-based regulatory instrument that integrates transparency, accountability, and collaboration across stakeholders. Its evolution demonstrates how regulatory frameworks can catalyze institutional learning and embed sustainability within corporate strategies. This research contributes original insights into how environmental disclosure programs in developing countries can transform governance systems and accelerate progress toward national and global sustainability goals.

Keywords: PROPER, SDGs, Social Innovation, Institutional Innovation

1. Introduction

The 2030 Agenda for Sustainable Development (Sustainable Development Goals/SDGs) establishes a global framework that emphasizes the integration of economic growth, social inclusion, and environmental protection (United Nations, 2015). In the Indonesian context, this agenda has been adopted through the National Action Plan for the Sustainable Development Goals coordinated by the Ministry of National Development Planning (Bappenas), positioning the private sector as a strategic partner in balancing economic advancement, social welfare, and environmental sustainability (Bappenas, 2022). In this context, the private sector is recognized as a key partner in achieving sustainable development, yet the main challenge lies in transforming business practices from mere regulatory compliance toward generating tangible positive impacts. Traditional command-and-control regulatory approaches have often proven inadequate in promoting innovative beyond compliance practices. Such models tend to emphasize formal adherence to legal requirements without offering sufficient incentives for firms to innovate or create broader socio-environmental value. In developing countries, where governance dynamics are shaped by limited institutional capacity and complex socio-political relations, the effectiveness of this regulatory model becomes increasingly constrained (Salomão & da Silva Rocha, 2018).

Empirical evidence supports this view: studies in China reveal that command-and-control regulations can negatively affect green innovation efficiency due to financial and operational constraints (Li et al., 2020), while research in Ghana highlights how weak institutions, bureaucratic rigidity, and complex regulations hinder firms' innovation capacity (Adu-Gyamfi et al., 2016). Similarly, the World Bank (2010) emphasizes that burdensome regulatory frameworks and institutional limitations in developing economies often result in formal compliance rather than the creation of shared environmental and social value.

In response, information-based policy instruments such as public disclosure programs have increasingly been recognized as effective tools for promoting corporate environmental accountability. These instruments leverage reputational pressure from markets and civil society to discipline corporate behavior (Fung et al., 2007). In Indonesia, the Program for Environmental Performance Rating (PROPER), administered by the Ministry of Environment and Forestry (KLHK), serves as a prominent example of this approach. PROPER not only evaluates companies' compliance with environmental regulations but has also evolved to encourage superior environmental performance and community development through a publicly accessible color-rating system (Ministry of Environment and Forestry of the Republic of Indonesia, 2023).

The evolution of PROPER's evaluation criteria, particularly those required to achieve the Green and Gold ratings, aligns with the concept of Creating Shared Value (CSV), which emphasizes the simultaneous creation of economic and social value (Hadi et al., 2021). These criteria encourage companies to design programs that go beyond charitable or philanthropic activities toward initiatives that are innovative and integrated into core business operations. This shift has stimulated the emergence of social innovation, defined as the development of new solutions—whether in the form of products, services, models, or processes—that are more effective, efficient, and sustainable in addressing social needs than existing practices (Howaldt et al., 2021).

Several prior studies have demonstrated the effectiveness of PROPER in improving corporate environmental performance, particularly in enhancing transparency and carbon emission disclosure. For instance, The Effect of PROPER Rating and Good Corporate Governance on Carbon Emission Disclosure found that PROPER ratings have a positive influence on the extent of corporate carbon emission disclosure (Nadhiroh et al., 2023). However, a research gap remains regarding the extent to which PROPER's reputational pressure mechanisms specifically foster sustainable social innovation. It is still unclear whether corporate community development programs have evolved from donation-based models toward empowerment-oriented approaches that are more collaborative and innovative. Addressing this question is crucial to evaluating PROPER's role not merely as a pollution control instrument but as a catalyst for inclusive and sustainable development. Therefore, this study aims to analyze the effectiveness of PROPER in driving social innovation that directly contributes to the achievement of the Sustainable Development Goals (SDGs).

2. Research Method

This study employs a qualitative descriptive approach to analyze the effectiveness of the Program for Environmental Performance Rating (PROPER) in promoting social innovation and sustainable environmental management practices. This approach was chosen as it enables an in-depth understanding of the social, institutional, and policy dynamics underlying the implementation of PROPER—dimensions that cannot be adequately captured through quantitative methods.

The research data comprise both primary and secondary sources. Primary data were obtained through in-depth interviews with Community Development Officers from PROPER participant companies that were Gold rating candidates within the oil and gas sector. Secondary data were collected from various sources, including the PROPER National Report published by the Ministry of Environment and Forestry (KLHK) for 2022–2023, corporate sustainability reports, and national policy documents such as the PROPER Technical Guidelines and Indonesia's SDGs Progress Report published by Bappenas (2022).

Data collection involved three main methods. First, semi-structured interviews were conducted to explore corporate experiences, strategies, and perceptions in meeting PROPER criteria and aligning them with Sustainable Development Goals (SDGs). Second, document analysis was performed by reviewing PROPER reports, official KLHK publications, corporate sustainability reports, and relevant policy documents. Third, indirect observation was carried out through the examination of publications and best practices from companies that have achieved Green and Gold PROPER ratings.

The collected data were analyzed using thematic analysis, following the stages developed by Braun and Clarke (2006), which include coding, categorization, and thematic interpretation. This analytical process aimed to identify patterns that illustrate the role of PROPER in fostering social innovation and sustainable governance. The findings were then interpreted using institutional theory (DiMaggio & Powell, 1983), which highlights the influence of normative and regulatory pressures on organizational behavior, as well as the social innovation framework (Howaldt et al., 2021), which explains how new social practices emerge in response to sustainability challenges.

3. Results and Discussions

Based on the research findings, the causal mechanism between corporate participation in PROPER and the emergence of social innovation is not linear but instead forms a recurring institutional learning loop. Two primary mechanisms operate simultaneously and reinforce one another: institutional pressure and the signaling mechanism. These mechanisms explain how PROPER functions not merely as a regulatory instrument but also as a catalyst for behavioral and strategic transformation within corporations toward more innovative and sustainable practices.

3.1. Coercive and Normative Pressures as Drivers of Transformation

Field findings indicate that coercive pressure serves as the initial trigger for companies to conduct a comprehensive evaluation of their social and environmental performance. In the context of PROPER, this pressure primarily arises from corporate efforts to avoid receiving a Red or Black rating, which could entail significant reputational and public trust risks. As noted by a Community Development Officer from an oil and gas company:

> "*A Red rating in PROPER is not merely about administrative sanctions; it carries serious reputational consequences. It serves as a strong warning for management to take immediate strategic actions to improve corporate performance." (Muntia, Interview, September 12, 2025).*

This statement illustrates how coercive pressure functions as a compliance trigger, compelling companies to reassess their social and environmental responsibility strategies (Xie et al., 2024). However, normative pressure—the aspiration to achieve higher ratings such as Green or Gold—acts as a roadmap for transformation and innovation. Higher PROPER ratings require participatory community engagement and program sustainability, encouraging companies to move beyond charitable CSR approaches toward a strategic shared value model.

As highlighted by Donny Arsal, Director of Semen Indonesia Group (SIG), in an interview with Metrotvnews.com (Lestarini, 2025), the company's agricultural waste co-processing program not only provides alternative fuel sources and environmental protection but also delivers economic benefits for local farmers. The initiative reduces fuel costs by approximately IDR 947 million per year while cutting CO_2 emissions—demonstrating the implementation of Creating Shared Value (CSV) principles that integrate economic, social, and environmental objectives simultaneously.

These findings are consistent with institutional theory as proposed by DiMaggio and Powell (1983), which posits that organizations seek legitimacy through processes of institutional isomorphism—adapting to coercive, normative, and mimetic pressures in their environment. Within the PROPER framework, Green and Gold ratings serve as symbols of legitimacy that companies strive to attain, representing success in aligning with the sustainability norms set by regulators and the public. This transformation also aligns with the concept of institutional adaptation (Hoffman, 1999), where regulatory and normative pressures not only generate compliance but also drive firms to internalize sustainability values as an integral part of their business strategy.

3.2. Signaling Mechanism as a Reinforcement of Internal Incentives

In addition to institutional pressures, the analysis indicates that PROPER ratings also serve as positive signals to external stakeholders, including government bodies, local communities, and financial institutions. In contexts of asymmetric information, such signals hold strategic value because they help build reputational capital and strengthen public trust (Cordeiro et al., 2021).

In 2024, the Financial Services Authority of Indonesia (Otoritas Jasa Keuangan or OJK) introduced the Indonesia Sustainable Finance Taxonomy (TKBI), which formally recognizes PROPER as one of the key indicators of corporate sustainability performance. Within the framework of green financing, companies with a minimum PROPER Green rating qualify for access to sustainable financing instruments. Thus, PROPER functions not only as a reputational tool but also as an economic signal that strengthens a company's position in the green capital market (OJK, 2024).

This external signaling is subsequently translated into internal incentives within the organization. As expressed by one Community Development Officer:

> *"After we achieved the Green rating and became a Gold candidate, recognition from management increased. Budgets for community development programs were more easily approved because they were viewed as investments rather than costs."(Muntia, Interview, August 12, 2025).*

This statement demonstrates how a strong external reputation creates internal legitimacy, reinforcing the strategic position of the sustainability division within the corporate structure. This process illustrates that PROPER not only drives external compliance but also enhances internal governance capability and fosters a culture of innovation within companies (Reihlen et al., 2022). Conceptually, this causal mechanism is circular and self-reinforcing. Coercive and normative pressures from PROPER stimulate companies to explore new approaches to managing social and environmental impacts (Delmas & Toffel, 2004). Companies that successfully develop and implement such social innovations subsequently achieve higher PROPER ratings (Lyon & Maxwell, 2011). These high ratings, in turn, function as credible positive signals to stakeholders, strengthening corporate reputation and legitimacy in the marketplace (King et al., 2005).

A strong reputation, in turn, generates internal incentives and greater organizational support for continued investment in innovation, as management begins to perceive sustainability as a strategic value driver (Huang & Xiao, 2023). This positive feedback loop progressively enhances a company's innovative capacity and builds dynamic capabilities for managing sustainability challenges. Accordingly, PROPER can be understood as both an institutional and strategic catalyst that extends far beyond its basic regulatory function (Fainshtein et al., 2024). At its core, PROPER acts as a mechanism for institutional norm formation. Through its repetitive cycles, the program gradually normalizes sustainability and social innovation practices, transforming them from mere compliance obligations into integral components of long-term corporate strategy (Hoffman, 1999).

3.3. From Regulatory Compliance to Strategic Environmental Management

At the early stage of its implementation, PROPER primarily functioned as a command-and-control instrument designed to ensure corporate compliance with environmental regulations. However, as the program evolved particularly with the introduction of the Green and Gold ratings its orientation gradually shifted from mere compliance toward beyond-compliance behavior.

Higher rating levels require companies to demonstrate proactive environmental initiatives, participatory community engagement, and the integration of sustainability principles into core business processes (KLHK, 2023). This shift in orientation reflects a broader global paradigm change in environmental governance from regulation-based approaches toward information- and performance-based mechanisms. Through its public disclosure system, PROPER leverages market and reputational pressures to encourage companies to voluntarily enhance their environmental management systems (Fung et al., 2007).

This finding aligns with Potoski and Prakash (2013), who argue that public disclosure programs can foster the internalization of environmental values within organizational culture. Consequently, companies no longer perceive environmental management as a financial burden but rather as a source of competitive advantage and social legitimacy.

3.4 Dimensions of Institutional and Organizational Learning

This study also demonstrates that institutional pressures within the PROPER framework—both coercive and normative—stimulate organizational learning processes that lead to continuous improvement in corporate environmental performance. For instance, in the oil and gas sector, compliance with pollution control standards initially emerged as a defensive measure. However, over time, these pressures have encouraged companies to adopt more strategic initiatives such as energy efficiency, waste reduction, and the implementation of circular economy principles.

This process can be explained through Argyris and Schön’s (1978) concept of double-loop learning, in which organizations not only correct errors (single-loop learning) but also reassess the underlying goals and values that guide their actions. Through its ongoing evaluation system and emphasis on community engagement, PROPER effectively fosters learning at both the value and strategic levels of the organization. Furthermore, the mechanism of institutional isomorphism (DiMaggio & Powell, 1983) is also clearly evident. Many companies view the achievement of high PROPER ratings by competitors or industry peers as benchmarks for improving their own performance. As one respondent noted:

> *“When another company in our sector received a Gold rating, it became an internal benchmark. Our management immediately set a target to enhance our environmental programs.” (Muntia, Interview, August 12, 2025).*

This cross-company learning dynamic illustrates that PROPER functions not only as a control mechanism but also as a driver of institutional change, shaping new norms of environmental responsibility at the industry level.

3.5. PROPER and SDGs

The Program for Environmental Performance Rating (PROPER) plays a crucial role in supporting the achievement of the Sustainable Development Goals (SDGs) in Indonesia by reinforcing sustainable environmental governance. Through a performance evaluation system grounded in transparency and public disclosure, PROPER encourages companies to manage resources responsibly, engage with communities, and adopt business practices aligned with the principles of sustainable development (KLHK, 2023). This approach positions PROPER as a national environmental policy instrument that effectively links corporate responsibility with the global SDG agenda (United Nations, 2015). Accordingly, PROPER functions not only as a compliance assessment mechanism but also as a sustainable governance instrument that embeds sustainability values into corporate management systems (Bappenas, 2022).

PROPER's contribution to the SDGs is reflected across various dimensions of its assessment framework. For instance, under SDG 6 (Clean Water and Sanitation), PROPER promotes the implementation of efficient wastewater treatment systems and sustainable water quality management. For SDG 7 (Affordable and Clean Energy), it evaluates energy efficiency, conservation, and the use of renewable energy within industrial sectors (KLHK, 2023). Meanwhile, SDG 12 (Responsible Consumption and Production) is addressed through circular economy practices, integrated waste management, and material efficiency. Furthermore, SDG 13 (Climate Action) is advanced through innovation in emission reduction and the use of alternative energy, as exemplified by Pertamina RU IV Cilacap's Desa Mandiri Energi program and Semen Indonesia Group's agricultural waste co-processing initiative, which together reduce CO_2 emissions and enhance fuel efficiency (KLHK, 2023).

Beyond promoting technical sustainability practices, PROPER also strengthens governance and participatory dimensions in environmental management. Companies are required not only to fulfill regulatory obligations but also to build partnerships with local communities, regional governments, and civil society organizations in implementing social and environmental initiatives (Bappenas, 2022). This approach fosters collaborative governance, enhancing accountability and transparency while ensuring that program benefits are directly experienced by surrounding communities. Through the public disclosure of performance results, PROPER also creates social and reputational pressure that acts as an incentive for companies to continuously improve their sustainability performance (KLHK, 2023).

PROPER has emerged as an effective mechanism for strengthening sustainable governance by integrating economic, social, and environmental dimensions within Indonesia's industrial sector. By emphasizing information transparency, multi-stakeholder collaboration, and corporate social responsibility, PROPER directly contributes to accelerating national SDG progress. The program not only ensures compliance with environmental regulations but also cultivates a culture of sustainability among businesses. Consequently, PROPER stands as one of Indonesia's most innovative governance practices, fostering synergy among government policy, corporate action, and community participation in realizing inclusive, competitive, and environmentally responsible development (United Nations, 2015; Bappenas, 2022; KLHK, 2023).

4. Conclusion

This study concludes that the Program for Environmental Performance Rating (PROPER) has evolved from a compliance-based environmental monitoring tool into a strategic governance mechanism that drives institutional transformation and corporate sustainability. Through the interplay of institutional pressures (coercive and normative) and signaling mechanisms, PROPER encourages companies to internalize sustainability values within their management systems. Coercive pressures act as the initial trigger for companies to improve environmental and social performance, while normative pressures guide them toward the development of socially innovative and value-creating programs. Furthermore, high PROPER ratings function as positive reputational signals that strengthen stakeholder trust and corporate legitimacy. This reputational gain translates into internal incentives—enhancing organizational support, resource allocation, and innovation—thereby fostering a culture of sustainability across the company.

At the broader level, PROPER contributes significantly to advancing Sustainable Development Goals (SDGs) in Indonesia by reinforcing sustainable environmental governance that integrates transparency, accountability, and multi-stakeholder collaboration. The program effectively bridges national environmental policy with global sustainability commitments, promoting corporate behavior that goes beyond compliance and emphasizes shared value creation. By embedding sustainability within institutional practices and decision-making structures, PROPER has become not merely a regulatory instrument but a catalyst for socio-environmental and economic transformation, supporting Indonesia's transition toward an inclusive, competitive, and sustainable development model.

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