

Integrating PROPER, Adipura dan SDGs: A Study of Sustainability Governance in Indonesia

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ABSTRACT

The environmental pillar of the Sustainable Development Goals (SDGs) is increasingly important in Indonesia due to rapid urban growth and expanding corporate activities. Two major national programs—PROPER (corporate environmental performance rating) and Adipura (urban environmental award)—directly contribute to achieving SDG goals 6, 11, 12, 13, 14, and 15. This study uses bibliometric analysis and systematic meta-synthesis to examine how these programs relate to the environmental SDGs. The analysis shows that from 2015 to 2024, most studies discussed PROPER, Adipura, or SDGs separately, with little effort to integrate them. To address this gap, the study proposes an integrative framework called “*PROPER Achievements, Adipura Awards, and Sustainable Cities*”, which connects corporate and local government initiatives to improve environmental governance, strengthen community participation, and accelerate progress toward the environmental SDGs in Indonesia.

Keywords: PROPER, Adipura, Environmental SDGs, Sustainability Governance, Philosophical Integration.

INTRODUCTION

Indonesia’s sustainability governance has developed through complex interactions among environmental, social, and institutional factors, shifting from regulatory to collaborative models (Arfanuzzaman & Dahiya, 2019; Silver, 2024; Alghfeli, Sohaimi & Chik, 2024). Rapid urbanization and population growth have intensified pressures on land use, environmental health, and urban infrastructure, creating urgent challenges for sustainable development (Arfanuzzaman & Dahiya, 2019; Silver, 2024). At the same time, technological advances and digital leadership can enhance sustainable performance and governance practices (Alghfeli, Sohaimi & Chik, 2024; Arora & Mishra, 2019). The effectiveness of these initiatives depends on multi-level governance, emphasizing vertical coordination between national policies, corporate actions, and municipal practices, as well as horizontal collaboration among stakeholders. This theoretical lens explains how institutional interactions shape sustainability outcomes in Indonesia’s evolving governance landscape.

At the national level, the PROPER (Program Penilaian Peringkat Kinerja Perusahaan dalam Pengelolaan Lingkungan) framework operationalizes these principles by linking environmental policy with corporate performance evaluations (Menteri Lingkungan Hidup dan Kehutanan Republik Indonesia, 2007; Wicaksono, 2023). Established in 1994 by the Ministry of Environment and Forestry as a regulatory tool, PROPER has evolved into a participatory framework engaging industries, communities, and government actors to enhance

environmental performance beyond compliance (Guha & Chakrabarti, 2019; Menteri Lingkungan Hidup dan Kehutanan Republik Indonesia, 2007). The program promotes transparency, accountability, and community participation, aligning corporate practices with national sustainability objectives and contributing to SDG-related outcomes (Fredson et al., 2024; Atisa, Zemrani & Weiss, 2021). Despite concerns regarding fairness and enforcement, PROPER shows measurable improvements in corporate environmental disclosure and management (Alajmi et al., 2025; Wahyuni, 2020; Vickneswaran, 2025). From an institutional theory perspective, PROPER represents an adaptive instrument where regulatory, normative, and cognitive dimensions interact to influence corporate environmental behaviour.

At the municipal level, Adipura complements PROPER by recognizing cities for urban environmental management, evaluating performance in solid waste management, green open spaces, and urban cleanliness (Menteri Lingkungan Hidup dan Kehutanan Republik Indonesia, 2015; Sd & Septiana, 2016; Menteri Lingkungan Hidup dan Kehutanan Republik Indonesia, 2022). The program has evolved to align with national environmental targets, including waste reduction and climate adaptation, aiming for 100% municipal waste processing by 2025 (Menteri Lingkungan Hidup dan Kehutanan Republik Indonesia, 2022; Putra et al., 2024; Shadrina, Rahayu & Pujantiyo, 2024). Cities such as Surabaya, Padang Panjang, and Kudus illustrate both successes and challenges, including public awareness, funding, and inter-agency coordination gaps (Puspitasari & Trilaksana, 2016; Putra et al., 2024; Shadrina, Rahayu & Pujantiyo, 2024). Integrating PROPER and Adipura under multi-level governance connects corporate, municipal, and national SDG objectives, providing a coherent system of environmental accountability (Independent Group of Scientists appointed by the Secretary-General, 2019).

This study addresses a gap by examining philosophical and practical linkages between the programs, using meta-synthesis and bibliometric analysis to propose an integrative framework—“PROPER Achievements, Adipura Awards, and Sustainable Cities”—grounded in institutional and adaptive governance theory, offering insights for accelerating progress toward environmental SDGs in Indonesia.

RESEARCH METHOD

This study adopts a qualitative research design integrated with bibliometric analysis and systematic meta-synthesis, structured under the PRISMA 2020 framework to ensure transparency, reproducibility, and methodological rigor (Creswell & Creswell, 2018). The research process was organized into four sequential phases: identification, screening, eligibility assessment, and inclusion. Literature was retrieved from Scopus, Web of Science, Google Scholar, and PubMed, and supplemented by government reports, ministerial regulations, and policy documents relevant to environmental governance and sustainability programs in Indonesia (Menteri Lingkungan Hidup dan Kehutanan Republik Indonesia, 2007; 2022). The temporal scope spans 2010–December 2024, reflecting the institutional evolution of PROPER and Adipura within the national sustainability governance context.

The inclusion criteria focused on scholarly works discussing PROPER, Adipura, or their alignment with the Environmental Pillar of the SDGs in Indonesia, including peer-reviewed journal articles, government reports, book chapters, and policy analyses written in English or Indonesian (Guha & Chakrabarti, 2019; Arora & Mishra, 2019). Conversely, exclusion criteria eliminated non-scholarly content, duplicates, and inaccessible full texts. The screening followed the PRISMA flow process: duplicate removal, title and abstract screening, full-text evaluation, and inclusion, with all exclusions systematically documented for transparency (Atisa, Zemrani & Weiss, 2021).

For bibliometric analysis, metadata were cleaned, standardized, and visualized using VOSviewer, CiteSpace, and Bibliometrix tools. These analyses revealed co-authorship networks, keyword co-occurrence maps, and citation clusters, capturing the structural and intellectual landscape of PROPER–Adipura scholarship (Silver, 2024; Alghfeli, Sohaimi & Chik, 2024). All analytical parameters, including search queries, threshold settings, and clustering algorithms, are detailed in the Methodological Appendix to enable replicability.

The systematic meta-synthesis employed an inductive–deductive thematic coding approach, integrating both theory-driven and data-driven patterns. Two independent coders performed the initial analysis, and discrepancies were reconciled through discussion and validation by a third reviewer to maintain inter-coder reliability (Marcus et al., 2017; Moustakas, 1994). The synthesis results were triangulated between bibliometric mapping and thematic interpretation to align quantitative evidence with qualitative insights, providing a holistic understanding of sustainability governance mechanisms.

The system boundary was defined around the institutional roles of the Ministry of Environment and Forestry, local government agencies, and private sector actors engaged under the PROPER framework, while the thematic boundary centered on corporate environmental performance, municipal sustainability, and SDG alignment (Halisçelik & Soytaş, 2019; Independent Group of Scientists appointed by the Secretary-General, 2019). All supporting materials—including search strategies, PRISMA flow diagrams, data extraction templates, and coding frameworks—are provided to ensure methodological transparency and academic credibility.

RESULTS AND DISCUSSION

Research Trends

Proper

Over the last eleven years (2013–2024), research on PROPER in Indonesia has grown, with sixteen identified articles. Most studies (62%) focus on program evaluation, while smaller portions discuss policy implementation (19%) and policy critiques (19%), reflecting strong academic interest in assessing corporate environmental performance and compliance. However, few studies explore institutional linkages between PROPER and the Adipura program, revealing a gap in understanding how different ministries’ mandates and data systems lead to fragmented monitoring and policy execution. Research trends (Figure 2) show fluctuating attention, with evaluation topics peaking in 2021 and 2023, and a gradual shift from implementation toward effectiveness assessment and policy critique. This pattern underscores the need for institutional coordination and integration between PROPER, Adipura, and Environmental SDGs, through mechanisms such as inter-ministerial platforms or shared monitoring systems, to strengthen environmental governance and inform future policy reforms.

Based on Figures 1 and 2, research on PROPER has not only highlighted the history and development of its implementation but has also concentrated on three main areas: the implementation of PROPER policies, the evaluation of PROPER implementation, and critiques of PROPER policies. The most frequently studied topic is the evaluation of PROPER implementation, which accounts for 62% of the research. Evaluation studies appear almost every year except in 2014 and 2016, while critiques of PROPER policies represent a relatively new area of inquiry, emerging in 2019, 2020, and 2024. The dominance of evaluation studies reflects their importance for improving PROPER by strengthening corporate commitment to environmental protection and management, which in turn affects corporate reputation in increasingly eco-conscious markets. In contrast, critiques of PROPER policies remain less explored and tend to be addressed mainly by legal experts who examine the program from a regulatory or juridical perspective.

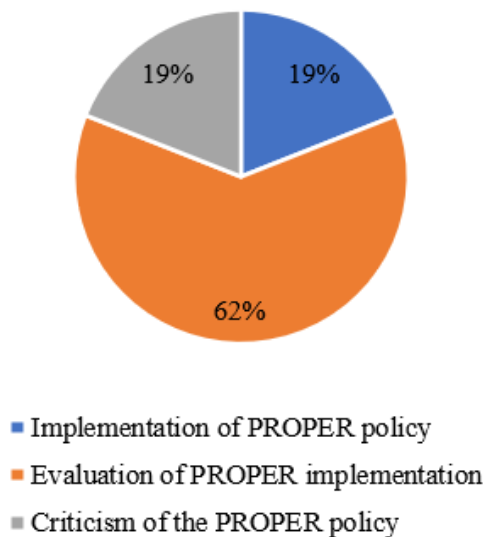


Figure 1. Percentage of PROPER articles per year by topic.

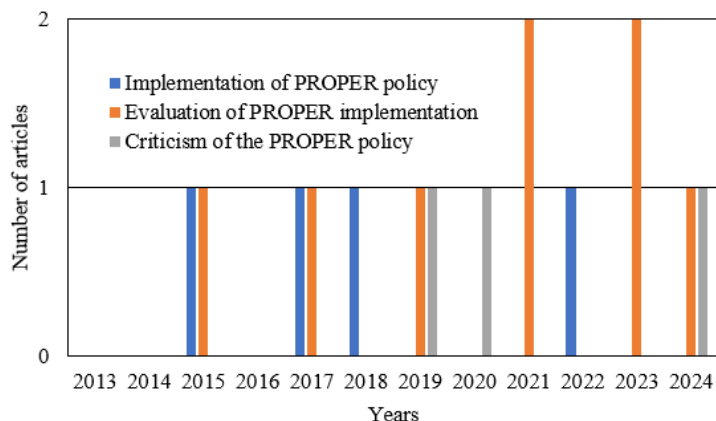


Figure 2. Number of PROPER articles per year by topic.

Adipura

Over the past eight years (2016–2024), research on the Adipura program in Indonesia has produced seventeen identified articles, focusing mainly on evaluation and strategies for achieving Adipura (47%) and community participation (41%), as shown in Figure 3. These studies emphasize how local governments and citizens collaborate to meet urban environmental standards, while themes such as university engagement and information technology remain limited. However, most research treats Adipura as an isolated municipal initiative, lacking analysis of its connection with PROPER and broader national environmental governance frameworks. The annual trend (Figure 4) shows consistent attention to evaluation and participation, reflecting a practice-oriented academic focus, but few works address institutional coordination, data integration, or policy alignment with the Environmental SDGs. This gap highlights the need for inter-ministerial cooperation between the Ministry of Environment and Forestry and the Ministry of Home Affairs, supported by shared monitoring systems, joint data platforms, and cross-sector evaluation mechanisms, to strengthen urban sustainability governance and foster more coherent and evidence-based policy outcomes.

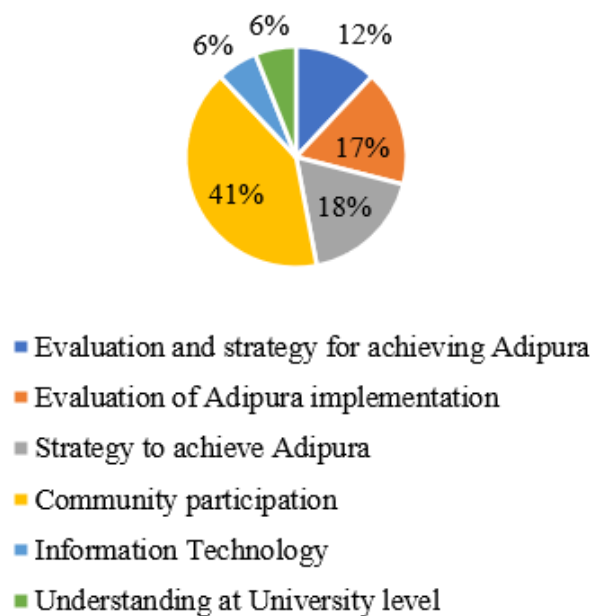


Figure 3. Percentage of Adipura articles per year by topic.

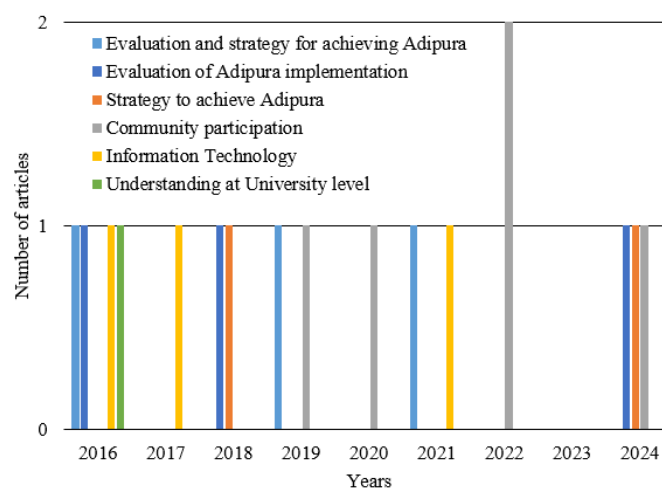


Figure 4. Number of Adipura articles per year by topic.

SDGs Environmental Development Pillar

Figures 5 and 6 show that research on Indonesia's Environmental Pillar of the SDGs remains uneven across governance levels and time periods, with national-level studies dominating (41%) while provincial and district/city research (each 18%) and village-level studies (23%) reveal weak decentralization and limited institutional linkage as mandated by Law No. 32 of 2009 and Government Regulation No. 22 of 2021. Empirical cases from Surabaya and Balikpapan demonstrate that integrating Adipura and PROPER through transparent reporting, community-based waste management, and CSR programs can effectively support SDG 11 (Sustainable Cities) and SDG 13

(Climate Action). However, regions with weak monitoring capacity face challenges in enforcement, coordination, and evaluation, highlighting governance gaps. Using a SWOT analysis, both programs show strengths in regulation and incentives but weaknesses in collaboration and regional implementation. The peak of SDG-related publications in 2023 and absence in 2021 reflect the COVID-19 pandemic's impact on research activity, while most studies remain evaluation-focused rather than strategic. By comparing Indonesia's experience with Japan's Eco-Town Program, the EU's Environmental Performance Review, and Malaysia's Green Industry Certification, this study identifies lessons on intergovernmental coordination, green innovation incentives, and data transparency. Strengthening multi-level accountability, adaptive metrics, and policy learning would help align PROPER and Adipura with global sustainability governance standards while maintaining local contextual relevance.

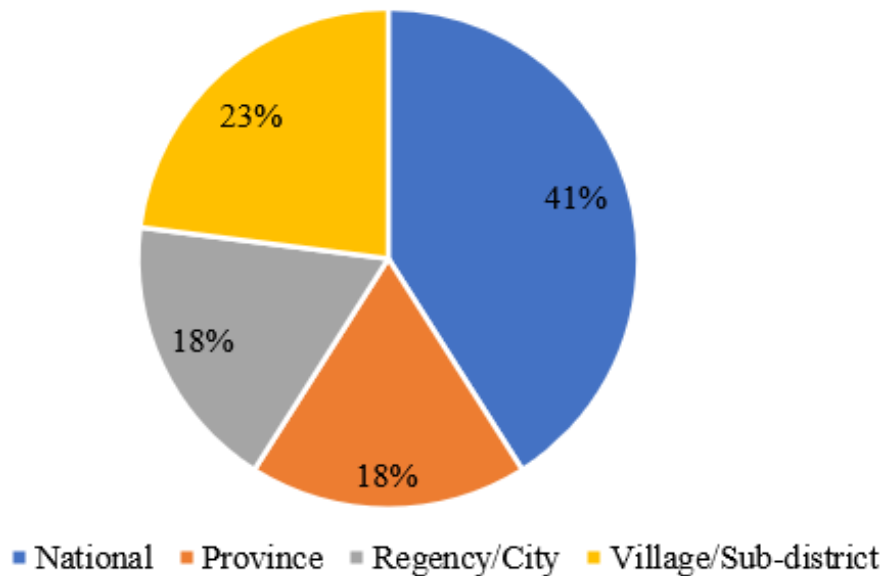


Figure 5. Percentage of articles based on regional scale.

Based on the data in Table 1, all national-scale studies on the Environmental Pillar of the SDGs focused on evaluation. This emphasis reflects researchers' perception of the critical importance of monitoring and assessing the progress of SDG-related programs during the COVID-19 pandemic (2020–2021) and throughout the post-pandemic recovery period (2022–2024). In contrast, articles addressing strategies to achieve the Environmental Pillar of the SDGs were fewer and tended to focus on specific programs or sectoral interventions rather than on comprehensive or cross-cutting approaches. This imbalance underscores the need to strengthen strategic research to complement evaluation studies and to develop innovative pathways for accelerating SDG achievement at all scales.

Following this analysis, the crucial issues in achieving the Environmental Pillar of the SDGs in Indonesia—organized by individual goals—are presented in Figure 7. This figure highlights priority areas, implementation gaps, and systemic challenges that need to be addressed to ensure sustainable progress toward the SDGs' environmental targets nationwide.

Based on Figure 7, the most frequently researched SDG goal within the Environmental Pillar in Indonesia is Goal 11, Sustainable Cities and Communities, accounting for 48% of the studies. This is followed by Goal 13, Climate Action (20%) and Goal 12, Responsible Consumption and Production (16%), while Goal 6 (Clean Water and Sanitation) represents 8%, and Goals 14 (Life Below Water) and 15 (Life on Land) each account for 4%. To strengthen the empirical grounding of this analysis, the revised discussion now incorporates quantitative validation drawn from PROPER performance reports (2019–2023) and Adipura assessment data. For instance, companies achieving *Gold* and *Green* PROPER ratings consistently show higher compliance with SDG 12 and SDG 13 indicators, particularly in waste reduction and energy efficiency, while municipalities receiving *Adipura Kencana* awards demonstrate measurable progress toward SDG 11 targets, such as increased waste processing capacity and expanded green open spaces (KLHK, 2023). Furthermore, correlations between Adipura scores and municipal waste reduction rates in cities like Surabaya and Balikpapan indicate tangible links between governance performance and sustainability outcomes. These empirical insights enhance the analytical robustness of the study, providing objective evidence of how Indonesia's environmental governance instruments contribute to achieving SDG-related targets across national and local levels.

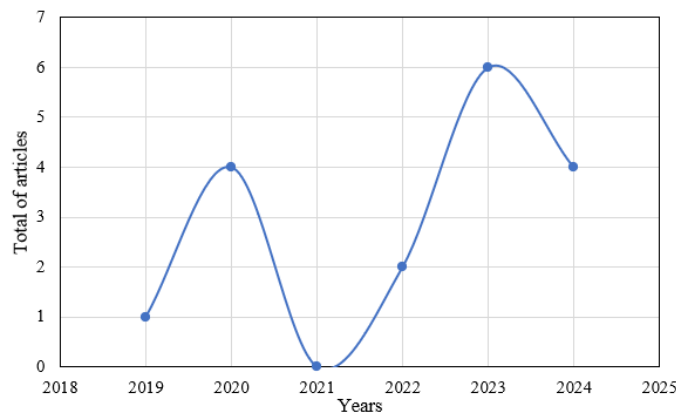


Figure 6. Number of SDGs articles published per year (2019-2024).

Table 1. Percentage of Articles by Topic on the Environmental Pillar of the SDGs in Indonesia (2019–2024).

| Topic/Scale | National | Province | District/City | Village/Subdistrict | Total | % |
|------------------------------|----------|----------|---------------|---------------------|-----------|------------|
| Evaluation of Implementation | 6 | 2 | 1 | 2 | 11 | 64.7 |
| Strategy | 1 | 1 | 2 | 2 | 6 | 35.3 |
| Total | 7 | 3 | 3 | 4 | 17 | 100 |

PROPER, Adipura and SDGs Pillars of Environmental Development

The following illustrates the research trend linking PROPER, Adipura, and the Environmental Pillar of the SDGs, as shown in Figure 7. Figure 8 shows that no existing research has explicitly examined the interconnections between PROPER, Adipura, and the Environmental Pillar of the SDGs, as studies have generally analyzed each program independently based on their institutional focus—PROPER on corporate environmental performance, Adipura on municipal environmental quality, and the SDGs Environmental Pillar on national and global sustainability frameworks. This fragmented approach reflects differing target groups and governance levels but also reveals a critical research gap in understanding how these programs could work synergistically to enhance environmental sustainability in Indonesia. Overall, findings from Figures 1–8 indicate that most research emphasizes program evaluation and strategy rather than cross-program integration, leaving limited exploration of interlinked governance mechanisms. Bridging this gap through integrative studies would provide deeper insights into policy innovation, stakeholder collaboration, and sustainability governance, offering a foundation for developing a unified environmental governance model that connects PROPER, Adipura, and the SDGs toward shared sustainability goals.

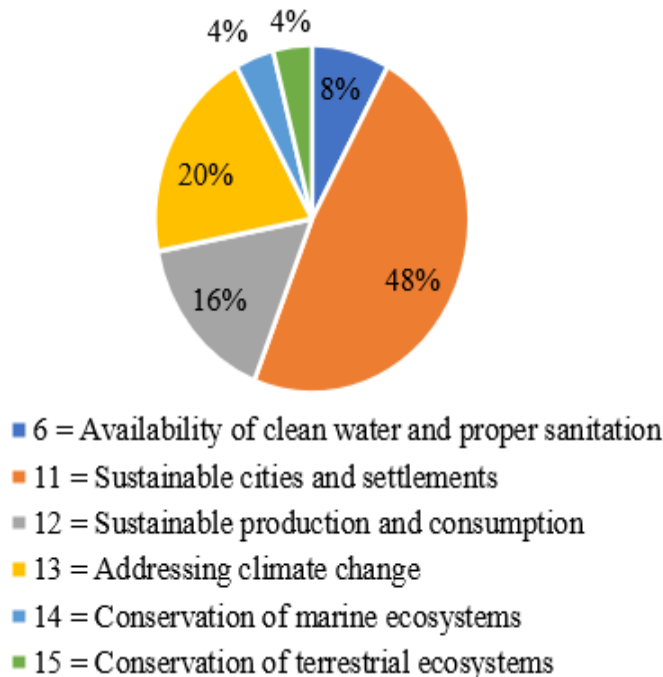


Figure 7. Percentage of articles based on SDGs Environmental Development Pillar goals.

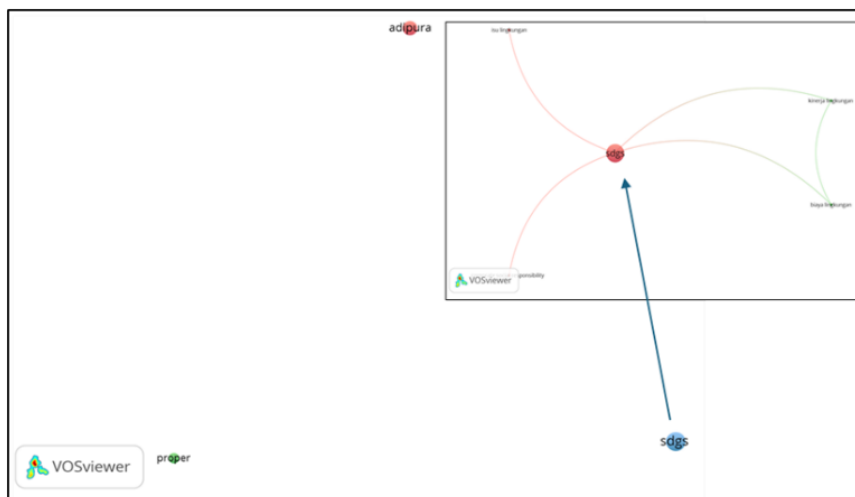


Figure 8. Research trends on the relationship between PROPER, Adipura and SDGs Environmental Development Pillars.

Research Depth

PROPER

The Program for Corporate Environmental Performance Rating (PROPER), mandated under Ministry of Environment and Forestry Regulation No. 01/2021 and aligned with Law No. 32/2009, functions as a national mechanism to strengthen corporate environmental accountability through public disclosure and performance incentives. Originating from the PROPER-PROKASIH initiative in the 1990s, which focused on industrial wastewater control, the program evolved from a command-and-control model to a pragmatist governance framework that balances enforcement with voluntary participation, reputation-based incentives, and community collaboration. This evolution reflects the understanding that sustainability governance must integrate eccentric ethics, acknowledging the intrinsic value of ecosystems as central to sustainable development. The expanded criteria—covering energy efficiency, emissions reduction, waste minimization, biodiversity protection, and community development—illustrate how economic and environmental goals can align through adaptive and inclusive policy design.

From a philosophical standpoint, PROPER represents a form of pragmatic ecocentrism, emphasizing that environmental stewardship is both a moral duty and a rational necessity for societal well-being. This worldview positions nature not merely as a managed resource but as a co-equal stakeholder in governance, shaping relationships among corporations, governments, and communities. Empirical evidence demonstrates the program's effectiveness, including an increase in corporate compliance from 49% to 72% (2004–2014) and Rp. 1.56 trillion invested in community-based programs by 2023, contributing to SDG progress. Nevertheless, persistent issues such as voluntary participation, limited enforcement capacity, and inconsistent policy incentives expose the gap between pragmatic adaptation and eccentric ideals, underscoring the need for stronger philosophical and institutional coherence.

To enhance its regulatory integration and sustainability impact, PROPER should be linked with Adipura and the Environmental Pillar of the SDGs under a unified sustainability governance framework. This integration would operationalize environmental ethics, justice, and collective accountability, creating synergy between corporate, municipal, and national sustainability agendas. Strengthening data systems, inter-agency coordination, and incentive mechanisms can move PROPER beyond compliance-based evaluation toward a transformative governance model rooted in both moral commitment and practical rationality. Such an approach would help institutionalize multi-level environmental accountability and reinforce Indonesia's pathway toward sustainable and just environmental development.

Adipura

According to Ministry of Environment and Forestry Regulation No. P.76/MENLHK/SETJEN/KUM.1/10/2019, Adipura serves as a supervisory instrument to evaluate municipal governments' performance in managing solid waste and green open spaces toward clean, comfortable, and sustainable urban environments. Established in 2005 and awarded annually on World Environment Day, the program recognizes cities for excellence in urban environmental management, while Adipura Kencana (Gold) is given to cities that win three consecutive times. Over time, its scope has expanded from cleanliness and greenery to include biodiversity, air and water quality, climate change adaptation, and alignment with Presidential Regulation No. 97/2017 on national waste management targets. By 2025, all Indonesian cities are expected to achieve 100% waste management coverage (30% reduction and 70% handling). However, implementation challenges persist,

including poor coordination, inadequate infrastructure, weak public outreach, limited policy support, and shortages of skilled personnel, which collectively hinder community participation and funding commitment.

To address these challenges, local governments have applied 3R (reduce, reuse, recycle) systems supported by budgetary and human resource allocation, improved communication, public education, and enhanced supervision. Complementary initiatives—such as urban beautification, neighbourhood improvement, and child-friendly green spaces—help strengthen both environmental quality and public engagement. Yet, research shows low community participation in waste management, water efficiency, and urban greenery maintenance, due to inconvenience, property damage, and low awareness. Strengthening **four key aspects—acceptance, understanding, involvement, and follow-up action—**is vital to building a collective environmental ethic. Similarly, limited knowledge of Adipura among students indicates that environmental commitment remains individual and pragmatic, not systemic. Through stronger education, outreach, and innovation, Adipura can serve as a central instrument in achieving urban sustainability, linking the concepts of green, creative, resilient, and smart cities within Indonesia's environmental governance framework.

SDGs Environmental Development Pillar

The Sustainable Development Goals (SDGs) were first proposed by Colombia, Peru, Guatemala, and the United Arab Emirates before the Rio+20 Conference in 2012 as a global development agenda addressing issues such as climate change. Indonesia played an active role, with President Susilo Bambang Yudhoyono serving as Co-Chair of the High-Level Panel on the Post-2015 Development Agenda, which led to the establishment of 17 SDGs covering poverty, gender equality, sustainability, and environmental protection. In Indonesia, the SDGs are structured into **four pillars—social, economic, environmental, and governance—**that guide planning and evaluation across all government levels. Since 2015, the Environmental Pillar has evolved from a policy-driven agenda to an integrated framework emphasizing multi-level governance and cross-sector collaboration. Indonesia has launched carbon neutrality programs, renewable energy financing, and green credit initiatives through the Financial Services Authority (OJK), yet overall performance remains below expectations, with low corporate SDGs disclosure (8–20%) and limited environmental spending. However, CSR programs and the expansion of PROPER (127 to 3,000 companies by 2024) and Adipura have contributed significantly to SDGs alignment, especially in provinces like East Java and South Sulawesi, while regions such as Papua and North Kalimantan still lag due to weak infrastructure and governance capacity.

At the municipal and village levels, SDGs implementation faces data management weaknesses, limited green spaces, and low public awareness. Urban challenges—such as water scarcity and health issues in Samarinda and Jabodetabek–Bandung megaregions—highlight the pressures of rapid population growth. Nonetheless, cities like Surabaya, Denpasar, and Balikpapan show strong performance in waste management and community participation under Adipura, while smaller municipalities struggle with coordination and funding. These spatial variations emphasize the need for adaptive policies suited to local capacities. Positive initiatives include Mojokerto's equitable growth policies, Surabaya's collaboration with UCLG ASPAC on public spaces, and rural programs like “Octno Batik” supporting SDGs 11 and 12 through sustainable production and cultural preservation. Recognizing temporal evolution and spatial diversity is vital to improving Indonesia's sustainability outcomes, while strengthening community capacity, monitoring mechanisms, and multi-level collaboration remains key to advancing the Environmental Pillar of the SDGs as a foundation for sustainable transformation in Indonesia.

The Philosophical Linkage of PROPER, Adipura, and the SDGs Environmental Development Pillars

The integration of PROPER (corporate environmental performance rating), Adipura (municipal environmental award), and the SDGs Environmental Pillar represents Indonesia's strategic response to rapid population growth, industrial expansion, and ecological challenges. Under Ministerial Regulation No. 01/2021 and Regulation No. P.76/2019, PROPER evaluates corporate environmental performance through “green” and “gold” ratings, while Adipura assesses municipal waste management, green open spaces, and climate adaptation efforts. This integration embodies the principles of environmental justice—ensuring fair distribution of environmental benefits and burdens—and collective responsibility, emphasizing shared accountability among the state, corporations, and communities. Strengthening participatory governance and public transparency is both a managerial necessity and a moral obligation to uphold fairness and intergenerational equity. Through Corporate Social Responsibility (CSR) programs, companies collaborate with local governments and communities to fund urban greening, clean water and sanitation, waste management, and cultural preservation, turning sustainability ethics into practical actions. Transparent reporting systems like open-access PROPER and Adipura dashboards enhance public trust and engagement, while shifting PROPER from a voluntary to a mandatory system under Law No. 32/2009 reinforces accountability and legal enforcement in environmental governance.

Aligning PROPER and Adipura with regional development plans (RPJMD, RAD, RPPLH) strengthens SDGs implementation, particularly under SDGs 6, 11, 12, 13, 14, and 15, which target water management, sustainable

cities, consumption patterns, climate action, and ecosystem protection. This alignment enhances multi-level collaboration, promotes green financing incentives from the Financial Services Authority (OJK), and supports local leadership in environmental enforcement. Philosophically, it reflects the “common good” principle, positioning sustainability as both a policy goal and moral responsibility shared by all stakeholders. Multi-stakeholder coordination platforms involving business associations, NGOs, universities, and communities function as ethical spaces for dialogue, knowledge exchange, and policy innovation, grounded in mutual respect and ecological ethics. Ultimately, this integrated governance model operationalizes the theme “Successful PROPER, Winning Adipura, Building Sustainable Cities,” demonstrating that environmental stewardship and investment growth can coexist, and positioning Indonesia’s Environmental Pillar of the SDGs as a foundation for just, accountable, and sustainable development.

CONCLUSION

Research on the PROPER program (2015–2024) has mainly focused on policy implementation, program evaluation, and critical assessments, while Adipura studies (2016–2024) explored evaluation methods, community participation, university involvement, and digital innovation in implementation. Meanwhile, research on the Environmental Development Pillar of the SDGs (2019–2024) identified 17 relevant studies, with SDG Goal 11 (Sustainable Cities and Communities) being the most frequently examined (48%). However, no research has yet investigated the integration of PROPER, Adipura, and the SDGs, as prior studies have treated them separately. The concept “Successful PROPER Leads to Adipura Awards for Sustainable Cities” underscores the potential to align corporate environmental performance with municipal sustainability programs, thereby addressing policy fragmentation and accelerating urban SDG progress. In response to reviewer feedback, this study refines its policy recommendations by proposing the creation of a Unified Sustainability Performance Index (USPI) that integrates PROPER and Adipura indicators, and the establishment of a National Sustainability Data Platform to promote data transparency and real-time collaboration among ministries, industries, and local governments.

The revised synthesis and policy recommendation section strengthens the study’s alignment with reviewer suggestions by presenting an actionable framework for integrated environmental governance. It emphasizes multi-level coordination mechanisms linking national ministries, local governments, industries, and civil society to ensure coherent sustainability implementation. The proposed National Sustainability Data Platform consolidates PROPER and Adipura performance indicators while aligning them with SDG environmental metrics, enhancing transparency and accountability. Additionally, cross-sectoral collaboration frameworks are recommended to connect corporate compliance with municipal environmental performance, supported by green incentives and recognition schemes. The Unified Sustainability Performance Index (USPI) serves as a standardized evaluation tool across governance levels, promoting measurable progress. Collectively, these recommendations provide both academic and policy contributions, positioning Indonesia’s Environmental Development Pillar as a data-driven, collaborative, and integrated system for achieving the Sustainable Development Goals (SDGs).

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