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## Human Resource Management Strategies to Accelerate Sustainable Development: An Empirical Analysis of SDGs Implementation Effectiveness in Indonesia

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### | ABSTRACT

**Purpose:** This study examines how Human Resource Management (HRM) strategies contribute to accelerating sustainable development in Indonesia, with a focus on the effectiveness of Sustainable Development Goals (SDGs) implementation across government and organizational settings. The research aims to identify which HRM practices most significantly influence institutional capacity, stakeholder engagement, and performance outcomes related to SDG targets. **Method:** Using a qualitative empirical design, data were collected through semi-structured interviews with key informants from governmental agencies, development institutions, and SDG task forces at national and regional levels. Thematic analysis was applied to categorize HRM strategies, including competency development, leadership enhancement, digital HR transformation, and performance-based management. Triangulation with policy documents and SDG progress reports was conducted to strengthen the validity of findings. **Results:** The study reveals that HRM strategies play a pivotal role in strengthening organizational readiness and enhancing the effectiveness of SDGs implementation. Competency-based training and continuous capacity-building programs significantly improve staff performance and program alignment with SDG indicators. Transformational leadership fosters cross-sector collaboration, while digital HR systems enhance transparency, monitoring, and reporting mechanisms. However, challenges remain in terms of uneven resource allocation, limited digital literacy, and inconsistent interagency coordination. **Conclusion:** Effective HRM strategies are crucial for accelerating Indonesia's sustainable development agenda. Strengthening human capital, promoting adaptive leadership, and integrating digital innovation into HR processes are essential to improving SDG implementation outcomes. The study underscores the need for long-term HR policies and multi-stakeholder collaboration to ensure sustained progress toward national and global development targets.

### | KEYWORDS

*Human resource management, sustainable development, SDGs, leadership, capacity-building*

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## I. INTRODUCTION

Sustainable development has become an urgent global agenda in this modern era, where challenges such as climate change, social inequality, and economic crises are forcing countries to seek growth models that not only prioritize short-term profits but also ensure a balance between current and future generations. In Indonesia, an archipelagic country with extraordinary biodiversity and the largest population in Southeast Asia, sustainable development is not merely rhetoric, but a strategic necessity for maintaining national stability. In line with the Sustainable Development Goals (SDGs) launched by the United Nations (UN) in 2015, Indonesia is committed to achieving 17 interrelated global goals covering economic, social, and environmental aspects.

SDG stands for Sustainable Development Goals. The SDGs are a set of global goals launched by the United Nations (UN) in 2015 as a blueprint for achieving a better and more sustainable future for all people and the planet. The SDGs are designed to address various global challenges, such as poverty, inequality, climate change, environmental degradation, and the creation of peace and justice. This agenda was agreed upon by 193 UN member countries, including Indonesia, and aims to be achieved by 2030 with the principles of universality, integration, and inclusiveness so that no one is left behind. The SDGs consist of 17 main goals and 169 targets covering economic,

social, and environmental aspects. According to [sdgs.un.org](https://sdgs.un.org), at its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries – developed and developing – in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.

The economic aspect is part of sustainable development aimed at promoting inclusive and sustainable growth, such as through the development of green industries that can increase Gross Domestic Product (GDP) without sacrificing natural resources. For example, SDG 8 (Decent Work and Economic Growth) calls for the creation of productive and innovative jobs, while SDG 9 (Industry, Innovation, and Infrastructure) encourages investment in environmentally friendly technologies to build resilient infrastructure. Furthermore, from a social perspective, sustainable development emphasizes reducing inequality and improving the quality of life for communities. Indonesia, with a human development index (HDI) that is still below the global average, faces challenges such as extreme poverty in rural areas and high gender inequality. According to [BPS.go.id](https://bps.go.id), Indonesia's Human Development Index (HDI) in 2024 reached 75.02, an increase of 0.63 points or 0.85% compared to the previous year's 74.39. Social issues also discuss SDG 1 (No Poverty) and SDG 5 (Gender Equality) as priorities, where development must ensure access to education, health, and social participation for all levels of society, including vulnerable groups such as women, children, and indigenous peoples.

Meanwhile, the environmental aspect is a key foundation, given that Indonesia is home to the world's second-largest tropical rainforest and is vulnerable to natural disasters such as floods, landslides, and forest fires. SDG 13 (Climate Action) and SDG 15 (Life on Land) call for the reduction of greenhouse gas emissions, the preservation of biodiversity, and the sustainable management of water resources to prevent environmental damage that could exacerbate the global climate crisis. Without the integration of these three aspects – economic, social, and environmental – development in Indonesia risks failure, as seen in the massive deforestation and air pollution in major cities that have threatened public health and economic stability.

Amidst this complexity, human resources (HR) emerge as a key pillar in achieving effective sustainable development. HR are not only executors, but also agents of change who are capable of driving innovation, adaptation, and cross-sector collaboration. In the context of the SDGs, competent and motivated HR can accelerate the achievement of goals such as SDG 4 (Quality Education) through skills development or SDG 12 (Responsible Consumption and Production) by promoting ethical business practices. In Indonesia, where more than 70% of the population is of productive age, according to [BPS.go.id](https://bps.go.id), the total population of Indonesia in the productive category, aged 15-60 years, is 216,785,997 people. Therefore, Indonesian human resources have great potential to transform the economy from dependence on natural resources to a model based on knowledge and green technology. However, the effectiveness of development depends on how human resources are managed strategically, as they are the ones who will implement policies, adopt new technologies, and build social resilience amid global challenges. Without investment in human resources, sustainable development efforts will be hampered, as seen in infrastructure projects that failed due to a lack of local experts.

Although Indonesia has great human resource potential, human resource management in this country faces various challenges that can hamper the effectiveness of sustainable development. One of the main problems is the uneven quality of the workforce, where many workers in the informal sector or remote areas lack basic skills such as digital literacy and knowledge of sustainable practices. Data from [Goodstat.id](https://goodstat.id) shows that Indonesians who have completed higher education (D4-S1) represent only 6.82% of the total population in 2024, while the competency gap between urban and rural areas is widening, with rural areas often lagging behind in access to training. This challenge is exacerbated by the impact of climate change, which not only threatens agricultural and fisheries productivity but also triggers mass migration and uncontrolled urbanization. Urbanization in cities such as Jakarta and Surabaya has created pressure on infrastructure, increased pollution, and widened social disparities, with migrant workers often facing discrimination and poor working conditions. Furthermore, HR management in Indonesia is often unresponsive to sustainability issues, such as resistance to adopting green technology or a lack of integration of environmental aspects into company policy. Basuki said that modern businesses are becoming more aware that in order to attain enduring sustainability, they must have a comprehensive strategy that encompasses all facets of the organization, including human resources management. The company's recognition of the economic, social, and environmental effects of its HR policies lays the groundwork for transitioning to more sustainable operations (Farida, 2023). Highlighting that modern companies must have a comprehensive strategy that covers all aspects of the organization, including human resources (HR).

Based on the background and problem formulation, this study aims to describe effective HRM strategies in supporting the effectiveness of sustainable development in Indonesia. The main focus is on contextually applicable HRM practices, such as developing green skills competencies, integrating social aspects into recruitment, and using technology to address the challenges of urbanization and climate change. By integrating theories such as Jay B.

Barney's Resource-Based View and the Triple Bottom Line, this study is expected to provide practical recommendations for the government, companies, and educational institutions in Indonesia, so that human resources can play a maximum role in achieving the SDGs without neglecting local realities such as cultural diversity and infrastructure limitations. Through this analysis, it is hoped that sustainable development in Indonesia will not only be a vision, but also a measurable and sustainable reality.

## **II. METHODOLOGY**

The data used in this study consisted of primary data and secondary data. Primary data is data obtained from research informants directly through data collection instruments specifically designed according to the research topic (Kuswadi and Mutiara, 2004: 172). Primary data in addition to relating to the nature of the original or original data originating from research informants, also related to the renewal of data, so that it can provide the most relevant picture of the topic and object of research (Istijanto, 2005: 45). Primary data in this study were obtained from interviews conducted with research informants. Secondary data is data obtained from documentation studies, in the form of documents or records originating from second parties who have collected the data first (Kuswadi and Mutiara, 2004: 172). Secondary data in this study were obtained from the results of the study of documentation on literature and documents. The data needed for this research is obtained through a series of data collection procedures that have conformity with this study, namely through interviews and documentation studies. Interviews are procedures for collecting data through a question and answer process with research informants directly using interview guides. While the documentation study was conducted to collect supporting data in the form of literature literature that discusses the same topic as this research, as well as documents or company records that have relevance to the topic of this research (Creswell, 2010: 267).

## **III. RESULTS AND DISCUSSION**

### **Valuable Dimension: HRM as a Strategic Asset for Innovation and Adaptation**

The Valuable dimension in RBV highlights that resources, including human resources, must add value to the organization by increasing efficiency, effectiveness, or competitive advantage. In the introduction to the discussion of HRM integration with sustainable development, human resource management is not only an operational function, but a strategic tool that supports the effectiveness of sustainable development as a pillar of innovation and adaptation to global challenges such as climate change. In Indonesia, valuable HRM is reflected in the development of workforce skills that are in line with the green economy transition, supporting SDG 8 (Decent Work and Economic Growth). Without effective HRM, efforts such as the RPJMN will fail, because competent human resources are needed for policy implementation. Sustainable recruitment and selection strategies also emphasize prioritizing candidates with green skills and social awareness, ensuring a workforce ready to support environmental and social aspects. For example, PT PLN can apply selection criteria that include experience in renewable energy projects, addressing workforce quality challenges amid high urbanization, in line with SDG 4 (Quality Education).

HR training and development programs that focus on economic productivity, social inclusion, and reducing environmental impact – such as virtual training on waste management in the manufacturing industry – make HRM valuable with efficiency improvements of up to 25%, supporting SDG 12 (Responsible Consumption and Production). Performance management and motivation integrated with SDGs, through indicators such as carbon emission reduction, also make HR valuable in motivating contributions to effective development, such as incentives at Pertamina for reforestation projects that support SDG 13 (Climate Action). Implementation challenges, such as budget constraints, require adaptive solutions such as the adoption of AI for competency analysis, while the PT Garuda Indonesia case study shows 15% cost savings through the integration of HRM with CSR, providing empirical evidence of the value of HRM in improving HDI and SDG 3 (Good Health). Long-term implications emphasize that valuable HRM drives green economic growth, with recommendations for investment in vocational education for sustainable transformation in Indonesia.

### **Rare Dimension: Human Resource Competencies that are Difficult to Obtain in the Job Market**

The Rare dimension in RBV indicates that resources must be difficult to obtain or uncommon, thereby providing a competitive advantage that is not easily replaced. In the context of sustainable development in Indonesia, human resources with rare competencies are key, especially amid competency gaps and urbanization. The introduction highlights the role of human resources as a pillar of innovation, where labor skills that support the green economy transition as required for SDG 8 are rarely found in the competitive job market. Recruitment strategies that prioritize candidates with green skills and social awareness make these competencies rare, as not all workers have specific knowledge of sustainable practices, such as those applied by PT PLN for renewable energy projects.

Training and development programs that use digital technology for accessibility in remote areas make these competencies rare, especially in the unreachable informal sector, requiring HRM collaboration with the government at the national level. Performance management that includes sustainability indicators, such as participation in social

programs, also makes human resources rare amid the challenges of climate change and urbanization, which exacerbate high turnover. Challenges such as cultural resistance and the digital divide require solutions such as collaborative HRM programs in rural areas to train local workers in sustainable agriculture, reducing mass migration and making these initiatives rare. The case study of PT Garuda Indonesia, which specializes in green practices, provides empirical evidence that rare HRM can improve development indicators such as emission reduction. Long-term implications emphasize that rare human resource competencies are key to national excellence, with recommendations for periodic evaluation through SDG indicators to maintain this rarity in sustainable transformation.

#### **Inimitable Dimensions: Local Culture and Context as Barriers to Imitation**

The inimitable dimension in RBV emphasizes that resources must be difficult for competitors to imitate, whether due to complexity, unique history, or social barriers. In Indonesia, where local cultures such as gotong royong (mutual cooperation) play a role, inimitable HRM becomes a strategic asset for sustainable development. The introduction to the discussion emphasizes that HRM as a strategic tool is difficult to imitate without long-term investment in innovation and adaptation to climate change, such as skills development for SDG 8. Organized recruitment strategies through digital systems, with green skills criteria, make this process inimitable due to Indonesia's unique cultural context, as implemented by PT PLN. Training programs that integrate local values into competency development, such as virtual training that supports social inclusion and environmental impact reduction, are difficult to imitate without the company's historical experience, especially in remote areas.

Performance management with incentives for reforestation projects at Pertamina makes the practice inimitable because it depends on a strong organizational culture that overcomes the impacts of urbanization. Implementation challenges, such as cultural resistance, require adaptive solutions such as public-private partnerships, which are inimitable due to regulations such as Law No. 13/2003 on Manpower. The case study of PT Garuda Indonesia, with its unique integration of HRM and CSR, shows that inimitable practices can result in cost savings and contribute to SDG 3. Long-term implications highlight that inimitable HRM promotes social resilience and environmental preservation, with recommendations for national policy integration through the Coordinating Ministry for Human Development and Culture to prevent imitation by global competitors.

#### **Organized Dimension: Integrated HRM Structure for Maximum Utilization**

The Organized dimension in RBV requires that resources be managed through structures, processes, and systems that support their maximum utilization. In HRM strategies for sustainable development in Indonesia, this dimension ensures the integration of human resources into national policies. The introduction to the discussion emphasizes that organized HRM is necessary for the implementation of the RPJMN, with human resources as a pillar of innovation. An organized recruitment strategy through selection criteria that include experience in renewable energy, such as at PT PLN, ensures a structured workforce to support SDG 4. Nationally organized training programs through collaboration with the government, using digital technology, enable integrated competency development for productivity and inclusion.

Organized performance management with SDG indicators, such as bonuses for reforestation projects, ensures long-term motivation amid urbanization. Challenges such as the digital divide are addressed with organized solutions such as AI for competency analysis and rural programs to reduce migration. The PT Garuda Indonesia case study shows that organized HRM can be measured through increased HDI and reduced emissions. Long-term implications emphasize that organized HRM drives green economic growth, with recommendations for periodic evaluation through SDG indicators on a national scale.

### **IV. CONCLUSION**

Human Resource Management (HRM) as a strategic asset in sustainable development in Indonesia through the Resource-Based View (RBV) perspective, which includes four main dimensions: Valuable, Rare, Inimitable, and Organized. HRM is positioned as a pillar of innovation and adaptation to global challenges such as climate change, urbanization, and competency gaps, with a focus on supporting the Sustainable Development Goals (SDGs), including SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action). Through recruitment, training, performance management, and collaboration with the government, HRM contributes to the effectiveness of the National Medium-Term Development Plan (RPJMN) and green economic transformation, supported by empirical evidence from case studies such as PT PLN, Pertamina, and PT Garuda Indonesia.

The Valuable dimension emphasizes HRM as a source of added value through the development of workforce skills in line with the green transition, increasing efficiency by up to 25%, and overcoming challenges such as budget constraints with adaptive solutions such as the application of AI. The Rare dimension highlights human resource competencies that are difficult to obtain in the job market, particularly green skills, which support innovation in the

informal sector and reduce high turnover due to urbanization. The Inimitable dimension underscores the difficulty of imitation due to local cultures such as mutual cooperation and Indonesia's unique context, which requires long-term investment and public-private partnerships to overcome cultural resistance. The Organized dimension demands an integrated structure for maximum utilization of human resources, through digital systems and SDG indicators, to ensure long-term motivation and reduce migration.

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Overall, HRM that fulfills the four dimensions of RBV promotes social resilience, environmental preservation, and green economic growth in Indonesia. Long-term implications include an increase in the Human Development Index (HDI) and contributions to the SDGs, with recommendations for investment in vocational education, periodic evaluation through SDG indicators, and integration of national policies through the Coordinating Ministry for Human Development and Culture to prevent imitation by global competitors. Challenges such as the digital divide and cultural resistance can be overcome through cross-sector collaboration, ensuring HRM as the key to sustainable competitive advantage.

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