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Sustainable Futures: Pertamina's Commitment in Advancing Sustainable Development Goals 13

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Abstract

This paper examines Indonesia's national energy corporation, Pertamina, and its multimodal strategy for addressing climate change, assessing its efficacy and suitability as a template for other energy corporations. Using a qualitative approach, the research analyzes Pertamina's sustainability reports, news stories, and official documents, focusing on measurable activities and achievements in emission reduction, resource management, and renewable energy integration. Pertamina's commitment to the environment is evident in its comprehensive strategy, which has led to a 31% reduction in greenhouse gas emissions since 2010 and a 5.65 million MWh gain in energy efficiency. The company's initiatives also include the development of 349 Green Energy Stations and significant efforts in water conservation and waste reduction. Pertamina's sustainable materials usage, particularly in packaging, further underscores its environmental responsibility. This study presents Pertamina's approach as an exemplary model for other corporations aiming to integrate sustainability into their operations.

Key words*: Climate Action, Pertamina, Sustainable Development Goals.*

INTRODUCTION

Since 1880, NASA's Goddard Institute for Space Studies (GISS) has conducted research on Earth's temperature, where the results show that there has been an average increase of at least 1.1° Celsius. This increase in temperature is not only occurring on land but also a global increase in sea surface temperatures. This can be seen based on the period from 1901 to 2020, with an estimated average increase of 0.084° Celsius per decade. Of course, global climate change also impacts Indonesia, which can be seen through research conducted by BMKG. The results found were that in the 1981-2010 period, the average temperature in Indonesia was 26.6° Celsius, while in 2021, the average air temperature increased to 27.0° Celsius based on data from 89 BMKG observation stations (Kurniawan, 2022). Climate change can occur due to various factors, including human activity. This makes the impacts and risks of climate change worldwide increasingly challenging to overcome. As the largest archipelagic country and the fourth most populous in the world, Indonesia is ranked in the top three regarding climate risk (Sengupta et al., 2023, 1).

With significant climate risks, Indonesia is highly vulnerable to extreme heat and various types of flooding, which are projected to increase both the intensity of disasters and the size of the population affected. Not only that, Indonesia is also dealing with rising sea levels, where this country is ranked fifth in the world for people living in coastal zones

with low elevation levels, making their position very vulnerable. The consequences of climate change are becoming increasingly widespread, affecting disaster risk management, water availability, health and nutrition, poverty, etc (Sengupta et al., 2023, ix). Based on the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), Indonesia is predicted to experience a warming trend for all emission scenarios consistently. There is a significant increase in the frequency of days with temperatures over 30° Celsius, and it is predicted that this will increase even higher in inland areas of Indonesia, such as Jambi, Pekanbaru, and Palembang on the island of Sumatra, and Samarinda and Palangkaraya on the island of Kalimantan. One of the reasons is that the relevant areas are centers of economic activity, such as manufacturing, oil and construction, trade, services, etc. Of course, this will affect nearby workers because it can cause lost productivity, increased energy costs, and construction delays (Sengupta et al., 2023, 3).

Cooperation between all actors is undoubtedly needed to face the risks of climate change and achieve peace and prosperity for humans and the planet on which we live. Sustainable Development Goals (SDGs) are steps adopted by all UN member countries, and this action has 17 goals and 169 targets to be achieved by 2030. SDGs or Sustainable Development Goals are coordinated by the Ministry of National Development Planning (PPN) or the National Development Planning Agency (Bappenas). One of the goals to be achieved by the SDGs is handling climate change, which is stated in focus number 13. "Climate Action" is a goal that prioritizes a rapid response to climate change and the various impacts that occur. According to the SDGs coordinator in Indonesia, goal number 13 has five crucial targets expected to be achieved. First, increasing national resilience and adaptation to climate hazards and natural disasters. Second, include anticipatory action for climate change in national policies, strategies, and planning. Third, increase awareness and capacity of communities and institutions regarding mitigation, adaptation, impact reduction, and early warning of climate change. Fourth, developed countries are committed to the United Nations Framework Convention on Climate Change to mobilize joint funds of US $ 100 billion per year by 2020 from all sources to meet the needs of developing countries for mitigation actions that are beneficial and transparent in their implementation. Fifth, encourage mechanisms to increase the capacity of least developed and small island developing countries to plan and manage climate change well, focusing on local communities, women, and youth (Pristiandaru, 2023).

Pertamina is a state-owned company committed to sustainability through good corporate governance, social responsibility, and an environmentally friendly work environment, proven by its international recognition for its commitment. On Thursday, June 2, 2022, Global Initiatives awarded the Indonesian Sustainability Business Awards (SBA) in the Highly Commended category to PT Pertamina (Persero) and PT Pertamina Hulu Rokan. This award is given to companies with a solid commitment to sustainability, have made consistent efforts in various areas of sustainability, and have a clear roadmap. From 2016 to 2019, Pertamina consistently received Appreciation awards. In SBA 2016, Pertamina won the Best Flagship Initiative and Best State-Owned Enterprise awards. In 2017, Pertamina was recognized as Best State-Owned Enterprise, Best Energy Management SBA, Special Recognition for Stakeholder Engagement and Materiality, and Special Recognition for UN Sustainable Development Goals SBA in 2018. Pertamina Hulu Rokan, one of Pertamina's affiliates, also received the award "Highly Recommended" (PT Pertamina (Persero), 2022).

Based on the ESG Risk Rating that the Sustainalytics Institute has provided, PT Pertamina (Persero) is rated 20.7, which places the company as the highest-ranked firm out of 24 companies in sub-industry and the 5th out of 309 companies across all sectors. Concerning possible significant financial repercussions resulting from Environmental, Social, and Governance (ESG) aspects, this grade indicates that Pertamina is exposed to a Medium level of risk. Notably, the company is now ranked fifth globally, up from 7th the year before. According to Sustainalytics, an organization's ESG Risk Rating measures how well it addresses ESG concerns that are especially important and relevant to its sector. It provides a systematic, quantitative assessment of a business's risk exposure and ESG performance. Pertamina's strong commitment to promoting a beneficial influence on the environment and society through its business operations is demonstrated by its achievement of a high ESG Risk Rating (PT. Pertamina (Persero), 2023).

In order to better understand how Pertamina's integrated strategy helps to achieve SDG 13: Climate Action, this study explores the particular initiatives and quantifiable successes within the company's activities by exploring this question: "How Does Pertamina's Diverse Strategy Impact Progress Towards SDG 13?". This study aims to analyze Pertamina's distinct, multidimensional approach to combating climate change and how it helps achieve SDG 13: Climate Action. The paper will analyze the company's quantitative accomplishments and tangible initiatives, going beyond simple aspiration, and assess their efficacy and potential for replication by other energy players.

METHOD

This paper uses a case study methodology and a literature review with qualitative methodologies. With an emphasis on Goal 13, this study thoroughly examines PT. Pertamina's (Persero) commitments to the Sustainable Development Goals. This paper employs document studies from the Sustainability Report PT. Pertamina Persero, as well as literature sources from books, journal articles, and online references, to conduct this analysis.

RESULT AND DISCUSSION

Sustainable Development Goals

Sustainable development has been introduced since the Environmental Conference in 1972 in Stockholm. However, understanding and acceptance, especially for practitioners outside the environmental sector, still takes quite a long time. As time goes by, currently with the birth of the Declaration of Sustainable Development Goals (SDGs) in 2015, awareness of the importance of implementing sustainable development is increasing in the global community. This certainly has a good impact on the understanding and implementing movements related to environmental issues. In order to deepen the concept of sustainable development, this chapter will begin by exploring the success of development and the resulting environmental impacts. The discussion will then continue by explaining the journey of sustainable development, including the process of preparing the SDGs and their relationship with the Global Addis Ababa Plan of Action Agreement and the Paris Climate Agreement. This development paradigm has been put forward for a long time, starting when Sustainable Development was first recognized for its significance at the Earth Summit in 1972. However, over the next 40 years, sustainable development was considered abstract and an obstacle to development, especially economic growth.

Meanwhile, the journey of an effective environmental development agreement and its connection with development in various aspects has been carried out for a long time, namely emerging at a forum in Stockholm in 1972. Awareness of the importance of environmental development for human welfare also began to grow. It resulted in the formation of institutions dealing with the environment, namely the United Nations Environment Program (UNEP). The importance of environmental issues continues to expand. It peaked with the birth of reports, which have become the basis for the urgency of integrating attention to the environment and economic development at various levels. This report is known as the Brundtland Report (Alisjahbana & Murniningtyas, 2018, 7).

In line with advances in knowledge, environmental impact measurements can now be expressed quantitatively and have measurable economic value. The internalization of eight environmental impacts into the development process can now be carried out through this quantitative approach. Therefore, steps to anticipate and prevent environmental impacts in community activities and the economic sector can be realized. The development paradigm, which previously concentrated more on the economic sector without considering environmental risks, can now be changed to provide more long-term benefits without threatening environmental sustainability. This approach is known as sustainable development. Thus, considering the long history of the struggle for sustainable development, implementing sustainable development has become a necessity whose implementation cannot be ignored. At the end of the series of events above, ten years after the 2nd Earth Summit in Johannesburg, the UN again held the 3rd Earth Summit in Rio de Janeiro, Brazil. This conference produced a document known as "The Future We Want," which serves as a guide for implementing sustainable development at the national and global levels. The document includes an agreement on a shared view of the future that the world hopes for and strengthens political commitment to achieving sustainable development. Also present at this conference were government leaders, representatives from the business sector, NGOs, academics, journalists, and the general public (Alisjahbana & Murniningtyas, 2018, 7-8).

In the text "The Future We Want," there are three main issues that are the focus of implementing sustainable development, namely

1. Implementing a green economy in the context of sustainable development and poverty alleviation,
2. Development of institutional structures to support sustainable development and
3. Action framework and instruments for implementing sustainable development.

This action framework includes the preparation of Sustainable Development Goals (SDGs) after 2015 (Alisjahbana & Murniningtyas, 2018, 9). Environmental issues first appeared on the international agenda at the Stockholm Conference on Human Environment in 1972. This conference also gave birth to the UNEP institution, the United Nations Environment Program, and two legal instruments. The Stockholm Declaration contains 24 environmental and development principles and 109 steps or action plans. This conference in Stockholm began the revival of modern environmental law (Kiss & Shelton, 1991).

In 1983, the UN formed the World Commission on Environment and Development (WCED) as an independent commission tasked with discussing and providing recommendations on global environmental issues. Four years later, in 1987, the Brundtland Commission (WCED) produced a report entitled Our Common Future, which discussed various programs to integrate environmental concerns and economic development at the international, national, and local levels. In 1992, twenty years after

the Stockholm Conference, the UN organized the United Nations Environment and Development (UNCED), a historical milestone for developing international, national, and local environmental policy and law. The journey continued. In 2000, 186 countries expressed their collective determination in the Millennium Development Goals (MDGs) to fight poverty and hunger, promote education and gender equality, reduce infant mortality, improve maternal health, and encourage environmental sustainability and global cooperation in development. Two years later in 2002, the World Summit on Sustainable Development (WSSD) was held in Johannesburg, South Africa. The essential results of this meeting were the Political Declaration and the Johannesburg Plan of Implementation (JPOI) (Alisjahbana & Murniningtyas, 2018, 9-10).

Indonesia has a significant role in this entire process. The High-Level Panel of Eminent Persons is a group of Expert Panels formed by the UN Secretary-General to provide input on the Post-2015 Global Development Agenda. The co-chairs of this Expert Panel include the 6th President of the Republic of Indonesia, Susilo Bambang Yudhoyono, British Prime Minister David Cameron, and the President of Liberia, Ellen Sirleaf Johnson. In subsequent discussions at the global level, Indonesia has consistently been actively involved, as seen in the Open Working Group on Sustainable Development Goals (OWG-SDGs), to discuss 27 groups of issues set out in the 2012 UN Sustainable Development Conference Report (Rio+20). Indonesia was also appointed as a member of the Intergovernmental Committee of Experts on Sustainable Development Financing (IG-SDF), which is an integral part of the funding aspect of implementing the Post-2015 Development Agenda. During the 2012-2014 period, Indonesia played an active role in the Global Partnership for Effective Development Cooperation (GPEDC), which aims to formulate more effective mechanisms and patterns of international development cooperation (HOW) to achieve the targets of the Post-2015 Development Agenda (the WHAT) (Alisjahbana & Murniningtyas, 2018, 12-13).

The SDGs resulting from the Declaration contain 17 goals, more than the MDGs, which only had 8 18 goals. SDGs also have 166 targets with measurable indicators. Sixty-one of them are in the form of means of implementation (means of implementations). In this regard, the SDGs are ambitious and may be difficult for all countries to implement. However, the results of this agreement have gone through a comprehensive and lengthy process. Based on the results of the Declaration, the SDGs consist of 17 goals, which can be grouped into four inseparable and interdependent pillars. These four pillars show the existence and importance of balance between the three main pillars, namely the social, economic, and environmental pillars supported by the governance pillar. The environmental pillar is crucial because the current growth described in the economic pillar certainly requires maintaining environmental sustainability. Likewise, as reflected in the social pillars, people's social behavior must undergo changes and adopt environmentally friendly behavior, as described above (Alisjahbana & Murniningtyas, 2018, 60-63).

Pertamina's Diverse Strategy Impact Progress Towards SDG 13

With a substantial carbon footprint, Pertamina, the national energy corporation of Indonesia, must confront this problem head-on. Given that the oil and gas industry contributes to greenhouse gas emissions, Pertamina prioritizes emission mitigation and control measures. The corporation generated 27.38 million tons of CO2 equivalent in 2022 alone, highlighting the need for more environmentally friendly energy sources and emission control strategies. With a multifaceted approach, Pertamina invests in cleaner technology, optimizes processes, and continuously lowers emissions across all its

businesses (PT Pertamina Persero, 2022, 17). Sustainability is a fundamental concept that permeates all aspects of company operations at PT Pertamina (Persero), not merely a catchphrase. A circular framework, an all-encompassing strategy with sustainability at its core, represents this dedication. The picture of Pertamina employees giving a youngster plant seeds illustrates their commitment to fostering a sustainable future even more. Pertamina's dedication to sustainability is evident in its workforce's constant development and contributions beyond simple policies and processes. Every employee has a role in creating enduring value for all parties involved (PT Pertamina Persero, 2022, 3).

Leading Indonesia's G20 energy transformation initiative, the Company is leading the B20 partnership as Chair of the Business 20 (B20) Energy, Sustainability and Climate Task Force, led by its President Director. With the backing of a strong group of eight Co-Chairs from the world's leading energy companies and 150 executives from various G20 countries, this significant position enables the Company to formulate policies and activities that effectively match the aims of the G20 (PT Pertamina Persero, 2022, 11). Acknowledging the growing significance of Environmental, Social, and Governance (ESG) elements for interested parties, the organization is committed to implementing a solid sustainability plan based on internationally acknowledged models. This commitment is supported by industry-specific standards established by the International Labor Organization (ILO) and the International Association of Oil and Gas Producers (IOGP), established multilateral agreements such as the UN Global Compact and Paris Agreement 2015. This multifaceted strategy seeks to guarantee company continuity, create long-term value, and eventually spur corporate growth. The three central tenets of the approach are developing a thorough road map, defining challenging objectives and doable projects, and encouraging candid communication through frequent publishing (PT Pertamina Persero, 2022, 29).

In addition to proactively planning for climate-related disruptions with an extensive risk management framework, they are actively investigating carbon capture, utilization, and storage (CCUS) technology. Beyond mitigation, Pertamina spearheads Indonesia's energy transformation through portfolio integration of renewables such as wind, solar, and geothermal energy, joint research and development of decarbonization strategies, and open reporting of their environmental performance. Pertamina encourages all stakeholders to embark on the path toward a more sustainable world, acknowledging that reaching a low-carbon future necessitates teamwork. When faced with the unpredictably windy 2022, Pertamina took a risk and anchored its future in a 2060 Net Zero Roadmap. This bold strategy places Pertamina at the center of Indonesia's net-zero objectives by striking a balance between rapid decarbonization, green initiatives, and legacy business. Pertamina integrates the SDGs and national goals into its strategy by addressing ten "Sustainability Focuses," including community, biodiversity, climate change, and ethical behavior. Concrete action driven by ESG principles reduced environmental footprints, strengthened community empowerment, and respected UNGC standards in 2022, demonstrating Pertamina's dedication to using sustainability as a compass to navigate the choppy waters of a changing world (PT Pertamina Persero, 2022, 18).

With a dynamic ecosystem of action and outcomes, Pertamina's sustainability objective is everything from passive to active. Balance, environmental preservation, and community empowerment initiatives have had significant results. Due to decreased flaring, increased energy efficiency, and using renewable energy sources, greenhouse gas emissions fell 31% in only 12 years. Sub-holding businesses are also part of this

decarbonization push, accelerating environmental advancement and aligning with the Net Zero Roadmap. Further gains are fueled by cooperation, as seen by its involvement in the B20 ESC Task Force, where I shaped policy, sparked collaboration, and established a carbon information center. Through these concerted efforts, Pertamina has achieved international recognition, ranking second in the oil and gas industry for sustainability and receiving a B in the CDP's climate assessment—noteworthy advancements. The tale of Pertamina is a monument to the strength of initiative, demonstrating the symbiotic relationship between environmental advancement and business success (PT Pertamina Persero, 2022, 19).

Understanding that goal-setting necessitates constant execution, the organization has relentlessly worked to advance a wide range of projects centered around three main objectives: maintaining and balancing nature, safeguarding the environment, and promoting community self-sufficiency. Within the environmental sphere, Pertamina is proud to have achieved a staggering 31.06% drop in greenhouse gas (GHG) emissions between 2010 and 2022, which equates to a stunning 7.9 MMtCO2e reduction. This achievement is not the result of hollow platitudes but instead of a multifaceted strategy that includes decreased flaring, maximized energy efficiency, the use of low-carbon energy sources, and deliberate fuel substitution. Furthermore, Sub-Holding firms' decarbonization initiatives smoothly mesh with the Net Zero Emission Roadmap, hastening the incorporation of renewable energy sources into the enterprise's future. There is clear evidence of enhanced sustainability performance due to these persistent efforts. Sustainalytics' October 2022 ESG score for Pertamina's Integrated Oil & Gas sub-industry of 22.1 earned the Company a commendable second position worldwide—a considerable improvement over the 28.1 score from the previous year. Additionally, a notable improvement was seen in CDP's evaluation of corporate environmental performance regarding climate change, which went from a D in the prior year to a B in 2022 (PT Pertamina Persero, 2022, 18-19).

Pertamina's dedication to environmental responsibility goes far beyond words; it manifests in actual actions and outstanding outcomes in various areas. The Company's activities are intertwined with this devotion, as shown by its accomplishments in many essential areas. Pertamina has blazed a trail of efficiency in the energy sector, exceeding its goals by cutting 5.65 million MWh compared to the business-as-usual scenario. The enormous progress in adopting renewable energy demonstrates this commitment to prudent resource management. At the top of Pertamina's environmental agenda is climate action. The firm has shown its dedication to reducing climate change and promoting a sustainable future by cutting emissions by an astounding 7.9 million tons of CO2e when compared to the baseline of 2010 (PT Pertamina Persero, 2022, 55).

Pertamina places a high priority on proper water management since it understands how valuable water is. The firm has committed to water conservation by reducing water use by 13.45 million cubic meters via careful recycling operations. Pertamina minimizes its influence on the environment by thoroughly managing waste and effluent. The business effectively cut the production of hazardous trash by 183.9 tons and total garbage by 189.7 tons. In addition, a 44% drop in oil leak events from 2021 to 2022 highlights Pertamina's dedication to environmental safety and spillage avoidance. Supporting environmental programs financially demonstrates Pertamina's steadfast dedication. A 24% rise in spending on environmental management compared to 2021 shows how committed the corporation is to making sustainable future investments (PT Pertamina Persero, 2022, 55).

Environmental responsibility makes even the most apparently insignificant areas of business subject to close examination. Pertamina's use of eco-friendly packaging for its lubricant goods indicates its dedication to making responsible material selections throughout its entire value chain. The environmental performance of Pertamina is not just a sum of statistics; instead, it is a mosaic of interconnected acts that all add to a more comprehensive and sustainable whole. Pertamina is leading toward a cleaner future by encouraging energy efficiency, embracing renewable energy, and cutting emissions. This shows that responsible environmental stewardship is feasible and crucial for any business aiming for long-term success (PT Pertamina Persero, 2022, 55).

Ten key "Sustainability Focuses" have driven Pertamina's precisely developed roadmap, which reflects its constant pursuit of sustainability. These priority areas align with international ESG standards and are the cornerstones for sustained advancement. Two related to Goal 13, Climate Change and Reducing Environmental Footprint, are fundamental. Pertamina is driven by tangible action to achieve its net-zero emissions goal by 2060. Thanks to its robust Zero Roadmap and decarbonization efforts, the corporation saw a notable 7.9 million tons CO2e reduction in 2022 compared to the baseline year 2010. Pertamina's dedication to sustainable energy solutions is further shown by building 349 Green Energy Stations and a 25.14 MW increase in new renewable energy capacity. The corporation plans to reduce emissions by 23% by 2025, progressively moving closer to its 32% target by 2030 (PT Pertamina Persero, 2022, 41).

Pertamina places a high value on responsible resource management and climate change mitigation. The emphasis of "Reducing Environmental Footprint" seeks to manage trash above regulatory limits and have a net-positive water effect. Significant advancements were made in 2022 when a thorough waste, water, emission, and effluent management strategy was formed, and 97% of essential sites received ISO 14001 certification. Additionally, Pertamina is dedicated to advancing Indonesia's net-zero goal by gradually raising the proportion of non-renewable energy (NRE) in its energy mix from 1% in 2021 to 17% by 2030. A total of 14% of the 2030 investment budget is set out for gas and NRE projects, indicating this commitment (PT Pertamina Persero, 2022, 41.

CONCLUSION

The energy company of Indonesia, Pertamina, represents more than just ambition when combating climate change. Its dedication to the environment infuses every aspect of business operations, creating a colorful tapestry of accomplishments that firmly establish its leadership in sustainable energy. Not only should this unrelenting commitment be acknowledged, but emulated. This green campaign is based on a multipronged approach. Thanks to a potent combination of energy efficiency, less flaring, and a determined shift to renewable energy sources, Pertamina has achieved an astounding 31% decrease in greenhouse gas emissions since 2010. See the 5.65 million MWh efficiency gain—above even Pertamina's lofty goals—and the 349 Green Energy Stations sprouting up, lighting the way for a greener future.

In addition to reducing climate change, Pertamina promotes prudent resource management. Water conservation is paramount; careful recycling has resulted in a significant decrease of 13.45 million cubic meters. Garbage is addressed head-on, resulting in a notable decrease in hazardous and overall garbage produced. Pertamina also prioritizes using sustainable materials, as shown in the creation of environmentally friendly packaging for its lubricating products. Every aspect of the business is examined

from an environmental responsibility perspective. This is not only an inspiring tale but a model for others to imitate. The experience of Pertamina teaches us important lessons:

1. Collaborate and build alliances such as the B20 Energy, Sustainability, and Climate Task Force.
2. Increase openness by disclosing data and best practices to spur advancement throughout the sector.
3. Make community involvement a priority and use sustainable projects to empower your neighborhood.
4. Adopt a mindset of perpetual innovation and investigate state-of-the-art technology such as CCUS to remain at the forefront of climate solutions.

Pertamina is driving towards a sustainable future with a dedication that is more than just a fad. By adopting its many strategies, fostering cooperation, and welcoming ongoing innovation, the global energy scene may be transformed into a platform that places environmental accountability at the forefront, illustrating a more sustainable and optimistic future for all.

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