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Opportunities and Challenges: Adopting "Blue-Green Economy" Terms to Achieve SDGs

Endang Sungkawati

Universitas Wisnuwardhana Malang, Indonesia

*Corresponding author: endangsungkawati@wisnuwardhana.ac.id

KEYWORDS

Blue-Green Economy, Indonesia, Opportunities and Challenges, SDGs, Sustainable. ABSTRACT Sustainable development and the blue-green economy are intimately linked and collaborate. Like other nations, Indonesia follows Blue-Green economic principles to reach the Sustainable Development Goals (SDGs). This study intends to investigate Indonesia's capacity and challenges in achieving the Sustainable Development Goals (SDGs) through implementing the Blue-Green economic concept and suggest solutions to address these barriers. Indonesia has adopted a substantial approach to attain sustainable development objectives by implementing a blue-green economic policy. This is primarily due to the country's status as a growing archipelago with a heightened susceptibility to natural disasters that affect all facets of society, the economy, and advancement. Indonesia is crucial in the global geopolitical $scene\ because\ of its\ plentiful, untapped\ maritime\ resources.\ Implementing\ the\ Blue\ Economy\ in\ Indonesia\ offers\ a\ great$ chance to accomplish the 17 Sustainable Development Goals. Prior studies focused solely on the blue or green economy and strategies for attaining sustainable development goals in Indonesia. This research is innovative as it integrates the blue-green economic idea. The study discovered that obstacles can be surmounted by implementing solutions to address legislative, governance, legal, and economic challenges. Efficiently developing the public sector is crucial. This involves applying technology advancements, managing information effectively, coordinating with stakeholders, seeking international collaborations, and adopting global best practices. It aims to determine how sustainable development indicators, specifically in Indonesia, impact economic growth indicators such as gross domestic product. Time series analysis is utilized to depict the relationship between variables. The ARDL model research shows a longterm equilibrium relationship between different measures of sustainable development and economic growth in Indonesia. Indicators of sustainable development have been seen to influence economic growth in Iraq. The analysis demonstrates that sustainable development has fueled economic growth in Indonesia from 2014 to 2024.

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1. INTRODUCTION

Indonesia has prioritized the Sustainable Development Goals (SDGs) announced by the President of Indonesia (Johnson, 1993; O'Donnell, 2020), a Development Program later endorsed by the United Nations (UN) in 2017 (Ali, 2020; Vu, 2020). The President has enacted a presidential rule on implementing sustainable development goals (SDGs) (Jodlbauer, 2021) and established a national coordination team for development objectives led directly by the Indonesian president (Langergraber, 2020; Malhotra, 2022; Skar, 2020). Indonesia prioritizes seven of the 17 SDGs (Mohamadpour, 2022; Mulligan, 2020): eradicating poverty (Rashtbari, 2020), ensuring zero hunger (Thongvitokomarn, 2020), promoting healthy (Xie, 2020) and prosperous lifestyles (Soliman, 2020), achieving gender equality (Jia, 2021), preserving ocean

habitats (Florence, 2016), fostering partnerships to achieve goals (Sarwar, 2022a), and enhancing industry (Sarwar, 2022b), innovation (Nekvapil, 2021), and infrastructure (Liu, 2021; Subiza-Pérez, 2020).

This country aims to address fundamental needs, improve living conditions, diminish poverty (Jiang, 2020), eradicate prejudice and injustice (Cruz, 2021), and establish a society centred on social justice and human security (Lehnert, 2021). Indonesia encounters both prospects and obstacles to achieving its SDGs. Enhanced state-building Historically, humanity has been connected to the sea for hundreds of thousands of years. With advances in fishing and navigation technologies, the marine environment became a focus for migration and colonization (Mbachu, 2023). Nevertheless, marine resources are not

restricted to the transportation-fisheries sector; they also encompass minerals extracted from the bottom and other technologies that transcend international borders. The sea functions as an ecosystem that substantially impacts human life

Sustainable development was first suggested at the Environmental Conference in Stockholm in 1972. Nevertheless, the idea and approach of sustainable development faced significant delays in gaining acceptance among individuals not involved in the environmental sector. Since the inception of the Declaration on Sustainable Development Goals (SDGs) in 2015, people worldwide have recognized the importance of implementing sustainable development. This chapter will begin by examining the achievements of development and its environmental consequences to grasp the concept of sustainable development (Aboelfetoh, 2020; Yang, 2021). The conversation progressed with an explanation of the extensive path of sustainable development (Hassan, 2020), the formulation of SDGs (Luo, 2021), and the connection between SDGs (Onu, 2023), the Global Addis Ababa Plan of Action Agreement, and the Paris Climate Agreement (Tharaneedhar, 2017).

Several nations have attained global economic development. The global population has surpassed 7 billion, and the typical country can still sustain it. According to the World Bank, in 1970, global economic growth was 4.36%, which benefited 3.76 billion people (Darajati, 2023). Developing nations have the potential to enhance and sustain economic growth as they approach the 21st century. China's economy expanded by 8.5% in 2000, maintaining its population of 1.26 billion (Hendriyana, 2022). In 1970, the population was 818 million, which grew by 19.3%. By 1982, the population had reached 1,008 billion (Senaratne & Zimbroff, 2019). India's economy grew by 3.84% in the same year, supporting its population of 1.053 billion (compared to 553 million in 1970) (Ayllon & Cole, 2015), which increased by 5.16%. In 1982, the population increased by 3.84% to reach 730 million and then went to 1 billion in 1998. Indonesia's economy expanded by 4.92% that year, accommodating a population of 211.5 million (Sheeba, 2015). In 1970, the economy grew by 7.55% with a population of 144 million; in 1982, the economy barely increased by 2.25% with a population of 154 million. Social progress, supported by the MDGs, has successfully decreased global extreme poverty by 915 million people, from 1.75 billion in 1999 to 836 million in 2015, marking the conclusion of the MDGs. Despite the initial modest decrease in severe population, we should appreciate this accomplishment, given that the MDGs are a

globally recognized agenda created by the UN. Indonesia has decreased the poverty rate based on PPP USD 1/capita/day from 20.6 percent in 1990 to 5.9 percent by the end of 2015 (Kang, 2019), surpassing the MDG aim of "halving extreme poverty" (Simeon et al., 2015; A. et al., 2018). Indonesia remains vigilant since its poverty rate has only dropped from 15.1 percent in 1990 to 11.22 percent in 2015 when assessed using the national poverty level.

Indonesia has long grappled with the challenges of nation-building and achieving sustainable economic growth (Bahri et al., 2023; Sudiantini et al., 2023). Sustainable development is a contemporary strategy that seeks to harmonize the many conflicting requirements of the global environment (Sarwar, 2022c), society (Veríssimo, 2021), and economy (Sungkawati, Solehudin et al., 2023; Yin, 2019). The main consultative results of sustainable development are addressing climate change (Darmayanti, Suyono, et al., 2023), reducing economic inequality and poverty (Booth & Golooba-Mutebi, 2014; Dornan, 2018; Nelson, 2010), fostering innovation (Flint, 2018; Novak, 2015), and achieving sustainable consumption behaviour (Pottenger, 2004; Sholihah, 2022). Sustainable development goals include enhancing social equity and establishing a fair society (Sungkawati, Usmiyatun et al., 2023). Sustainable development measures aim to improve overall well-being, promote social inclusion, and find a fair and equal society that provides equal opportunities for all individuals, irrespective of gender (Sugiono et al., 2023), ethnicity (Sungkawati, 2020), religion (Rawanoko et al., 2023), race (Leksono & Sungkawati, 2019), political affiliation, etc (Lestari et al., 2020). Implementing a blue-green economic strategy is crucial for sustainable development (Setiawan et al., 2020). The SDGs emphasize incorporating blue-green economic principles into national development programs to guarantee sustainable sociopolitical and economic development (Sungkawati et al., 2024). The paper has detailed the opportunities, challenges, and strategies for attaining the SDGs using blue-green financial mechanisms in Indonesia. The Sustainable Development Goals (SDGs) and the government's objective of establishing a Blue-Green economy are crucial for all individuals as everyone shares a collective responsibility for the future of our planet.

2. METHOD

Descriptive, interpretative and qualitative methods are used to determine how the provisions for the Blue-Green Economy are to achieve the SDGs and how and what the opportunities and challenges are for Indonesia when implementing them. Secondary data was obtained by a literature review (SLR) using the steps used by (Darmayanti, Milshteyn, et al., 2023a) with seven stages, namely the SLR 7P diagram technique. The 7P technique for obtaining secondary data can be seen in Figure 1.

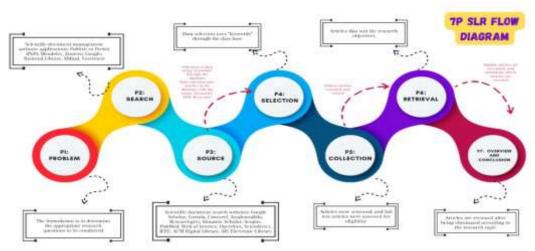


Figure 1. 7P technique in obtaining secondary data for the Blue-Green Economy (Darmayanti, Milshteyn, et al., 2023b)

Figure 1 displays the sequential process of conducting a secondary literature review of the data. At an early stage, it is essential to identify the specific problems to be addressed, such

as the prospects and obstacles for the blue-green economy in Indonesia (Wulandari et al., 2022). The next stage in P2 is to identify the search tool or program that will be used to search for

the articles to be selected. This research uses the Publish or Perish (PoP) search tool (Sah et al., 2022). The third step, P3, identifies the website as the database or data source to be managed with the PoP. Data comes from articles, theses, books and journals registered by SINTA, Garuda/crossref (UN agencies to support the achievement of SDGs) (Aryaseta et al., 2023) in Indonesia from many points of view. Step P4 involves selecting a database using the keywords "SDGs" and "Blue-green Economy." Step P5 excluded previous publications based on the criterion that only articles published between 2018 and 2024 were considered during the last ten years. Selected works use Indonesian and English texts and are published in complete form with a PDF. Step P6 involves data analysis on the conceptual relationship between the SDGs and the "blue-green economy." This article evaluates Indonesia's "opportunities and challenges" in achieving the SDGs through "implementing the Blue Green Economic strategy." The assessment includes direct quotes, quotations from other sources, summaries, and verified interpretations that collectively inform the research findings (Vidyastuti et al., 2018).

The final step, P7, involves reviewing and concluding the selected articles while focusing on an interpretive survey to help understand the process and situation. Interpretive investigations require researchers to go beyond simply explaining a situation. Researchers must assess and interpret the reader's condition using empirical facts. The interpretive approach in development and policy studies focuses on creating methods to increase understanding of various development strategies for academics from multiple disciplines to expand their knowledge. This strategy does not involve advancing or ignoring existing opportunities or difficulties.

This article is organized into six main sections, followed by concluding remarks. The first section briefly overviews the "theoretical foundations of the SDGs." The second half briefly "introduces" the Blue Green economic method. This step analyzes Indonesia's potential to achieve the SDGs by adhering to the Blue Green Economic Regulations in these three parts.

Next, we examine the "challenges faced by Indonesia in achieving the Sustainable Development Goals (SDGs)" using the Blue Green economic model in four parts. These five sections discuss "potential solutions Indonesia can use to overcome these obstacles." This study aims to identify Indonesia's talents, obstacles, and options for achieving the SDGs by implementing a blue-green economic strategy equipped with a roadmap.

3. RESULTS AND DISCUSSION

3.1.Sustainable Development Target: Short Introduction

Sustainability has a historical background began in the 1970s and has developed a theoretical foundation over time (Straaten & Tylecote, 1997; Schrijver, 2010). Academic discussions on sustainability cover a variety of perspectives, and experts highlight several aspects of sustainability. Henderson et al. (2023) define sustainability as a process that focuses on preventing resource depletion due to human activities and meeting demand. Sustainability is a balanced relationship between human activities and the environment's ability to support them (Haanurat et al., 2024), where society aims to utilize all the environment's potential without destroying it (Expósito, 2020; Rosati, 2019). Sustainability is the fair allocation of natural resources between present and future generations through socio-economic practices in limited ecosystems (Sinha, 2020; Sungkawati & Uthman, 2024). Development, as a comprehensive philosophy and practice, has many meanings. Development is a complex process that aims to reduce inequality and eliminate extreme poverty by modifying social structures (Mulili, 2020), institutions (Soberón, 2020), economic strategies and societal attitudes (Ruiz-Blanco, 2022; Taylor, 2016). Vanorman (2020) views development as a colonial state that effectively and sustainably meets the population's needs by comparably using natural resources and systems.

Socio-economic activities in Indonesia have demonstrated a strong balance in sustainability over the past decades, even under limited ecological conditions, as depicted in Figure 2.



Figure 2.Sumber BAPPENAS, BPS, dan UNFPA (2018)

Figure 2 shows Indonesia's GDP has almost quadrupled in the last 30 years. This refers to progress in economic development leading to an increase in living standards, demonstrated by consistent increases in GDP per capita and the structural evolution of the Indonesian economy. This shift can be seen in the decreasing share of the agricultural sector and the increasing share of the

industrial and service sectors in Gross Domestic Product (GDP). Economic progress has driven the rise of the digital economy, placing Indonesia in the fourth industrial revolution. High economic growth can cause environmental and social problems, including pollution, deforestation and socio-economic inequality. Indonesia has experienced a significant reduction in forest cover, with half of its forests lost in the past 50 years. After China, Indonesia is the

second largest contributor to plastic waste in the sea. Indonesia faces challenges related to inequality in environmental issues during a period of economic progress. Income inequality has increased significantly since 2000. This can be seen from the increase in the Gini index from 28.5 in 2000 to 38.1 in 2017 (Hanan, 2017; Zhang, 2020).

World Bank research in 2015 shows that Indonesia's economic growth only benefits 20% of the population, particularly the highest income group, the consumer class. The future development agenda must be more inclusive so that all Indonesian citizens can participate and benefit from economic progress. For financial progress to benefit all levels of society and be more inclusive, increased public participation is needed, including taxation and active involvement in democracy. Increasing participation requires improving governance and institutions through implementing sustainable development.

3.2 The Concept of Sustainable Development

Sustainable development is a complex topic with several meanings and interpretations (Li, 2020a; Nemali, 2022). Three components of sustainable development are economic growth (Alves, 2020), social justice to meet the needs of the current generation (Labib, 2020), and environmental protection to ensure the ability to meet the needs of current and future generations

(Lama, 2021). The United Nations Development Program (UNDP) provided a comprehensive definition of sustainable development in 2015 (Tan, 2021), coinciding with the SDGs launch (Trovato, 2022; White, 2021). UNDP defines sustainable development as meeting the current generation's needs without endangering future generations' ability to meet their needs (Shi, 2020). This serves as a reminder to the current generation of their responsibility in utilizing the earth's resources. We must preserve natural resources for future generations while protecting the environment.

Furthermore, Klarin (2018) stated that sustainable development is based on meeting human needs while adhering to certain environmental constraints. Environmental limitations Sustainable development involves applying environmentally friendly techniques to complete tasks (Sharma, 2015). Viable choices in sustainable development drive improvements for the present and the future. The concept of sustainable development requires us to change our lifestyle (Larcher & Tarascon, 2015), focusing on longterm environmental preservation. In 2015, UNDP introduced the Sustainable Development Goals (SDGs), which consist of 17 Global Goals with 169 goals and 244 indicators that must be achieved by 2030. The Sustainable Development Goals (SDGs) replaced the Millennium Development Goals (MDGs) set by America. Nation in 2016. Below is a list of Sustainable Development Goals (SDGs), shown in Figure 3.



Figure 3. Sustainable Development Goals (SDGs) in Indonesia until 2030

Indonesia collaborates 17 SDG goals with the Sustainable—development (SDGs), which aim to end poverty (Figure 3). The first goal is to eliminate world poverty. This target also applies to the percentage of the population below the national poverty threshold, as shown in Figure 4 (Alavi, 2013; Lund, 2018).

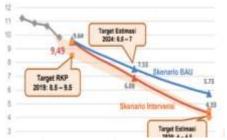


Figure 4. The main target of the SDGs is eliminating poverty

Figure 4 shows 5.73% poverty in 2030 based on the business-casual scenario. Based on the intervention scenario, the poverty rate will reach 4%–4.5% in 2030. SDGs reduce poverty to single digits. However, Indonesia faces more significant challenges in alleviating poverty. Because poverty levels are already low,

poverty alleviation is difficult because the poorest people face various challenges beyond their financial capabilities, such as isolated living conditions and inadequate access to health, education and sanitation services. The place is nice and powerful. One of the goals is to reduce poverty in the poorest areas of Indonesia. Eastern Indonesia (KTI) consistently has a higher poverty rate than Western Indonesia (KBI). To achieve success, Papua Province requires specific policy efforts. Indonesia is also prone to natural disasters. Disasters can increase poverty significantly. We must also protect those above the poverty line from falling below the poverty line while reducing poverty. Therefore, efforts to eradicate poverty must prioritize macroeconomic stability, which includes managing economic growth and inflation, especially setting prices for essential goods. On a local scale, social protection and economic development strategies are critical.

Elimination of hunger is the second goal. Eliminating hunger promotes food security, nutrition, and sustainable agriculture. Figure 5 shows that widespread food insecurity is driving this ambition.

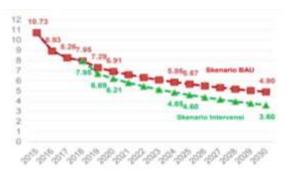


Figure 5. Second SDG goal (elimination of hunger)

Figure 5 shows a significant decline in food insecurity in Indonesia from 2000 to 2014. Widespread food shortages have had an impact on national food supplies. Authorities must ensure the availability of essential food to reduce food shortages. Natural disasters, climate change and extreme weather can impact agriculture. Due to the increase in severe weather and disasters related to climate change, a 2017 FAO report recommended further reductions in food scarcity. To reduce food shortages to 3.6% by 2030, food access and availability must be improved. These initiatives include increasing crop yields, managing food stocks, stabilizing food supplies and prices, and mitigating climate change.

Target 3 is to improve health and well-being across ages. Figure 6 shows the SDG indicators for maternal mortality per 100,000 live hirths.

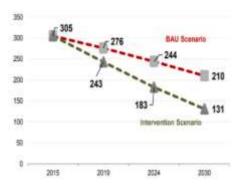


Figure 6. SDGs with the aim of improving health and well-being across \$ages\$

The high maternal mortality rate in Indonesia is shown in Figure 6. Health facilities and socio-economic challenges contribute to high maternal mortality rates. Women who marry early have a higher child mortality rate. Lack of appropriate health services increases maternal mortality rates. Remote populations face geographic barriers to healthcare access and a lack of health services. To reduce maternal mortality, the maternal and child health referral system and professional midwives must be strengthened.

Goal 4 is to ensure inclusive, egalitarian and lifelong learning opportunities for all. Gender equality and empowerment of women and girls is goal 5. Goal six is Providing universal water and sanitation. Goal seven provides affordable, reliable, sustainable and contemporary energy for everyone. Goal 8 promotes inclusive and sustainable economic growth, full and productive employment, and a dignified workforce. Goal nine promotes equitable and sustainable industrialization, resilient infrastructure, and innovation. Reducing national and international disparities is the tenth Goal. The eleventh goal is to create cities and settlements that are inclusive, safe, resilient and

sustainable. Maintaining sustainable consumption and production is Goal 12. Take urgent action to mitigate climate change and its impacts (Goal 13). Protect and utilize the oceans, seas and marine resources for sustainable development. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt land degradation and biodiversity loss (Goals 14 and 15).

Further, goal 16 fosters peace, inclusiveness, peace, justice, and strong institutions. Partnership to achieve goals is the ultimate goal. Economies use taxation for redistribution, equality, and stabilization. Taxes are necessary for good government. People participate in national development by paying taxes. Indonesia's tax revenue to GDP ratio is low compared to neighbouring Southeast Asian countries. After Myanmar, Indonesia had the second lowest tax revenue to GDP ratio in ASEAN in 2016. A high tax revenue ratio will help the country fund development. Achieving tax revenues of 14.2% by 2030 will require hard work, but it is achievable. To achieve this goal, the tax base must be expanded, legal certainty and ease of administration must be provided, and public knowledge and tax compliance must be increased. The central government, commercial sector and civil society organizations are working to achieve the SDGs. IGOs and INGOs implement many SDG projects based on the principles of International Cooperation in their partner countries. The SDGs and global cooperation can set us up to fight disasters such as catastrophic climate change and an unanticipated major economic recession.

3.2 Blue-Green Economic Policy pioneers new opportunities in the economy

The Blue-Green Economy is a modern development model that preserves the environment and oceans without destroying or exploiting them. The Blue-Green Economy combines the Blue and Green economies. UNEP describes the Green Economy as improving human well-being and social justice while reducing environmental risks and ecological scarcity. Green Economic Policy aims to improve the environment. A key component of sustainable development is the Green Economy (Roberts, 2010; Wheatcroft, 2020). Traditional Green Economy theory suggests that current development tactics have caused severe environmental damage. The environment must include economic growth (UNEP et al., 2012). Green Economy ideas have spread to new industries. The Green Economy is driven by environmental awareness and the creation of new opportunities, which can create economic development and new jobs. The UN identified the Green Economy as a new development engine in 2012. The challenges of the Green Economy are enormous. Prioritizing energy efficiency is critical (X. Wang, 2020). The Green Economy Plan prioritizes Wind and solar energy over petroleum-based resources.

Green Economy includes 'environmentally friendly construction methods' in large and small urban and metropolitan development initiatives. A Green Economy requires clean transportation. Cycling and public transportation are more recommended for clean mobility than private cars. Environmental management in a Green Economy promotes ecological benefits while reducing negative impacts. Agriculture, forestry, and clean and safe land management are Grecalle's food-producing enterprises and are part of their priorities. Organic food, fair trade and reforestation are Green Economy priorities. Companies producing environmentally friendly and cruelty-free food are part of the Green Economy. Global ecotourism, or eco-friendly tourism, is critical to an eco-friendly economy. Governments must collaborate in public service delivery and regulatory frameworks such as research, design and consultancy to create a Green Economy. In the Green Economy, 'Eco-Friendly Technology' has developed rapidly (Li, 2020b). Green technology promotes sustainability through environmentally friendly and innovative innovations. This sector prioritizes producing and distributing renewable social energy, water purification, waste processing, solid waste management, and reducing air pollution.

A fundamental Green Economy initiative is to value natural

ecosystem services economically. High resource efficiency and critical inclusion are essential in the Green Economy. Many sources link the 17 Sustainable Development Goals and their targets. One goal can help achieve another, resulting in a complex web of relationships. Indonesia's SDGs Roadmap was analyzed using a linkage study. UN DESA (Le Blanc, 2015), IGES (Zhou & Moinuddin, 2017), Bappenas (Bappenas, 2018), and scientific studies funded by the Nippon Foundation are also included. IGES studied SDG goals and targets in 9 Asian countries, including Indonesia. This extensive analysis examines the goals and targets of the SDGs in Indonesia, especially the SDGs targets for 2017-2030, namely the road map for fair paid work. High-quality, environmentally friendly jobs with fair wages are essential to a green economy. They impose fines for violating carbon emissions restrictions to encourage a green economy. The Green Economy creates powerful and valuable recycling, reuse and repair initiatives to reduce waste in every community. Borel-Saladin and Turok (2013) believe that the Green Economy can help an unbalanced economy become healthier and more equal by paying attention to environmental warning signs.

According to Okafor-Yarwood et al. (2020), academics and politicians are pushing for the Blue Economy (BE) to save the ocean and its riches. UNCTAD describes the Blue Economy as trade and commercial activities that conserve marine biodiversity, ecosystems, species and genetic resources. The World Bank describes the Blue Economy as economic sectors and policies that influence the sustainability of marine resources. The basis of blue economy theory is the gap between marine-related socio-economic progress and environmental degradation (World Bank, 2017). The Blue Economy promotes economic growth, social inclusion and ocean-based livelihoods while protecting marine and coastal ecosystems. The blue economy focuses on the environment and the economy (Ortega, 2022; Phan, 2020). These characteristics vary according to social and economic context. Developing a country's blue economy requires government and private sector involvement. One of its features is the encouragement of blue economy entrepreneurship. Blue Economy activities include aquaculture, maritime and coastal tourism, deep-sea and short-sea fishing, shipping, seabed mining, marine biotechnology, medicinal resource refining, and desalination. National governments, IGOs, international NGOs, and civil society organizations must collaborate to create effective geopolitical, socio-cultural, and economic plans.

3.3 Indonesia's Opportunities to Achieve Sustainable Development Goals with Blue-Green Economic Steps

Indonesia, which is located between two continents and two oceans, allows it to become a crossroads for world traffic, both air and sea traffic. Indonesia is a crossing point for world economic activities and trade between industrial and developing countries. Indonesia is called an archipelagic country because it is formed from many groups of islands. Indonesia is not formed by one large island or several islands but thousands of islands. The many islands that makeup Indonesia make it an archipelagic country. With Indonesia's sea area reaching millions of square kilometres, this country has become a maritime axis with extraordinary potential for developing various maritime sectors. Indonesia was designated as a world maritime country, to be precise, in 1982. Legally, Indonesia's determination as a maritime country is contained in the 1982 United Nations Convention on the Law of the Sea (UNCLOS), which is called the Archipelagic State Principle. Therefore, proper use of marine resources is essential. The area of the Exclusive Economic Zone of Indonesia is 2.55 km2. It can be seen that most of Indonesia's territory is water. This is the main reason that makes Indonesia a maritime country. With an area this large, of course, the marine potential in Indonesia is enormous. Shallow and deep-sea fisheries in Indonesia must be utilized more. Deep sea fisheries in Indonesia can gain world market share. The Indonesian government must adopt sustainability and the blue economy to lead sustainable fisheries management.

Indonesia's marine environment is rich in coral and medicinal

plants. Corals and medicinal plants are abundant in Indonesia's marine zones. Governments, the corporate sector, international NGOs and other international institutions must collaborate on scientific studies to evaluate assets across various industries. If we develop this business, Indonesia will dominate the ASEAN PHARMACY market. However, 90% of pharmaceutical raw materials in Indonesia are still imported from other countries, especially China and India. However, this needs to be improved and maintained better.

Coastal sediments include titanium and zirconium tin, which are of world value (Kuo, 2015). Developed countries use it to make biomedical devices and airplanes. Indonesia can process and export raw materials or use them for local industry. With the right technology, Indonesia can increase income by processing mineral compounds into value-added goods rather than sending them raw. Indonesia can double its profits by following Blue-Green economic standards such as 'clean industry,' which are in high demand internationally. Governments, national politicians, research institutions and corporations must work together to achieve this goal. Indonesia can build low-carbon ports. National maritime navigation and port infrastructure can make much money for our government. Indonesia may become a container trans-shipping hub and attract more international investors by building an ocean navigation system through sea travel and modern, environmentally friendly ports. Indonesia may get cash for initial costs. Due to its favourable position in the Indian Ocean, this region can become a regional logistics management center. The marine economy offers other options, such as natural gas storage centers and oil and gas exploration platforms. A shipbuilding center, regional seismic studies, and ship deployment center along the Indonesian coastline are possible. The Indonesian government requires the participation of the private sector and foreign companies to implement these programs. Modern marine-related companies must use energysaving and pollution-free methods to obtain environmentally friendly certification.

Indonesia has excellent marine tourism potential in its coastal areas. The 'Blue-Green tourism sector' is booming in many countries. Sailing, swimming, diving, surfing, water skiing, beach volleyball and other water sports can be promoted in Indonesian lagoons and bays. Recreational diving facilities are essential for tourism. Indonesia has significant maritime ethnography and archaeology. Exploration is essential for research and tourism. The growth of tourism in Indonesia can provide many jobs. Residents can make tourist souvenirs and make money with small companies. This can reduce poverty and unemployment. Promoting tourism in these places must prioritize coastal conservation and protecting marine resources.

International geopolitics places Indonesia in a strategic position. Indonesia can become the primary guardian of the Indian Ocean. Maritime protection policies can improve the Indonesian economy by creating many opportunities. Keep navigation channels free from pirates and military blockades to ensure sea passage. Indonesia could make much money by investing in naval resources. Indonesia's maritime resources can drive the growth of renewable energy, essential for sustainable development and a blue-green economy. Renewable energy is considered 'clean energy'. Ocean waves, offshore wind and OTEC technology can generate electricity. This procedure requires resources, UNDP, JICA, GIZ support and human skills. Mangrove forests protect much of Indonesia's coastline as carbon sinks and coastal barriers.

Indonesia uses fisheries management areas to make harvest-level decisions. While promising, these systems require a budget, human resources, and a management plan to minimize fish stock losses, including harvest restrictions determined based on research and statistics. Indonesia's maritime spatial plan identifies economically viable but protected zones. Maritime spatial plans and business licensing systems must be integrated to ensure zoning compliance. Indonesia can increase income by following Blue-Green economic criteria, including 'clean industry' and improving management of marine and coastal assets (fisheries, mangroves, coral reefs), which are in high demand internationally. The "scorecard" system

measures compliance and development implementation plans using coastal and marine resource indicators, including the area of mangrove forests and the quality of coral reefs. To avoid utilization conflicts, Indonesia can prepare marine and coastal cadastres (spatial ownership lists). Indonesia can follow global fisheries best practices by implementing "rights-based" fisheries management. The government grants harvesting rights to coastal residents or companies up to the harvest limit in this arrangement. This makes fishermen stakeholders in fisheries management, encouraging good management and increasing productivity. Better conservation can help Indonesia restore 600,000 hectares of mangrove forests by 2025. Mangrove forest loss must be reduced and stopped alongside restoration efforts. Expanding the moratorium on primary forest conversion to include mangrove forests would allow Indonesia to plan yieldbased payments for the carbon stored in biomass and soil in its extensive mangrove forests and ensure coastal communities receive these benefits to encourage sustainable mangrove management.

However, incentives and investments are needed to improve critical services and infrastructure in waste collection, water services, and disposal to manage environmental impacts on coastal areas, improve the quality of life for coastal communities, and protect tourist destinations. The investment will be huge, but global experience shows that infrastructure development like this provides significant benefits (substantial Level Panel on a Sustainable Ocean Economy, 2020). Infrastructure alone cannot eliminate waste. Indonesia's blue economy will require a circular economy and reduce waste over time. These measures include plastic price increases, innovation and recycling incentives, and behavioural adjustments to limit plastic consumption. Deposit return mechanisms, recycling material standards, minimum recycled content requirements, and public procurement priorities can complement Extended Producer Responsibility laws.

The World Bank supports the government's blue economy strategy through investments such as the Prosperous Seas Program, which improves the livelihoods of coastal communities and restores critical ecosystems, and the Coral Reef Rehabilitation and Management Program, a 20-year investment in coral reef management and research. In addition, the Integrated and Sustainable Tourism Development Program (P3TB), an integration platform, the World Bank's Indonesia Sustainable Oceans Program [DJ1], provides technical support for increasing blue economy capacity and knowledge. Indonesia can create a blue economy for future generations through the actions above. Appropriate and timely information systems on fisheries, ecosystems and human impacts are needed to collect and monitor data using Indonesia's complex seascape. Expanding surveys to obtain stock and harvest data for specific species and speeding up electronic monitoring and reporting systems are needed. Regular ecosystem monitoring and data exchange mechanisms are also necessary. Tourism would benefit from better data. Tourism locations can benefit from environmental impact monitoring to identify problems and enable rapid mitigation. They are building back "bluer" after COVID-19. Short-term economic recovery after COVID-19 can be aligned with the demands of the maritime sector. Regional spatial planning and fisheries management plans can be examined and implemented when pressure is lower. The packages can create jobs and strengthen coastal resilience by investing in village infrastructure and labour-intensive coastal and marine restoration activities such as mangrove forests and beach cleanups in tourism-dependent areas. This article shows that Indonesia's blue-green economic potential is real and can be achieved with the desired capabilities and targets.

Indonesia can establish environmentally friendly industrial factories using abundant natural resources and the principles of a green economy. Eco-Friendly Industrial Factories prioritize reducing carbon emissions during production. However, this situation requires proven renewable energy sources. Energy-saving industrial transformation must be carried out in stages. In the wake of civil conflict, Indonesia's industrial and manufacturing sectors could benefit from international investment. Thus, the economic zone can accommodate several new factories. Indonesia can start the Green Industry idea based on these criteria.

Green agriculture is vital for the Green Economy. Organic farming must replace dirty inorganic farming in Indonesia. Due to public health concerns, organic vegetables and fruits are in high demand nationwide. Sustainable agriculture in Indonesia can benefit from public optimism, which can be one of the goals that may be achieved by utilizing the principles of the blue-green economy in the manufacturing sector. Increasing efficiency and improving waste management can drive major green economic expansion in the industrial sector while reducing environmental and social costs. Indonesia's manufacturing industry accounts for more than 25% of the country's economic activity. This includes the manufacturing and processing sectors, innovative technologies for sustainable industry, and waste reuse. Maintaining the expansion of this industry is very important to improve the welfare of the Indonesian people, mainly because of the significant employment prospects on offer. Actions that need to be taken are to create small businesses that focus on waste management, implement financial rewards for energy conservation, and fund research and innovation in environmentally friendly technologies. Significant investment in land and sea transportation networks, telecommunications and other infrastructure will unlock Indonesia's enormous economic potential and improve its ability to deal with climate change and other threats. Connectivity investment currently accounts for around 17% of GDP. This is important in supporting Indonesia's increasing economic growth rate and reducing regional development gaps.

As the economy grows, a great need for new urban infrastructure for land and water transportation will be needed. Significant planning and investment decisions taken in the coming years will have a long-term impact on Indonesia's ability to achieve environmentally friendly economic growth, given the importance of ports, water and sanitation systems, and other critical infrastructure. Necessary steps include expanding the socially and ecologically conscious cost-benefit analysis of critical connectivity solutions and integrating climate risk assessments into urban development and investment planning. Green-blue economic connectivity can be implemented by building 'smart' cities and establishing multimodal links, including modern port facilities, to improve maritime connectivity. This involves connecting metropolitan centers in the archipelago and internationally. Figure 9 shows a nighttime view of Southeast Asia from space.





government has time to solve other problems. Economic recovery

From the start, sustainable themes such as green cities can be integrated into city planning. Environmentally friendly cities and villages can be built by encouraging the government and business world to emphasize sustainable development. Indonesia can create a Blue-Green economy workforce by employing the unemployed young generation. The Indonesian government employs several new graduates to work in the public sector. This may help new recruiters build a solid workforce in the country. Community leaders can help achieve the Sustainable Development Goals by following the Blue-Green economic concept. Indonesia can exploit many opportunities by focusing on the Sustainable Development Goals using a Blue-Green financial strategy.

3.4 Indonesia's Challenges to Achieve Sustainable Development Goals with Blue-Green Economic Steps

UNDP has identified three main problems with SDG implementation in all states. The first is the difficulty of governing a country. This involves meeting government, business and civil society actors at the right time and place to achieve a goal. Second, make difficult trade-offs. This involves balancing party interests with shared goals. Building actionable accountability is the third thing. These procedures emphasize transparency, responsibility, and responsiveness (Bowen et al., 2017). These challenges are relevant to Indonesia on several levels. Indonesia still needs to achieve various development goals due to governance issues. In this regard, the government, commercial sector and civil society must understand their roles and act better (Ajward, Weerasinghe, 2012), governing is how government players discuss, decide, and act. Most Indonesians think that government is about power politics. However, this is related to the methods, mechanisms and strategies used to overcome socio-economic and political problems and improve these areas. The Indonesian government has many weaknesses. A significant problem is the erosion of effective governance.

Therefore, the Indonesian government system needs assistance in terms of stakeholder participation, consensus orientation, accountability, transparency, responsiveness, effectiveness and efficiency, equality and inclusion, and the rule of law. The legitimacy of actions, minimum corruption, equal treatment of minority groups and the voice of the most vulnerable groups in decision-making, conformity to information, long-term public interest, bureaucratic effectiveness, etc., must be improved. Using a blue-green economic approach, Indonesia must have all the conditions above to achieve its SDGs.

Due to structural and functional deficiencies, Indonesian regional governments can become more effective and efficient. This has a significant impact on SDG implementation. Indonesia has various concerns regarding corporate governance and e-governance. This governance problem has hampered Indonesia's SDGs and Blue-Green economic program. SDGs are challenging to achieve because they require efforts to bring together relevant stakeholders at the right time and place. Sustainable development and a Blue-Green economy involve many stakeholders, including national governments, IGOs, MNCs, TNCs, local and international NGOs, governments, civil society organizations and individuals. Coordinating and uniting various parties to solve SDG problems

and the Blue-Green economy is challenging in Indonesia.

Making difficult trade-offs is another obstacle Indonesia faces in achieving the SDGs through Blue-Green economic provisions. The SDGs are a universal framework with many potentially different policy objectives in the economic, social and environmental sectors, some of which are complementary. Previous development agendas focused on economic growth. If we can optimize synergies and resolve trade-offs, we will determine whether the agenda is achieved (Kroll et al., 2019). There may be trade-offs in SDG initiatives. A trade-off is "a situation where you balance two opposing situations or qualities, and, in some cases, this can be a situation where you accept something bad to get something good" (Cambridge, 2021). Short-term winners and losers will exist in this environment. Under these conditions, responsibilities may be suppressed, and stakeholder interests may conflict. Balancing the conflicting interests of stakeholders has become an important task. Using the Blue-Green economic concept, all stakeholders must communicate to make difficult decisions based on a sincere desire to achieve the SDGs.

Indonesian public administration and management must be more bureaucratic, hierarchical, outdated and corrupt (Ramasamy, 2020). Poor public administration and management in Indonesia have hampered performance. Thus, the government cannot correctly implement public policies at the lower level. Government procurement has many complicated and time-consuming steps. This has made private investors, especially foreign companies, reluctant to invest in Indonesia's economic initiatives. New public management (NPM) and public-private partnerships (KPS) also impact Indonesia's SDGs.

Building public trust and knowledge is equally complex. Recent surveys show that Indonesians need more confidence in government policies and actions. The Global Corruption Barometer for Indonesia found that 47% of the public trusts the government. About 80% consider government corruption a major problem. The GCBSL survey shows a significant increase in climate change, natural resource use, and disaster management corruption, and 51% believe corruption is rampant. This is new in Indonesia, and political leaders and bureaucrats are involved in environmental and natural resource management controversies (Ramasamy, 2020). Due to a corrupt political and administrative culture, Indonesian people no longer trust government programs. This urgent scenario has hampered community integration and mobilization to achieve the SDGs through the Blue-Green economic concept. Politicization in the administrative sector and development projects harms the SDGs and Indonesia's Blue-Green economy. Therefore, academic research and performance evaluations need to be revised to analyze the SDG program and the Blue-Green economy in Indonesia with actual data.

Thus, this process changes the goal significantly. All these problems have hampered program implementation. Due to the civil war in Indonesia for almost three decades, the districts affected by the war have significant regional development differences. Development still lags in war-torn areas. Due to resource inequality, some areas are poor in other areas. Poverty and alienation from development prevent residents in underdeveloped areas from actively participating in development programs. Any development project

in the region must start by meeting local needs. Therefore, Indonesia must build infrastructure to support the SDGs and the Blue-Green economic plan.

The use of Blue-Green economic principles in Indonesia to achieve the SDGs is threatened by political instability. Due to frequent and unpredictable changes in government, public policy and development must be more consistent. From 2017 to 2019, the legislative branch of the GoSL underwent more than three changes. In this uncertain and turbulent political environment, Indonesia needs help to attract foreign and local investors for development projects. Using the Blue-Green economic model, political power struggles have hampered the achievement of the SDGs. The 2019 COVID-19 pandemic had a significant impact on human society. As a result of the pandemic, people's lifestyles have changed drastically. This is detrimental to all development portfolios around the world. Lockdowns and other epidemic control measures slowed global economic activity. This also has an impact on the earth's ecosystem. The COVID-19 pandemic has had devastating and devastating impacts on the environment. According to several studies, air quality is improving worldwide (Rume & Islam, 2020). Apart from that, greenhouse gas emissions have also decreased. Covid-19 has further drawbacks. The extraordinary growth in medical waste, such as masks, hurts the environment. As seen above, social, political, economic and natural problems have prevented Indonesia from adopting a Blue-Green economic policy to achieve the SDGs.

Political instability in Indonesia threatens Blue-Green economic principles for SDGs. The renewable energy industry in Indonesia needs help with the combined percentage of renewable energy used by marine and wind energy, which is below 3%. Renewable energy investment is one reason for Indonesia's low contribution to renewable energy. Renewable energy investment is low, indicating investor skepticism. The lack of government incentives through laws and the political climate after the election and government transition discouraged investors (Bappenas, 2021).

In politics, especially after Indonesia's presidential and vice presidential elections. In a democracy like Indonesia, the president must be elected. Indonesians are focused on the 2024 presidential election. The 2024 presidential election raises various political challenges that could affect SDG targets. In the 2024 Indonesian presidential election, economic policies and recovery from the COVID-19 epidemic will be critical topics. Voters will evaluate presidential contenders' pandemic response, including sector recovery and job development. Presidential contenders with a clear vision and measures to revive Indonesia's economy would likely gain support. An inclusive election can shape inequality-reducing policies. Elected officials can promote social and economic measures that reduce inequality. The unfair general election process, including fraud, has affected the commitment to achieve the Sustainable Development Goals. Fair and democratic elections are essential for stable governance and sustainable development.

In contrast, an uneven selection procedure can substantially hinder SDG achievement. Unfair elections affect several SDGs. Under Security and Stability (SDG 16), rigged general elections can promote political and social instability. Election chaos and inequality endanger SDG 16's security and stability. Second is Community Empowerment (SDG 16.7), which fraudulent elections might hamper. SDG 16.7 stresses community empowerment, which might be hindered by unequal political participation. Third, Social and Legal Justice (SDG 10), including unjust general elections, can worsen inequality. SDG 10, which seeks to combat inequality, is challenged if elections favour particular groups. Fourth, Human Rights (SDG 16.3) states that rigged elections might violate human rights, including free choice. Human rights breaches during elections could prevent SDG 16.3, which promotes an effective and inclusive rule of law. Five, Poverty Alleviation (SDG 1), particularly unfair elections, can lead to economic policies that hurt disadvantaged communities. Economic policies that hurt people experiencing poverty endanger SDG 1, which aims to reduce poverty. Sixth, Quality

Education (SDG 4) and unfair selection could reduce education spending. Elected leaders can improve SDG 4 by prioritizing education. In rigged elections, health policies may not cover the entire community, according to SDG 3. Health policies that are not egalitarian and inclusive endanger SDG 3, which promotes health and well-being. Finally, SDG 6's discriminatory selection procedure can delay infrastructure improvements for clean water and sanitation. If elected leaders do not prioritize infrastructure, SDG 6 clean water and sanitation is at risk.

Public sector corruption hinders development, poverty eradication, and sustainable development. Corruption is hard to measure because objective evidence is incomplete and hard to compare. Global civil society organization Transparency International (TI) established the Corruption Perceptions Index (IPK) to fight corruption. Corruption in public sectors (administration and politics) determines countries' corruption perception index rankings. This composite indicator uses corruption perception data from renowned institutions. The index reflects global observers' views, including specialists from the countries and areas analyzed.

Indonesia needs unfair elections and corruption in this unstable political climate. Multiple industries must spend enough to reach the 23 percent renewable energy mix objective by 2025 (Bappenas, 2021). Due to obstacles, Indonesia's marine biotechnology industry needs to grow. Marine biotechnology research takes 5-10 years and is expensive to produce pharmaceuticals, cosmetics, bioenergy, superior species, bioremediation bacteria, and other items. Second, the marine biotechnology business lacks researchers and engineers. Therefore, an innovative environment has yet to be created. Third, research and development infrastructure, fiscal incentives and disincentives, and political-economic policies need improvement (Dahuri, 2021). Naturally, this can hurt a nation's SDG efforts. Unfair elections can damage sustainable development by eroding democracy and public involvement. Thus, political power struggles have hampered SDG implementation using the Blue-Green economic paradigm. Every nation must hold fair, democratic, and inclusive elections to fulfill the SDGs. Social, political, economic, and natural issues have stopped Indonesia from adopting a Blue-Green economic policy to fulfill the SDGs.

Modern sustainable development and the blue-green economy balance conflicting desires with understanding the world's environmental, social, and economic constraints. Every global social-transformative development plan has obstacles. As mentioned above, Indonesia's blue-green economy offers opportunities and challenges for achieving the SDGs. Many practical and economical local alternatives can be used intelligently to overcome these limitations. Please identify it accurately and use alternative options for this procedure to be successful. The SDGs and Blue-Green economic principles are a revolutionary agenda driven by society based on openness, accountability, participation and inclusion. Thus, these processes involve several actors. This scenario requires developing a sense of reciprocity, trust, and stakeholder recognition at every level to achieve intentional goals. Several institutions implement SDGs and Blue-Green economic provisions. They require effective communication, coordination and cooperation. Increasing stakeholder knowledge and education regarding these objectives is critical as an initial approach.

This study found that only certain socio-economic classes understand the SDGs and the Blue-Green economy. This layer usually consists of high-ranking government officials, members of Intergovernmental Organizations (IGOs) and International Non-Governmental Organizations (INGOs) who actively participate in this process, academics interested in these topics, and some knowledge seekers from ordinary people. Society must be aware of these goals; sometimes, they need to be made aware; therefore, their input is significant. Therefore, SDG initiatives and national Blue-Green economic education are needed to overcome this problem. Such efforts should teach stakeholders about the SDGs and Blue-Green economic development and give them a sense of responsibility and ownership. These awareness initiatives should leverage mainstream and social media to reach diverse stakeholders across multiple regions. The federal government,

ministries, provincial and local governments, the commercial sector, and civil society must actively participate in this mission. To make this agenda a success, women, the elderly, school children, ethnic minorities, indigenous groups, people with disabilities and other vulnerable communities must participate.

In addition, Indonesia's school and university education system must include sustainable development and Blue-Green economic disciplines to equip students with these capabilities. This can prepare the younger generation for global trends, prospects and professional expectations. This provides new employment pathways and enables discoveries, ideas and assets across various sectors. Public administration communicates executive branch policies to the public and implements them at the grassroots level. The previous section explained the shortcomings of Indonesia's public administration and management sector. To fulfill Indonesia's SDGs, this sector must be improved. Indonesia's old public administration system needs renovation to improve its administration, management, and technology. Civil servants must hone their trilingual, ICT and other technical skills. Following Blue-Green economic principles reduces politicization and public sector corruption, helping achieve the SDGs.

Political changes, especially the movement of power, have changed the Indonesian government's administrative policies and regulations. This is a worrying trend in Indonesian public administration. Therefore, conflicting public policies and government programs significantly hamper Indonesia's development aspirations. This hampers policy and institutional consistency in Indonesia's administrative sector. This dangerous position must be recognized, and the constitution's provisions and other laws must form stable and strong government policies and institutions in Indonesia. Multi-stakeholder partnerships are critical for the SDGs and the Blue-Green economy. As a director, the government must balance party interests. Because it collaborates with many partners with diverse affiliations and goals, the government must negotiate and resolve problems satisfactorily. A people-centred government can help this task significantly. People-centred governance structures should be proposed to meet the SDGs and Blue-Green economy goals. This can encourage everyone to have equal involvement in the process. important recommendations include increasing organizational accountability, efforts to achieve the SDGs, and a blue-green economy. Governments, ministries, other public institutions, IGOs, international NGOs, the commercial sector and civil society organizations must be held accountable. These institutions must follow the National Roadmap to fulfill their obligations. At the same time, the parties must have access to adequate procedural information. The government must provide reliable data on the progress of these programs without falsifying statistics. The current evaluation and monitoring system for these agendas needs to be improved. Therefore, independent and impartial authorities must carry out these procedures.

Following Blue-Green economic solutions to achieve the SDGs requires strong political will and government commitment. Relevant agencies and authorities must motivate the community to achieve these goals. Even though it concentrates on achieving the SDGs and the Blue-Green economy in Indonesia, it must also decentralize operations and allow for a good flow of information in society. The government must establish environmentally friendly policies that support the SDGs and the Blue-Green economy. Rather than investing in new assets, Indonesia can maximize its natural resources to achieve these goals. In the Indonesian context, identifying elements of environmental sustainability, potential use of existing resources, and other resource needs in terms of financial, human, and technological knowledge. Tell us. Indonesia is ready to recognize the opportunities and obstacles to achieving its SDGs. The government will use appropriate suggestions to overcome this by following Blue-Green economic standards. That will make this task more manageable.

4 CONCLUSION

Sustainable development and the blue-green economy are closely interconnected and work together. Like many other countries, Indonesia adheres to Blue-Green economic principles to achieve the Sustainable Development Goals (SDGs). This research aims to explore the potential and problems faced by Indonesia in achieving the SDGs by applying the Blue-Green economic concept and propose ways to overcome these obstacles. Indonesia has implemented a significant strategy to achieve sustainable development goals by incorporating blue-green economic policies, mainly because its developing archipelagic nation is at high risk of natural disasters that impact all aspects of society, the economy and progress. Indonesia has a strategically important position in the global geopolitical landscape due to its abundant unexplored marine resources. Adopting the Blue Economy in Indonesia provides an excellent opportunity to achieve the Sustainable Development Goals. The country can progress towards a green economy by integrating environmentally friendly technologies into large-scale development projects from the start, which will help achieve the Sustainable Development Goals. Indonesia faces obstacles and limitations in achieving the Sustainable Development Goals while still adhering to the Blue-Green economic concept. The study finds that barriers can be overcome by implementing strategies to overcome policy, governance, legal and economic difficulties. Developing the public sector effectively and efficiently is critical, as is implementing technological transformation and information management, facilitating stakeholder coordination, pursuing international cooperation and partnerships, and learning from global best practices. Leveraging human resources, natural capital and tangible assets, increasing the adaptive capacity of various communities, and implementing disaster risk management practices due to climate change are critical to achieving the Sustainable Development Goals through a Blue-Green economy. At the same time, it should also increase public accountability, openness, and knowledge of these goals.

This research shows that the blue economy has great potential in building a maritime economic system that focuses on environmental sustainability. The government can fulfill its commitment to economic, social and cultural rights by exploiting marine resources, including guaranteeing the right to food, health and a fair standard of living. These rights must include basic requirements and be fulfilled at the highest level possible. An appropriate and integrated national laws and policies system is needed to balance the blue economy, human rights and environmental protection. The 2024 presidential election in Indonesia will reflect people's concerns and hopes regarding various crucial political issues. The selection of state leaders will mainly focus on economic policy, post-pandemic recovery, poverty alleviation, social inequality, improving education, environmental issues, foreign policy and international relations. Understanding these concerns will enable voters to make informed judgments and support a sustainable presidential election that reflects the aspirations of the Indonesian people.

This study mainly focuses on analyzing the potential and obstacles faced by Indonesia in achieving the SDGs through their implementation. The blue-green economy provisions stem from actions implemented by Indonesian government agencies between 2016 and 2019. The regime transition in 2019 and changes in Indonesia's socio-economic and political landscape may have created new possibilities and obstacles in realizing the Sustainable Development Goals after 2019. The COVID-19 pandemic has created various obstacles to development efforts in the current global landscape. Studies that might be carried out to examine how developments in Indonesia's socio-economic and political situation impact achieving the SDGs will provide new insights into this field of research. All governments need to revise and adapt their strategies to achieve the Sustainable Development Goals (SDGs) by focusing on the changes caused by the COVID-19 pandemic. Suppose Indonesia is ready to identify and address the priority areas above effectively. China can successfully implement the provisions of the Blue-Green economy and achieve the Sustainable Development Goals by 2030.

REFERENCES

- Aboelfetoh, E. F. (2020). Effective disposal of methylene blue using green immobilized silver nanoparticles on graphene oxide and reduced graphene oxide sheets through one-pot synthesis. Environmental Monitoring and Assessment, 192(6). https://doi.org/10.1007/s10661-020-08278-2
- Alavi, H. (2013). Islamic Educational Goals, Methods, and Content, with Emphasis on Shia Faith. Journal of Research on Christian Education, 22(1). https://doi.org/10.1080/10656219.2013.769817
- Ali, A. (2020). Blue-laser-diode-based high CRI lighting and highspeed visible light communication using narrowband green-/red-emitting composite phosphor film. Applied Optics, 59(17), 5197-5204. https://doi.org/10.1364/A0.392340
- Alves, A. (2020). Exploring trade-offs among the multiple benefits of green-blue-grey infrastructure for urban flood mitigation. Total of the Environment. https://doi.org/10.1016/j.scitotenv.2019.134980
- Aryaseta, A. W., Rosidah, I., Cahaya, V. E., Dausat, J., & Darmayanti, R. (2023). Digital Marketing: Optimization of Uniwara Pasuruan Students to Encourage UMKM" Jamu Kebonagung" Through Branding Strategy. Jurnal Dedikasi, 20(2), 13-23.
- Ayllon, T., & Cole, A. (2015). Münzverstärkung (Token Economy). Verhaltenstherapiemanual. https://doi.org/10.1007/978-3-642-55210-6_41
- Kesejahteraan Berkelanjutan Pemahaman Pertumbuhan Ekonomi Klasik, Neoklasik, Islam, Green Economy, Blue Economy. books.google.com. https://books.google.com/books?hl=en&lr=&id=hJncEAAAQ BAJ&oi=fnd&pg=PA1&dq=ekonomi+biru&ots=dCxfnU6lOU& sig=9wz-hlJfGwuGQIrnBmYhi_3NulE
- Booth, D., & Golooba-Mutebi, F. (2014). Policy for agriculture and horticulture in Rwanda: A different political economy? Development Policy https://doi.org/10.1111/dpr.12081
- Cruz, J. A. (2021). Evaluation of the cooling effect of green and blue spaces on urban microclimate through numerical simulation: A case study of Iloilo River Esplanade, Philippines. Cities and Sustainable Society. https://doi.org/10.1016/j.scs.2021.103184
- Darajati, M. R. (2023). Ekonomi Biru: Peluang Implementasi Regulasi Di Indonesia. The Journalish: Social and Government. http://thejournalish.com/ojs/index.php/thejournalish/artic le/view/599
- Darmayanti, R., Milshteyn, Y., & Kashap, A. M. (2023a). Green economy, sustainability and implementation before, during, and after the covid-19 pandemic in Indonesia. Revenue Journal: Management and Entrepreneurship, 1, 27-33.
- Darmayanti, R., Milshteyn, Y., & Kashap, A. M. (2023b). Green economy, sustainability and implementation before, during, and after the covid-19 pandemic in Indonesia. Revenue Journal: Management and Entrepreneurship, 1, 27–33.
- Darmayanti, R., Suyono, G., Gunawan, I. I., Hidayat, A., & Maghfiroh, I. (2023). Sustainable lifestyle: Study of independent curriculum implementation in terms of mathematics learning and P5 implementation. AMCA Journal of Education and Behavioral Change, 3(2).
- Dornan, M. (2018). What's in a term? "Green growth" and the "bluegreen economy" in the Pacific islands. Asia and the Pacific Studies, 408-425. 5(3), https://doi.org/10.1002/app5.258
- Expósito, L. M. C. (2020). Implementation of SDGs in university teaching: A course for professional development of teachers in education for sustainability for a transformative action. Sustainability (Switzerland), https://doi.org/10.3390/su12198267
- Flint, C. (2018). Political geography: World-economy, Nation-State and locality. Political Geography: World-Economy, Nation-Locality, 1 - 376.https://doi.org/10.4324/9781315164380
- Florence, N. (2016). Study on the effect of an electrolyte on the selfaggregation and the geometry of the dye aggregates of

- methylene blue in aqueous media. Journal of Surface Science Technology, and 32(1), https://doi.org/10.18311/jsst/2016/6599
- Haanurat, A. I., Vedianty, A. S. A., & Tollentino, S. A. (2024). Instagram's impact on sharia economic law literacy in the digital age and Indonesia's sharia economy strengthening. Revenue Journal: Management and Entrepreneurship, 2.
- Hanan, J. J. (2017). Greenhouses: Advanced technology for protected horticulture. taylorfrancis.com. https://doi.org/10.1201/9780203719824
- Hassan, A. K. (2020). Green synthesis of bentonite-supported iron nanoparticles as a heterogeneous Fenton-like catalyst: Kinetics of decolorization of reactive blue 238 dye. Water Science and Engineering, 286-298. 13(4). https://doi.org/10.1016/j.wse.2020.12.001
- Hendarto, T., Safitri, N. D., & Dhakal, A. (2023). Does TQM affect Indonesian food sector production efficiently? *Revenue Journal:* Management and Entrepreneurship, 1.
- Hendriyana, A. (2022). Ekonomi Biru Dorong Perikanan dan Kelautan Berkelanjutan. Retrieved April.
- (2021). A human-scale investigation into economic benefits of urban green and blue infrastructure based on big data and machine learning: A case study of Wuhan. Journal of Cleaner Production, https://doi.org/10.1016/j.jclepro.2021.128321
- Bahri, S. E. Z., Aprilianti, D. R. V, & SSTP, M. E. (2023). Menuju Jiang, W. (2020). A single-molecule conformation modulating crystalline polymorph of a physical π - π Pyrene dimer: Blue and green emissions of a pyrene excimer. Journal of Materials Chemistry 8(10), 3367-3373. https://doi.org/10.1039/c9tc06603a
 - Jodlbauer, J. (2021). Biocatalysis in Green and Blue: Cyanobacteria. Biotechnology, 39(9), 875-889. https://doi.org/10.1016/j.tibtech.2020.12.009
 - Johnson, C. (1993). Blue-on-Yellow Perimetry Can Predict the Development of Glaucomatous Visual Field Loss. Archives of Ophthalmology, 111(5), 645-650. https://doi.org/10.1001/archopht.1993.01090050079034
 - Kang, H. (2019). Economy-wide climate change impacts on green water droughts based on the hydrologic simulations. *Agricultural* Systems. 171. 76-88. https://doi.org/10.1016/j.agsy.2019.01.006
 - Labib, S. M. (2020). Spatial dimensions of the influence of urban green-blue spaces on human health: A systematic review. **Environmental** Research. https://doi.org/10.1016/j.envres.2019.108869
 - Lama, G. F. C. (2021). Hydraulic efficiency of green-blue flood control scenarios for vegetated rivers: 1D and 2D unsteady simulations. Water (Switzerland), *13*(19). https://doi.org/10.3390/w13192620
 - Langergraber, G. (2020). Implementing nature-based solutions for creating a resourceful circular city. Blue-Green Systems, 2(1), 173-185. https://doi.org/10.2166/bgs.2020.933
 - Larcher, D., & Tarascon, J. M. (2015). Towards greener and more sustainable batteries for electrical energy storage. Nature Chemistry. https://www.nature.com/articles/nchem.2085)
 - Lehnert, M. (2021). The role of blue and green infrastructure in thermal sensation in public urban areas: A case study of summer days in four Czech cities. Sustainable Cities and Society, 66. https://doi.org/10.1016/j.scs.2020.102683
 - Leksono, S., & Sungkawati, E. (2019). Revitalization on the Suprastructure of Traditional Market Institutions. 6th International Conference on Community Development (ICCD 2019), 87-90.
 - Lestari, I., Sungkawati, E., & Atiwi, E. (2020). Kualitas Layanan Administrasi di Pascasarjana Universitas Negeri Malang. Jurnal Penelitian & Pengkajian Ilmiah Mahasiswa (JPPIM), 1(1), 65-69.
 - Li, J. (2020a). An integrated strategy to improve the microclimate regulation of green-blue-grey infrastructures in specific urban Iournal of Cleaner Production. https://doi.org/10.1016/j.jclepro.2020.122555
 - Li, J. (2020b). Has solar PV achieved the national poverty alleviation goals? Empirical evidence from the performances of 52 villages China. Energy, 201.

- https://doi.org/10.1016/j.energy.2020.117631
- Liu, Z. (2021). Heat mitigation benefits of urban green and blue infrastructures: A systematic review of modeling techniques, validation and scenario simulation in ENVI-met V4. Building Environment, https://doi.org/10.1016/j.buildenv.2021.107939
- Lund, C. (2018). Social determinants of mental disorders and the Sustainable Development Goals: a systematic review of reviews. The Lancet Psychiatry, 5(4), https://doi.org/10.1016/S2215-0366(18)30060-9
- Luo, X. F. (2021). A Series of Fused Carbazole/Carbonyl Based Blue to Yellow-Green Thermally Activated Delayed Fluorescence Materials for Efficient Organic Light-Emitting Diodes. **Optical** Materials, Advanced https://doi.org/10.1002/adom.202100784
- Malhotra, K. (2022). Rate of COVID-19 infection and 30 day mortality between blue and green (dedicated COVID-19 safe) pathways: Results from phase 1 and 2 of the UK foot and ankle COVID-19 national (UK-FAlCoN) audit. Foot and Ankle 28(7), 1055-1063. Suraerv. https://doi.org/10.1016/j.fas.2022.02.017
- Mbachu, C. A. (2023). Green synthesis of iron oxide nanoparticles by Taguchi design of experiment method for effective adsorption of methylene blue and methyl orange from textile wastewater. Results in Engineering, https://doi.org/10.1016/j.rineng.2023.101198
- Mohamadpour, F. (2022). The development of imin-based tandem Michael-Mannich cyclocondensation through a singleelectron transfer (SET)/energy transfer (EnT) pathway in the use of methylene blue (MB+) as a photo-redox catalyst. RSC 12(17), 10701-10710. Advances. https://doi.org/10.1039/d2ra01190e
- Mulili, B. M. (2020). Financial inclusion as a tool for women's economic empowerment in Africa: Achieving un's 2030 sdg. Empowering African Women for Sustainable Development: Toward Achieving the United Nations' 2030 Goals, 133-143. https://doi.org/10.1007/978-3-030-59102-1_12
- Mulligan, J. (2020). Hybrid infrastructures, hybrid governance: New evidence from Nairobi (Kenya) on green-blue-grey infrastructure in informal settlements: "Urban hydroclimatic risks in the 21st century: Integrating engineering, natural, physical and social sciences to build resilience." Anthropocene, https://doi.org/10.1016/j.ancene.2019.100227
- Nekvapil, F. (2021). Wasted biomaterials from crustaceans as a compliant natural product regarding microbiological, antibacterial properties and heavy metal content for reuse in blue bioeconomy: A preliminary study. *Materials*, 14(16). https://doi.org/10.3390/ma14164558
- Nelson, K. G. (2010). Exploration of Classroom Participation in the Presence of a Token Economy. Journal of Instructional Psychology. https://search.ebscohost.com/login.aspx?direct=true&profil e=ehost&scope=site&authtype=crawler&jrnl=00941956&A

N=50303278&h=N0G77FtjCi6ruAI98kA%2Fz8yHSFWQZeW qbiOEjC9PgfkLmrNHBbEBf0ATcDp30yqsfWvv%2FmJRCMF VI1I3UFSVWw%3D%3D&crl=c

- Nemali, K. (2022). History of controlled environment horticulture: Greenhouses. HortScience. https://journals.ashs.org/hortsci/view/journals/hortsci/57 /2/article-p239.xml
- Threefunctional Economic Model of Ukraine. Monograph.-5th Ed., Supplemented.—Kyiv.
- O'Donnell, E. (2020). The blue-green path to urban flood resilience. Blue-Green Systems, 2(1), 28-45. https://doi.org/10.2166/bgs.2019.199
- Onu, D. C. (2023). Isotherm, kinetics, thermodynamics, recyclability and mechanism of ultrasonic assisted adsorption of methylene blue and lead (II) ions using green synthesized nickel oxide nanoparticles. Environmental Nanotechnology, Monitoring Management, and https://doi.org/10.1016/j.enmm.2023.100818

- Ortega, I. U. (2022). Cross-curricular skills in the era of Sustainable Development Goals. Perception and Learning Outcomes among Students of the Faculty of Social Sciences and Communication (UPV/EHU). Human Review. International Humanities Review / Revista Internacional de Humanidades. https://doi.org/10.37467/revhuman.v11.4185
- Phan, H. T. P. (2020). The "walk" towards the un sustainable development goals: Does mandated "talk" through nonfinancial disclosure affect companies' financial performance? Sustainability(Switzerland), https://doi.org/10.3390/su12062324
- Pottenger, J. R. (2004). Civil society, the economy, and educational assistance in former soviet republics. International Journal of 27(11), Administration, Public 851-868. https://doi.org/10.1081/PAD-200037351
- Rashtbari, Y. (2020). Application of powdered activated carbon coated with zinc oxide nanoparticles prepared using a green synthesis in removal of reactive blue 19 and reactive black-5: Adsorption isotherm and kinetic models. Desalination and Water Treatment, 179, 354-367. https://doi.org/10.5004/dwt.2020.25020
- Rawanoko, E. S., Sungkawati, E., & Ario, M. F. (2023). Promoting Pancasila values through local culture: a case study of the Tengger festival of the karo ethnic group for ecotourism development. Jurnal Civics: Media Kajian Kewarganegaraan, 20(1), 197-204.
- Roberts, I. G. (2010). Agreement and head movement: Clitics, incorporation, and defective goals. books.google.com. https://books.google.com/books?hl=en&lr=&id=Qi5JykGnVQ AC&oi=fnd&pg=PR5&dq=loose+part&ots=QaE0EzmsPl&sig=L PH60N21zcb9YJE4ybU3z4CLEb8
- Rosati, F. (2019). Addressing the SDGs in sustainability reports: The relationship with institutional factors. Journal of Cleaner 1312-1326. Production. 215. https://doi.org/10.1016/j.jclepro.2018.12.107
- Ruiz-Blanco, S. (2022). Green, blue or black, but washing-What characteristics company determine greenwashing? Environment, Development and Sustainability, 24(3), 4024-4045. https://doi.org/10.1007/s10668-021-01602-x
- Sah, R. W. A., Darmayanti, R., & Maryanto, B. P. A. (2022). Updating Curriculum Through 21st Century Learning Design. Seminar Nasional Teknologi Pembelajaran, 2(1), 127-142.
- Sarwar, S. (2022a). Impact of energy intensity, green economy and blue economy to achieve sustainable economic growth in GCC countries: Does Saudi Vision 2030 matters to GCC countries. Renewable Energy, 191. https://doi.org/10.1016/j.renene.2022.03.122
- Sarwar, S. (2022b). Impact of energy intensity, green economy and blue economy to achieve sustainable economic growth in GCC countries: Does Saudi Vision 2030 matters to GCC countries. Renewable Energy, 191. https://doi.org/10.1016/j.renene.2022.03.122
- Sarwar, S. (2022c). The Nexus of Energy, Green Economy, Blue Economy, and Carbon Neutrality Targets. Energies, 15(18). https://doi.org/10.3390/en15186767
- Senaratne, M., & Zimbroff, A. (2019). Ekonomi Biru di Samudra Hindia-Tinjauan Literatur. Seychelles Research Journal.
- Setiawan, N., Leksono, S., & Sungkawati, E. (2020). Modal sosial pedagang kaki lima dalam memanfaatkan ruang publik untuk berjualan di pasar besar malang. Jurnal Penelitian &Pengkajian Ilmiah Mahasiswa (JPPIM), 1(1), 59-64.
- Novak, A. (2015). How to raise the Ukrainian economy. Sharma, V. K. (2015). Ferrates: Greener oxidants with multimodal action in water treatment technologies. Accounts of Chemical Research. 48(2). https://doi.org/10.1021/ar5004219
 - Sheeba, C. (2015). Token Economy-a Positive Reinforcement Program for Children. International Journal of Psychiatric Nursing. https://xdocs.pub/doc/ijpn-24-march-with-doijn67zg446gor#page=26
 - Shi, D. (2020). Synergistic cooling effects (SCEs) of urban green-blue spaces on local thermal environment: A case study in Chongqing, China. Sustainable Cities and Society, 55. https://doi.org/10.1016/j.scs.2020.102065

- Sholihah, N. A. (2022). Dropshiper from an Islamic economic perspective, economy, innovation, and digital business. AMCA Journal of Religion and Society, 1, 22-25.
- Simeon, I., Abdullahi, M. I., & Umaru, Y. (2015). Efficacy of token economy-technique in reducing lateness behaviour among primary school pupils in Kaduna Metopolis, Nigeria. Journal of Sociology, Psychology and https://www.icidr.org/jspapvol7-no3-dec2015/Efficacy%20of%20Token%20Economy-Technique%20on%20Reducing%20Lateness%20Behaviour %20among%20Primary%20School%20Pupils%20in%20Ka duna%20Metropolis-Kaduna%20State-Nigeria.pdf
- Sinha, A. (2020). Interplay between technological innovation and environmental quality: Formulating the SDG policies for next 11 economies. Journal of Cleaner Production, 242. https://doi.org/10.1016/j.jclepro.2019.118549
- Skar, S. L. G. (2020). Urban agriculture as a keystone contribution towards securing sustainable and healthy development for cities in the future. Blue-Green Systems, 2(1), 1-27. https://doi.org/10.2166/bgs.2019.931
- Soberón, M. (2020). Introducing an organizational perspective in sdg implementation in the public sector in Spain: The case of the former ministry of agriculture, fisheries, food and environment. Sustainability (Switzerland), 12(23), 1-19. https://doi.org/10.3390/su12239959
- Soliman, M. (2020). Rapid green synthesis of silver nanoparticles from blue gum augment growth and performance of maize, fenugreek, and onion by modulating plants cellular antioxidant machinery and genes expression. Acta Physiologiae Plantarum, https://doi.org/10.1007/s11738-020-03131-y
- Subiza-Pérez, M. (2020). Green and blue settings as providers of mental health ecosystem services: Comparing urban beaches and parks and building a predictive model of psychological Landscape and Urban restoration. Planning, https://doi.org/10.1016/j.landurbplan.2020.103926
- Sudiantini, D., Rizky, P. P., & Hazarika, A. (2023). Digital economy and financial inclusion in reviving the national economy: A Management Strategy. Revenue Journal: Management and Entrepreneurship, 1.
- Sugiono, A., Masykuroh, E., Sungkawati, E., Setyadjit, S., Dahliani, L., Yustina, I., & ... (2023). Developing model of logistics capability, supply chain policy on logistics integration and competitive advantage of SMEs. Uncertain Supply Chain Management, 11(3), 1009-1018.
- Sungkawati, E. (2020). Implementation of Total Quality Management (TQM) in Gender-Based Cooperatives. International Conference on Community Development (ICCD 2020), 230-234.
- Sungkawati, E., Novitasari, D. R., & Hamad, S. Ben. (2024). Viral Marketing: Mixue the King of Snow Ice Creamâ€"How does this franchise affect the market? Revenue Journal: Management and Entrepreneurship, 2.
- Sungkawati, E., Solehudin, R. H., Rosyidi, M., & Madhukullya, S. (2023). Impact of" Instagram" on digital-based Islamic marketing: Islamic Marketing Mix discussion. AMCA Journal of Religion and Society, 3(1).
- processing skills by creating new entrepreneurs. Revenue Journal: Management and Entrepreneurship, 1.
- Sungkawati, E., & Uthman, Y. (2024). Adopting Blue-Green Economy Terms to Achieve SDGs: Indonesia's Opportunities and Challenges. Assyfa Learning Journal, 2(1).
- Tan, C. L. Y. (2021). The right mix: Residential urban green-blue space combinations are correlated with physical exercise in a tropical city-state. Urban Forestry and Urban Greening, 57. https://doi.org/10.1016/j.ufug.2020.126947
- Taylor, B. (2016). Lynn White Jr. and the greening-of-religion hypothesis. Conservation Biology: The Journal of the Society 1000-1009. Conservation Biology, 30(5), https://doi.org/10.1111/cobi.12735
- Tharaneedhar, V. (2017). Prediction and interpretation of adsorption parameters for the sequestration of methylene blue dye from aqueous solution using microwave assisted

- corncob activated carbon. Sustainable Materials Technologies, 1-11. 11. https://doi.org/10.1016/j.susmat.2016.11.001
- Thongvitokomarn, S. (2020). Indocyanine green fluorescence versus blue dye or radioisotope regarding detection rate of sentinel lymph node biopsy and nodes removed in breast cancer: A systematic review and meta-analysis. Asian Pacific Journal of Prevention, 21(5), https://doi.org/10.31557/APJCP.2020.21.5.1187
- Trovato, M. R. (2022). Climate Adaptation Heuristic Planning Support System (HPSS): Green-Blue Strategies to Support the Ecological Transition of Historic Centres. Land, https://doi.org/10.3390/land11060773
- Vanorman, Z. A. (2020). Green-to-Blue Triplet Fusion Upconversion Sensitized by Anisotropic CdSe Nanoplatelets. Chemistry of 4734-4742. Materials. 32(11), https://doi.org/10.1021/acs.chemmater.0c01354
- Veríssimo, N. V. (2021). From green to blue economy: Marine biorefineries for a sustainable ocean-based economy. Green Chemistry, 23(23), 9377-9400. https://doi.org/10.1039/d1gc03191k
- Vidyastuti, A. N., Darmayanti, R., & Sugianto, R. (2018). The Role of Teachers and Communication Information Technology (ICT) Media in the Implementation of Mathematics Learning in the Digital Age. Al-Jabar: Jurnal Pendidikan Matematika, 9(2), 221-
- Vu, H. P. (2020). Blue-Green Algae in Surface Water: Problems and Opportunities. Current Pollution Reports, 6(2), 105-122. https://doi.org/10.1007/s40726-020-00140-w
- Wang, A. W. (2018). Crypto Economy. How Blockchain, Cryptocurrency, and Token-Economy Are Disrupting the Financial World. Skyhorse Publishing.
- Wang, X. (2020). How can the maritime industry meet Sustainable Development Goals? An analysis of sustainability reports from the social entrepreneurship perspective. Transportation Research Part D: Transport and Environment, https://doi.org/10.1016/j.trd.2019.11.002
- Wheatcroft, E. (2020). The role of low temperature waste heat recovery in achieving 2050 goals: A policy positioning paper. Energies, 13(8). https://doi.org/10.3390/en13082107
- White, M. P. (2021). Associations between green/blue spaces and mental health across 18 countries. Scientific Reports, 11(1), 8903. https://doi.org/10.1038/s41598-021-87675-0
- Wulandari, T., Nurmalitasari, D., Susanto, K., & Darmayanti, R. (2022). Etnomatematika Pada Batik Daun Sirih dan Burung Kepodang Khas Pasuruan. Seminar Nasional Teknologi Pembelajaran, 2(1), 95-103.
- Xie, P. (2020). Spatial-temporal variations in blue and green water resources, water footprints and water scarcities in a large river basin: A case for the Yellow River basin. Journal of Hydrology, 590. https://doi.org/10.1016/j.jhydrol.2020.125222
- Yang, M. (2021). Impact of planting time soil moisture on cereal crop yield in the Upper Blue Nile Basin: A novel insight towards management. Agricultural agricultural water Water Management, https://doi.org/10.1016/j.agwat.2020.106430
- Sungkawati, E., Usmiyatun, U., & Karim, S. (2023). "Improving" food Yin, Z. (2019). What Drives Entrepreneurship in Digital Economy? Evidence from China. *Economic Modelling*, 82, 66-73. https://doi.org/10.1016/j.econmod.2019.09.026
 - Zhang, Q. (2020). Green-composites produced from waste residue in pulp and paper industry: A sustainable way to manage industrial wastes. Journal of Cleaner Production, 262. https://doi.org/10.1016/j.jclepro.2020.121251