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## Literature Review: Directions of Economic Development and Green Finance in Indonesia

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### Abstract

Generally, a green economy will change the established economic system to be more in line with sustainable principles. This is the main challenge in realising a green economy. The purpose of this research is to provide information and understanding of the direction of green economy development in Indonesia and the importance of combining economic and environmental elements in sustainable development, as well as to thoroughly analyse the challenges and prospects of a sustainable green economy in Indonesia. The research uses descriptive qualitative research methods with literature review techniques. The analysis stages used are three, namely analysing the contents of the journal, coding the contents of the journal using bibliometric analysis, then looking for similarities and differences and then discussing them to draw conclusions. The study concludes that green economic development in Indonesia aims to achieve sustainable and inclusive economic growth, taking into account environmental and social aspects. Some of the main directions in this development include increasing the use of renewable energy, sustainable natural resource management, waste management and recycling, environmentally friendly transport, green city development, green industry, circular economy, sustainable water management, and strengthening policies and regulations.

**Keywords:** *Economic; Economic development; Green economy; Sustainable development; Green Finance.*

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### INTRODUCTION

The concept of a "green economy" emerged as a way to achieve sustainable development by combining economic and environmental elements to address increasingly complex environmental challenges and global economic changes. Green economy also means an economy that is low carbon or does not produce emissions and pollution for the environment, saves natural resources, is socially just (Jaya & Padilla, 2024). Therefore, a green economy in general will change the established economic system, to be more in line with sustainable principles (Sukhdev et al., 2015). This is the main challenge in realizing a green economy.

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Efficient and sustainable use of natural resources, reduction of greenhouse gas emissions, and protection of natural ecosystems are all part of this transformation. Apart from that, it is also important to maintain a sustainable economic climate for the welfare of the Indonesian people for the present and future generations, with the main focus on economic activities that produce products and create jobs that need to be the focus of policy makers. Therefore, in micro and macro-economic development carried out by the government, it must adopt green economic principles in its implementation (Bappenas, 2021). Thus, the concept of a green economy is needed in order to support the welfare and justice of domestic market players so that they are given the opportunity to develop the Indonesian economy.

Therefore, this research is proposed with a literature review theme: Directions for Green Economic Development in Indonesia. This research aims to provide information and understanding about the direction of green economic development in Indonesia and the importance of combining economic and environmental elements in sustainable development, as well as thoroughly analyzing the challenges and prospects of a sustainable green economy in Indonesia. It is hoped that the implications of this research will be useful for the public and academics in monitoring the direction of research on green economic development in Indonesia. Thus, providing opportunities for further research development with more original (new) themes. It is also hoped that this research can provide suggestions and criticism to the government in perfecting green economic policies in Indonesia.

This research uses the theoretical basis of economic development. Although, economic development has a very broad meaning. However, according to economics academics, development is traditionally seen as an economic phenomenon that is measured based on the level of economic growth (Sugiharti et al., 2017). Meanwhile, according to other economists, economic development is a multidimensional process that causes changes in the important characteristics of a society, for example changes in the state of the political system, social structure, value system in society and its economic structure (Aminata et al., 2022).

The process of economic transformation, through a green economy strategy, allows for a shift in the economic structure from less productive to more productive sectors (industrialization) in line with efforts to maintain the carrying capacity and carrying capacity of the environment. A green economic strategy that promotes low-carbon and climate-resilient development policies is a crucial foundation for its implementation (Bappenas, 2021).

The concept of a green economy is defined as low carbon, resource efficient and socially inclusive (Chaabén et al., 2024). In a green economy, job and income growth is driven by public and private investment into economic activities, infrastructure and assets that enable reduced carbon emissions and pollution, increased energy and resource efficiency, and prevented loss of biodiversity and ecosystem services. The concept of a green economy is very important to guide sustainable development policies, because this concept gets to the heart of the problem and regulates the economy in a way that is compatible with local and global ecological requirements and long-term dynamics

(Söderholm, 2020; Yildirim & Yildirim, 2020). This is because humanity faces serious challenges in the coming decades, such as climate change, loss of biodiversity, increasing inequality and other challenges. This systemic global crisis cannot be handled in isolation, because everything is interrelated. However, our economic system is not suitable enough to provide a good balance between environmental and social goals.

To keep the wheels of the economy moving amidst these threats and challenges, the green economic paradigm needs to continue to be created on various fronts as a game changer (Cho et al., 2021). The realization of this can begin to foster an investment climate in the low-carbon sector, from clean energy development to sustainable development. Sustainable development is a conscious and planned effort that combines environmental, social and economic aspects into development strategies to ensure the integrity of the environment as well as the safety, capabilities, welfare and quality of life of present and future generations (Law No. 32 of 2009 concerning Environmental Protection and Management).

## METHOD

Researchers used descriptive qualitative research methods with literature review techniques to provide a comprehensive picture of the direction of green economic development, the importance of combining economic and environmental elements in sustainable development, as well as thoroughly analyzing the challenges and prospects of a sustainable green economy in Indonesia.

Various relevant literature, journals and scientific articles will be used for the literature analysis process (Jaya, 2020). The article search method is carried out in research journal databases and searches via the internet. The database search used was Google Scholar from 2018 to 2024. This literature review methodology process was carried out to find journals that were relevant to keywords such as economic development, green economy, and sustainable development, especially in Indonesia.

**Table 1. Literature selection criteria (data inclusion)**

Criteria	Inclusion
Time period	Maximum journal publication period is 7 years (2018-2024)
Language	English and/or Indonesian
Subject	Economic development, green economy, and sustainable development, especially in Indonesia
Journal Type	Original Research Article (not from a review)
Text availability	Full Text / Open Access
Sinta Index	Reputable national journals (Sinta indexed) and reputable international journals (Scopus indexed).

Source: Data tabulation, 2024.

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This Literature Review was synthesized using a narrative method by grouping similar extracted data according to the results measured to answer the objectives of research journals that met the inclusion criteria, then collected and made a journal summary including the researcher's name, year of publication of the journal, research title, method, and a summary of results or findings. The summary of the research journal is entered into a table sorted according to the year the journal was published. To further clarify the journal analysis process, the abstract and full text of the journal are read and examined. The journal summary is then analyzed regarding the content contained in the research objectives and research results/findings.

The analysis used goes through 3 stages of journal content analysis, then coding is carried out on the contents of the journals reviewed using bibliometric analysis of the data that has been collected, then the similarities and differences are looked for and then discussed to draw conclusions. The data used in this research is secondary data. Secondary data is data obtained not from direct observation. However, this data was obtained from the results of research conducted by previous researchers. The secondary data sources in question are research journals that have been scientifically tested contained in articles or journals indexed by Sinta 2, 3, 4, 5, and 6 as well as international journals indexed by Scopus.

## **RESULTS AND DISCUSSION**

The Literature review was conducted to provide information and understanding of the direction of green economic development in Indonesia and the importance of combining economic elements with the environment in sustainable development, as well as thoroughly analysing the challenges and prospects of a sustainable green economy in Indonesia. The collected literature was obtained from the publication year 2018-May 2024. A total of 216 research journals were finally analysed by bibliometric using the keywords 'Economic development, green economy, and sustainable development'. From the results of the analysis test, a direction mapping will be carried out on the direction of green economic development in Indonesia and the importance of combining economic elements with the environment in sustainable development. The bibliometric analysis test was carried out using the Vos Viewer application, and found the following keyword mapping.

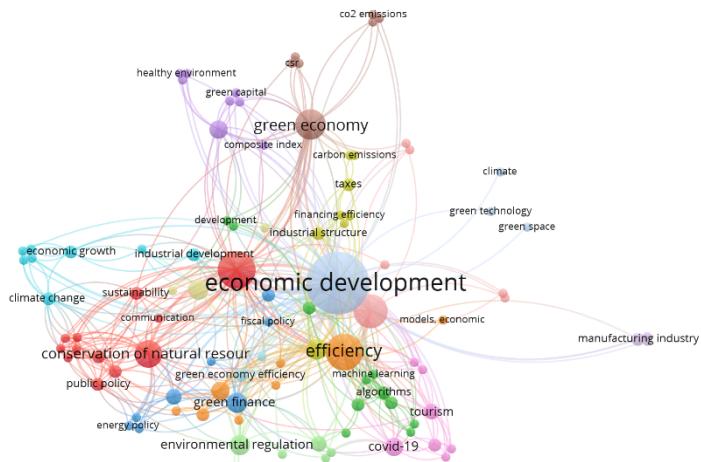


Figure 1. Bibliometric Test Results

## DISCUSSIONS

### Directions for green economic development in Indonesia

Green economic development in Indonesia is directed at achieving sustainable and inclusive economic growth by considering environmental and social aspects. This approach aims to reduce negative impacts on the environment while improving people's quality of life and economic prosperity. The following are some of the main directions of green economic development in Indonesia:

- a. **Renewable energy**, carried out by increasing the use of renewable energy such as solar, wind, hydro and bioenergy, and reducing dependence on fossil fuels and reducing greenhouse gas emissions (Al-Shetwi, 2022; Arimura & Matsumoto, 2020; Attahiru et al., 2019; Chang et al., 2017; Ivan Rahmat Santoso, 2020; Jaya & Padilla, 2024; Nahrin et al., 2023; Rahman et al., 2022; Raihan et al., 2023).
- a. **Sustainable Management of Natural Resources**, carried out by managing forests sustainably to prevent deforestation and land degradation as well as encouraging sustainable agricultural practices that are environmentally friendly and efficient (Chen & Chen, 2021; Khan & Johl, 2019; Papaspyropoulos et al., 2016).
- a. **Waste Management and Recycling**, carried out by improving sustainable management of solid and liquid waste and encouraging recycling practices and reducing the use of single-use plastics (Mohsin et al., 2020).
- a. **Environmentally Friendly Transportation**, The government is starting to promote the use of electric vehicles and efficient public transportation and develop transportation infrastructure that supports low-carbon mobility (Andreas et al., 2020; Attahiru et al., 2019; Chiou et al., 2011).
- a. **Green City Development**, this concept includes green open spaces, energy efficient buildings, and sustainable transportation systems and encourages urban planning that is environmentally friendly and resilient to climate change (Ashari & Anggoro, 2020, 2021; Cao et al.,

2019; Jiang & Zheng, 2021; J. Li et al., 2022; Ma & Zhu, 2024; Yang et al., 2023).

- a. **Green Industry**, namely efforts to encourage industry to adopt environmentally friendly technologies and clean production practices and reduce industrial emissions and pollution with cleaner technologies and practices (Chiou et al., 2011; Deswanto & Siregar, 2018; Xingwei Li et al., 2022; Xinping Li et al., 2023; Saputra, 2023).
- a. **Circular Economy**, an idea that is carried out by encouraging the reuse, repair and recycling of products to reduce waste and resource use and integrate circular economy principles in various industrial sectors (Hina et al., 2023; Kaipainen & Aarikka-Stenroos, 2022; Krmela et al., 2022; Kuzma & Sehnem, 2022; Marrone et al., 2020; Nielsen & Hakala, 2022; Taleb & Farouque, 2020; Wu et al., 2019).
- a. **Sustainable Water Management**, by increasing the efficiency of water use and water resource management as well as protecting water ecosystems and reducing water pollution (Chinta et al., 2014; Christ & Burritt, 2017; Haque et al., 2021).
- a. **Strengthening Policies and Regulations**, The Indonesian government will develop policies and regulations that support green economic development and increase incentives for companies and individuals to participate in environmentally friendly activities (Martins et al., 2022; Matisoff et al., 2016; Sahid et al., 2021; Sukhdev et al., 2015).
- a. **Education and Public Awareness**, This is important to do, because by increasing public awareness and education about the importance of environmental sustainability, it can encourage active community participation in environmental conservation activities (Bahzar, 2020; Illankoon et al., 2017).

These efforts are supported by various government initiatives, the private sector, and non-governmental organizations, as well as international cooperation. This is because green economic development is a holistic and multi-sectoral approach, so it requires collaboration to achieve sustainable and inclusive growth. Implementation of a green economy will not only help overcome pressing environmental challenges, but also create new economic opportunities and improve people's quality of life. Apart from that, green economic development is also expected to support Indonesia in achieving sustainable development targets and reducing the impact of climate change.

Indonesia now also has a benchmark for development indicators measuring the balance between economic welfare and social equality in society as well as mitigating the risk of environmental damage with the launch of the Indonesian Green Economy Index by the Ministry of National Development Planning/National Development Planning Agency (Bappenas). Indonesia's Green Economy Index (GEI) provides an overview of Indonesia's achievements and scores in its transformation towards a green economy. The green economy is one of six strategies for Indonesia's economic transformation, set by the Ministry of National Development Planning/Bappenas, in an effort to achieve the vision of

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Indonesia 2045 and is declared a game changer for Indonesia in its post-Covid-19 pandemic economic recovery and towards sustainable development.

The Indonesian Green Economy Index calculates Indonesia's score in economic transformation towards a green economy by looking at the comparison of the progress of the indicators against the minimum value and maximum target to be achieved. There are 15 indicators in GEI Indonesia, which cover three pillars, namely economic, social and environmental, which reflect green economic development. The economic pillar consists of six indicators, including emissions intensity, energy intensity and gross national income (GNP) per capita. Meanwhile, the social pillar includes four indicators, namely unemployment rate, poverty rate, life expectancy and average length of schooling. Meanwhile, the environmental pillar includes five indicators, namely land cover, degraded peat land, emission reduction, managed waste and new and renewable energy. In general, the report produced by GEI Indonesia proves Indonesia's commitment, especially the Ministry of National Development Planning/Bappenas, in realizing sustainable development.

### **Economic collaboration with the environment in sustainable development**

Sustainable development is a human effort to improve the quality of life while still trying not to exceed the life-supporting ecosystem. Nowadays, the issue of sustainable development has become an important issue that needs to continue to be socialized in society.

Economic collaboration with the environment in sustainable development in Indonesia is an approach that integrates economic and environmental aspects to achieve balanced and sustainable development goals. This concept emphasizes the importance of synergy between economic growth and environmental conservation, as well as ensuring that economic activities do not damage natural ecosystems and the resources that are the basis of human life. The relationship between economic development and environmental sustainability is an absolute relationship and both have an impact on each other. High and environmentally friendly economic development will produce good environmental quality. This good environmental quality will later influence the quality and quantity of resources and will have a good impact on economic development. Failure to maintain environmental sustainability will result in high costs and loss of needed resources, both economically and non-economically. It will cost more to restore resources lost due to environmental damage and degradation. "Sustainable development will be realized when there is harmonization between economic development and increasing environmental sustainability."

Natural resource-based economic development that does not pay attention to aspects of environmental sustainability will ultimately have a negative impact on the environment itself. Because, basically natural resources and the environment have a limited carrying capacity. In other words, economic development that does not pay attention to the capacity of natural resources and the environment will cause development problems in the future. Sustainable development aims to improve community welfare, to meet human needs and aspirations. Because, sustainable development is essentially aimed at seeking

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equitable development between generations now and in the future. Economically oriented development can be measured for its sustainability based on three criteria, namely: (1) There is no wasteful use of natural resources or depletion of natural resources; (2) No pollution and other environmental impacts; and (3) Activities must be able to increase useable resources or replaceable resources.

Sustainable development targets include efforts to realize, firstly, equal distribution of the benefits of development results between generations (intergeneration equity), which means that the use of natural resources for the purposes of growth needs to pay attention to reasonable limits in the control of ecosystems or environmental systems and is directed towards replaceable natural resources and emphasize the lowest possible exploitation of irreplaceable natural resources. Second, safeguarding or securing the preservation of existing natural resources and the environment and preventing ecosystem disturbances in order to ensure the quality of life remains good for future generations. Third, the use and management of natural resources is solely for the sake of pursuing economic growth in the interests of equitable and sustainable use of natural resources between generations. Fourth, maintaining sustainable welfare of the people (society) both now and in the future (inter temporal). Fifth, maintaining the benefits of development or management of natural resources and the environment which have long-term or sustainable benefits between generations. Sixth, maintaining the quality of human life between generations in accordance with their habitat.

Three main reasons (factors) why economic development must be sustainable. The first factor concerns moral reasons. The current generation enjoys goods and services produced from natural resources and the environment, so it is morally necessary to pay attention to the availability of these natural resources for future generations. This moral obligation includes not extracting natural resources that can damage the environment, and can eliminate the opportunity for future generations to enjoy similar services. The second factor concerns ecological reasons. Biodiversity, for example, has very high ecological value, therefore economic activity should not be directed at activities that utilize natural resources and the environment alone, which in the end can threaten ecological functions. The third factor, which is the reason for the need to pay attention to sustainability aspects, is economic reasons. The reason from the economic side is that there is still debate because it is not known whether economic activities so far have or have not met the sustainability criteria, as we know, the dimensions of sustainable economics themselves are quite complex, so that often the sustainability aspect from the economic side is only limited to measuring intergenerational welfare (intergenerational welfare maximization).

By paying attention to existing phenomena, changes in the sustainability paradigm should consider the following aspects: (1) The behavior of the current generation does not completely determine the behavior of future generations; (2) Future generations must be ensured to obtain at least a minimum level of consumption; (3) The movement of natural resource prices and ownership rights towards future consumption must be determined to avoid over-exploitation of present natural resources; (4) In a situation where the market is not functioning,

non-market intervention is needed; (5) Correct intervention is an important strategy to maintain sustainability.

## **CONCLUSION**

In the end, the study concludes that green economic development in Indonesia aims to achieve sustainable and inclusive economic growth, taking into account environmental and social aspects. Some of the main directions in this development include increasing the use of renewable energy, sustainable natural resource management, waste management and recycling, environmentally friendly transport, green city development, green industry, circular economy, sustainable water management, and strengthening policies and regulations. Public education and awareness raising are also key to encouraging active community participation. These efforts are supported by initiatives from governments, the private sector, non-governmental organisations, and international cooperation. Green economic development not only helps address environmental challenges, but also creates new economic opportunities and improves people's quality of life. Indonesia has established the Green Economy Index (GEI) to measure progress towards a green economy, covering economic, social, and environmental indicators.

Economic and environmental collaboration in Indonesia's sustainable development emphasises the importance of balancing economic growth and environmental conservation. Development that does not pay attention to environmental sustainability can cause long-term losses. Therefore, sustainable development must pay attention to equitable distribution of benefits between generations, safeguarding natural resources, and improving the quality of life in a sustainable manner. The three main factors underlying the importance of sustainable development are moral, ecological and economic reasons. Sustainable development requires a paradigm shift that ensures future generations benefit equally with current generations, taking into account appropriate interventions in dysfunctional market situations.

Overall, although this research provides a good strategic overview, it still has limitations, especially on aspects that need to be clarified and further researched to ensure effective and sustainable implementation of green economic development in Indonesia.

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