



# The Role of Financial Instruments in Implementing Sustainable Budgeting to Support the Green Economy in Indonesia

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## Abstract

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### Article history:

Received: August 3, 2025  
Revised: September 11, 2025  
Accepted: October 14, 2025  
Published: December 30, 2025

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### Keywords:

Blue Financing,  
ESG,  
Green Sukuk,  
Sustainable Budgeting.

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### Identifier:

Zera Open  
Page: 133–151  
<https://zeraopen.com/journal/igr>

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Sustainable budgeting represents a strategic approach in financial planning that integrates environmental, social, and governance (ESG) principles to achieve a balance between economic growth and the preservation of natural resources. In the Indonesian context, the implementation of sustainable budgeting faces several challenges, including dependence on fossil energy, limited green infrastructure, and financing gaps. Nevertheless, there are significant opportunities through financial instruments such as Green Sukuk and Blue Financing, which can support the national transition toward a green economy. This article discusses the role of financial institutions, government policies, as well as the challenges and opportunities related to the implementation of sustainable budgeting in Indonesia. The findings of the literature review highlight that strengthening regulations, enhancing institutional capacity, and raising public awareness are critical factors in optimizing sustainable financial instruments. These insights provide strategic recommendations for policymakers and financial institutions to accelerate the achievement of green economy objectives and broader sustainability goals.

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## **1. Introduction**

Sustainable budgeting is a strategic practice in aligning financial management that aims to create a harmonious balance between economic growth, environmental preservation, and social justice. This approach not only emphasizes the efficient allocation of resources but also considers the long-term impact of every financial decision on the environment, society, and the economic system as a whole. Thus, sustainable budgeting requires all parties involved, both the government and the private sector, to pay attention to the use of renewable energy, waste reduction, the implementation of fair labor practices, and investment in companies that adhere to Environmental, Social, and Governance (ESG) principles.<sup>1</sup> This approach emphasizes the integration of sustainability into every fiscal policy, budget allocation, and financial planning, thereby creating a synergy between economic interests and broader social and environmental responsibilities.

In Indonesia, the urgency of sustainable budgeting is increasing in line with the government's commitment to achieve Net Zero Emissions (NZE) by 2060 or even sooner. The government is actively encouraging this transformation through various structured policies and frameworks, including through the Ministry of Finance and Financial Services Authority (*Otorotitas Jasa Keuangan / OJK*). These two institutions have formulated a strategy for developing Green Budgeting and implementing Green Sukuk, which is focused on being a financing instrument for

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<sup>1</sup> Dindafitria Satriana, Nasywa Ananda, and Nashifa Tsarwa. "Menyeimbangkan Pertumbuhan Ekonomi dan Kelestarian Lingkungan Melalui Analisis Tantangan dan Peluang Green Financing di Indonesia." *Asian Legal Reform Journal* 5, no. 1 (2024): 1-23.

environmentally friendly and sustainable projects. Financial institutions hold a central position in this process because they are responsible for channeling funding that supports sustainable development, integrating ESG principles into business activities, and encouraging the growth of sectors that have a positive contribution to the environment, including renewable energy and Micro, Small, and Medium Enterprises (MSMEs) that are committed to sustainable practices.<sup>2</sup>

Indonesia's potential in developing renewable energy is immense, including solar, wind, and geothermal energy sources spread across various regions. However, achieving this clean energy target faces a number of non-trivial structural challenges, including a high dependence on fossil fuels, limited supporting infrastructure, and financing problems that limit the acceleration of the energy transition. To overcome these obstacles, the government has designed fiscal policies that encourage green investment, provide carbon tax incentives, and build green infrastructure through PT SMI and other related agencies. This effort is being made to create an ecosystem that supports a fair, efficient, and sustainable clean energy transition.<sup>3</sup>

Although various policies and instruments have been implemented, the implementation of Green Budgeting, Blue Financing, and Green Sukuk in Indonesia still faces a number of significant obstacles. These obstacles include limited human and financial resources, inadequate institutional capacity, less effective inter-agency

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<sup>2</sup> Oluwafemi Elias, Opeyemi Joseph Awotunde, Oladiipo Ishola Oladepo, Patience Farida Azuikpe, Olufemi Adeleye Samson, Onabolujo Richard Oladele, and Oyindamola Omolara Ogunraku. "The evolution of green fintech: Leveraging AI and IoT for sustainable financial services and smart contract implementation." *World Journal of Advanced Research and Reviews* 23, no. 1 (2024): 2710-2723.

<sup>3</sup> Pandu Rizky Fauzi. "Peluang Dan Tantangan Transisi Energi: Implikasi Kebijakan Pasca Presidensi G20 Indonesia." *Journal of Tax Policy, Economics, and Accounting (Taxpedia)* 1, no. 1 (2023): 16-34.

coordination, regulations that are not yet comprehensive, and high market risks. These factors collectively hinder the optimization of the implementation of sustainable financial instruments and the achievement of established sustainability targets.

This study aims to comprehensively analyze the challenges and opportunities of sustainable budgeting in Indonesia, with a main focus on the strategic role of financial institutions, government policies, and the effectiveness of green financing instruments. The research uses a literature study method to gather information from various relevant primary and secondary sources, so that it can provide a complete picture of the dynamics of implementing sustainable budgeting in Indonesia and provide strategic recommendations for policymakers and the financial sector to accelerate the transition to a greener and more sustainable economy.

## **2. Literature Review**

This Sustainable budgeting is an integral part of the concept of sustainable financing that emphasizes the importance of integrating Environmental, Social, and Governance (ESG) principles into every financial decision-making process. This approach aims to enhance economic sustainability while simultaneously preserving the environment. Thus, sustainable budgeting is not just about short-term financial management but also emphasizes the long-term impact on the economy, society, and the entire ecosystem.<sup>4</sup> Financial institutions hold a very strategic role in this

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<sup>4</sup> Muhammad Azhar Khalil, Rashid Khalil, and Muhammad Khuram Khalil. "Environmental, social and governance (ESG)-augmented investments in innovation and firms' value: a fixed-effects panel regression of Asian economies." *China Finance Review International* 14, no. 1 (2024): 76-102.

context. They not only channel funds to environmentally friendly projects but also play a role in developing green financial products, increasing public financial literacy, and encouraging the business sector, especially MSMEs, to implement sustainable and responsible business practices.<sup>5</sup>

In Indonesia, (OJK) has issued the Sustainable Finance Roadmap as a strategic guide to encourage the growth of the green financial market at the national level. This policy emphasizes the need for product innovation, ESG reporting standards, and the strengthening of the sustainable finance ecosystem. In addition, Bank Indonesia also plays an active role by becoming a member of the Network for Greening the Financial System (NGFS), which shows the country's commitment to supporting the development of an environmentally friendly and sustainable financial system.<sup>6</sup> The Indonesian government is simultaneously promoting a green economy strategy through the implementation of a carbon tax, the development of a circular economy, and the construction of green infrastructure that supports the clean energy transition and resource efficiency.<sup>7</sup>

Nevertheless, green financial instruments such as Green Sukuk and Blue Financing still face various complex challenges. Green Sukuk, designed to finance climate change mitigation and adaptation projects, faces limitations in

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<sup>5</sup> Muhammad Azhar Khalil, Rashid Khalil, and Muhammad Khuram Khalil. "Environmental, social and governance (ESG)-augmented investments in innovation and firms' value: a fixed-effects panel regression of Asian economies." *China Finance Review International* 14, no. 1 (2024): 76-102.

<sup>6</sup> Solikin M Juhro, Irman Robinson, Heru Rahadyan, and Arnita Rishanty. "Climate Risks, Just Transition, and Central Bank Policy for Sustainable Economic Growth." *Jurnal Ekonomi Indonesia* 13, no. 3 (2024): 215-248.

<sup>7</sup> Liudmila Filipava and Fakhri Murshudli. "The development of the global green finance market: The role of banks and non-banking institutional investors." In *Green finance instruments, FinTech, and investment strategies: Sustainable portfolio Management in the Post-COVID era*, pp. 27-46. Cham: Springer International Publishing, 2023.

implementation due to a lack of public understanding of this instrument, limited market capacity, and the absence of consistent environmental impact reporting standards.<sup>8</sup> Meanwhile, Blue Financing, which focuses on the conservation and management of marine resources, faces constraints related to incomplete data, still limited infrastructure, and inter-agency coordination that is not yet optimal.<sup>9</sup>

Given this background, the literature review approach is very important to comprehensively understand the dynamics of implementing sustainable budgeting in Indonesia. This study allows researchers to identify the challenges faced, the opportunities available, and provide strategic recommendations for policymakers and financial institutions to improve the effectiveness of green financing instruments in supporting sustainable and environmentally friendly economic development.<sup>10</sup>

### **3. Method**

This study applies the literature review method as the main approach to comprehensively analyze sustainable budgeting in Indonesia. This method was chosen because it allows researchers to get a broad and in-depth picture of current trends, implemented policies, and best practices in the field of sustainable financing, including various green financial innovations that have been implemented both at

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<sup>8</sup> Bella Tahya Hania, Endri Endri, and Indra Indra. "Identify the issuance problem of corporate green sukuk in Indonesia." *Islamic Economics Journal* 8, no. 2 (2022): 187-204.

<sup>9</sup> Mazlinawati Abdul Majid and Intan Sazrina Saimy. "Strategic Marketing of Blue Financing for Advancing Blue Economy Activities: A Comprehensive Review." In *International Conference on Business and Technology*, pp. 219-229. Cham: Springer Nature Switzerland, 2024.

<sup>10</sup> Syarifuddin Lakasse, Amril Amril, Helmy Syamsuri, and Ikhsan Amar Jusman. "The role of green finance in sustainable business strategies: Opportunities and challenges for business organizations." *Jurnal Penelitian Inovatif* 4, no. 2 (2024): 665-672.

the national and international levels. The data used in this literature study was collected from various reliable sources, including peer-reviewed scientific journals, official government reports, public policy documents, and publications from international organizations that focus on sustainability and green financing. This approach provides a strong empirical basis for assessing the dynamics of sustainable budgeting and evaluating the effectiveness of existing instruments and policies.

The analysis process begins with the identification of the topic and the clear formulation of the research questions, namely regarding the challenges faced and the opportunities available in sustainable budgeting in Indonesia. After the topic and research questions are determined, the next step is to search for relevant literature through leading academic databases, digital libraries, and official repositories. Inclusion criteria are strictly set, including the relevance of the topic to the research focus, the credibility of the sources used, the relatively recent publication period, and the reliability of the methodology used by the original author. Thus, the collected literature has high quality and can be relied on as a basis for analysis.

The next stage is systematic content analysis. At this stage, each piece of literature obtained is evaluated to identify relevant main themes, including the strategic role of financial institutions in channeling sustainable funds, government policies that support the transition to a green economy, and the implementation of green financing instruments such as Green Sukuk and Blue Financing. This content analysis aims to understand the interaction between various actors and policies, the obstacles faced, and potential solutions that can be applied.

The results of the analysis are then presented in a comprehensive narrative, so that they can clearly and systematically describe the dynamics of implementing sustainable budgeting in Indonesia. This narrative presentation not only highlights existing successes and constraints but also provides strategic recommendations that can be used by policymakers, financial institutions, and other stakeholders to optimize the implementation of sustainable budgeting, so that the goals of green development and sustainable finance can be achieved effectively.

## **4. Results**

### **4.1. The Role of Financial Institutions in Sustainable Budgeting**

Financial institutions have a very strategic role in supporting sustainable budgeting, especially through the allocation of funds aimed at environmentally friendly and sustainable projects. This strategic function emphasizes the importance of financial institutions not only as providers of capital but also as drivers of change towards more socially and environmentally responsible business practices. The integration of ESG (Environmental, Social, Governance) principles into every business process becomes an important instrument to ensure that every financial decision can produce measurable impacts, not only economically but also socially and environmentally, so that the benefits can be felt in the long term.<sup>11</sup> Thus,

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<sup>11</sup> Muhammad Azhar Khalil, Rashid Khalil, and Muhammad Khuram Khalil. "Environmental, social and governance (ESG)-augmented investments in innovation and firms' value: a fixed-effects panel regression of Asian economies." *China Finance Review International* 14, no. 1 (2024): 76-102.

financial institutions hold a central position in encouraging sustainable economic growth while preserving natural resources.

In Indonesia, (OJK) has taken concrete steps by issuing the Sustainable Finance Roadmap, which specifically emphasizes the importance of the role of banks and non-bank financial institutions in supporting green projects and sustainable investments. This roadmap is designed to strengthen the regulatory framework, provide implementation guidelines, and ensure that green financial instruments can be accessed more widely by business actors and the public. In addition, the application of ESG principles is an important criterion in project evaluation, so that every investment channeled by financial institutions is not only financially profitable but also provides a positive contribution to the environment and wider society.

In addition to their main role in channeling funds, financial institutions also have a responsibility to increase the financial literacy of the public and MSME actors regarding green investment. This literacy is very important so that business actors understand the long-term benefits of sustainable business practices and are able to access various environmentally friendly financial instruments, including green bonds and sukuk. Innovative products such as Green Sukuk, which are sharia bonds specifically for financing climate change mitigation projects, are a concrete example of how financial institutions can strengthen the green economy and facilitate sustainable projects.<sup>12</sup>

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<sup>12</sup> Bella Tahya Hania, Endri Endri, and Indra Indra. "Identify the issuance problem of corporate green sukuk in Indonesia." *Islamic Economics Journal* 8, no. 2 (2022): 187-204.

However, the implementation of sustainable budgeting through financial institutions still faces various significant challenges. Limited institutional capacity, less optimal inter-agency coordination, and market risks are the main factors that hinder the optimization of green financing. In addition, public understanding of green financial instruments is still relatively low, so public participation in supporting sustainable projects is also limited.<sup>13</sup> These obstacles indicate that although instruments and policies are already in place, the success of their implementation depends heavily on institutional readiness, the quality of regulations, and public involvement.

On the other hand, there are great opportunities for financial institutions to use financial technology (fintech) to expand access to green financing. This technology allows for better transparency in reporting impacts, as well as more accurate and real-time measurement of ESG impacts. With a combination of product innovation, adequate regulatory support, and increased public awareness of sustainability, financial institutions are believed to be able to play a central role in accelerating Indonesia's transition to an inclusive, sustainable, and resource-efficient green economy.<sup>14</sup>

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<sup>13</sup> Syarifuddin Lakasse, Amril Amril, Helmy Syamsuri, and Ikhsan Amar Jusman. "The role of green finance in sustainable business strategies: Opportunities and challenges for business organizations." *Jurnal Penelitian Inovatif* 4, no. 2 (2024): 665-672.

<sup>14</sup> Oluwafemi Elias, Opeyemi Joseph Awotunde, Oladiipo Ishola Oladepo, Patience Farida Azuikpe, Olufemi Adeleye Samson, Onabolujo Richard Oladele, and Oyindamola Omolara Ogunraku. "The evolution of green fintech: Leveraging AI and IoT for sustainable financial services and smart contract implementation." *World Journal of Advanced Research and Reviews* 23, no. 1 (2024): 2710-2723.

## 4.2. Government Policies and Green Financing Instruments

The Indonesian government has placed the sustainable economy as one of the main priorities in the national development agenda through the implementation of various pro-environmental fiscal policies. One of the government's strategic efforts is to provide carbon tax incentives that aim to encourage business actors to switch to cleaner and lower-emission production practices, while also reducing dependence on fossil energy sources that have a negative impact on the environment.<sup>15</sup> In addition, the government also initiated the construction of green infrastructure and a number of other related government agencies, which are directed to support environmentally friendly, efficient, and sustainable projects. These steps are in line with Indonesia's green economy strategy which emphasizes the principles of low carbon, the development of a circular economy, and the acceleration of the transition to renewable energy sources, including solar, wind, and geothermal.<sup>16</sup>

In the context of financing, the government places green financial instruments as one of the main focuses to increase the availability of funds that can support sustainable projects. Green Sukuk, for example, is designed as a sharia bond that allows the government to fund climate change mitigation and adaptation projects with an approach that is in line with sharia principles and is transparent. Meanwhile, Blue Financing is directed to support marine conservation, coastal resource management, and improve the welfare of coastal communities through

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<sup>15</sup> Pandu Rizky Fauzi. "Peluang Dan Tantangan Transisi Energi: Implikasi Kebijakan Pasca Presidensi G20 Indonesia." *Journal of Tax Policy, Economics, and Accounting (Taxpedia)* 1, no. 1 (2023): 16-34.

<sup>16</sup> Liudmila Filipava and Fakhri Murshudli. "The development of the global green finance market: The role of banks and non-banking institutional investors." In *Green finance instruments, FinTech, and investment strategies: Sustainable portfolio Management in the Post-COVID era*, pp. 27-46. Cham: Springer International Publishing, 2023.

sustainable financing mechanisms.<sup>17</sup> Although the potential of these instruments is very large, their implementation still faces various obstacles. Some of the main challenges include a lack of uniform environmental impact reporting standards, limited market and instrument liquidity, and inter-agency coordination that is not yet fully optimal. These factors have the potential to hinder the effective use of funds and the achievement of expected sustainability targets.<sup>18</sup>

On the other hand, the government has a number of opportunities to strengthen sustainable budgeting and improve the effectiveness of green financial instruments. In a form that is important to ensure a fair risk distribution between the government and the private sector so that projects remain sustainable and provide optimal benefits to the community.<sup>19</sup> Through the harmonization of regulations that allows for the creation of a clear and consistent legal framework in the implementation of green projects. In addition, increasing the capacity of related institutions, including government agencies and financial institutions, is key to ensuring that every project can be managed professionally and sustainably. Collaboration with the private sector and international institutions is also an important strategy, especially in terms of technology transfer, funding, and the development of best practices in managing sustainable projects.

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<sup>17</sup> Mazlinawati Abdul Majid and Intan Sazrina Saimy. "Strategic Marketing of Blue Financing for Advancing Blue Economy Activities: A Comprehensive Review." In *International Conference on Business and Technology*, pp. 219-229. Cham: Springer Nature Switzerland, 2024.

<sup>18</sup> Bella Tahya Hania, Endri Endri, and Indra Indra. "Identify the issuance problem of corporate green sukuk in Indonesia." *Islamic Economics Journal* 8, no. 2 (2022): 187-204.

<sup>19</sup> Wahyu Fahmi Rizaldy. "Mendorong Inovasi Pembiayaan Daerah Jawa Barat: Blended Finance sebagai Katalisator Pertumbuhan Ekonomi yang Abstract Berkelanjutan." In *Proceedings of National Conference West Java Economic Society (WJES)*, pp. 211-233. 2024.

The development of digital technology-based monitoring and evaluation systems can help assess the impact of projects objectively, increase transparency, and strengthen accountability in the implementation of green financing.<sup>20</sup> The combination of pro-environmental government policies and the role of financial institutions in channeling funds and supporting sustainable investment forms a strong and integrated green financing ecosystem. This ecosystem is not only a foundation for accelerating Indonesia's transition to a green economy, but also plays an important role in achieving the Net Zero Emissions (NZE) target by 2060. Through the synergy between fiscal regulation, green financial instruments, monitoring technology, and multi-sectoral collaboration, Indonesia has a great opportunity to implement sustainable budgeting effectively, improve the quality of development, and ensure inclusive and environmentally friendly economic growth. The implementation of these strategies is expected to not only have an impact on the success of individual projects but also strengthen national economic and environmental resilience in the long term.<sup>21</sup>

## 5. Discussion

The implementation of sustainable budgeting in Indonesia shows a complex and multidimensional dynamic, which involves the interaction between financial institutions, the government, and the community. The results of this study confirm

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<sup>20</sup> Felipe Arias Fogliano de Souza Cunha, Erick Meira, and Renato J. Orsato. "Sustainable finance and investment: Review and research agenda." *Business Strategy and the Environment* 30, no. 8 (2021): 3821-3838.

<sup>21</sup> Syarifuddin Lakasse, Amril Amril, Helmy Syamsuri, and Ikhsan Amar Jusman. "The role of green finance in sustainable business strategies: Opportunities and challenges for business organizations." *Jurnal Penelitian Inovatif* 4, no. 2 (2024): 665-672.

that financial institutions have very large potential in encouraging sustainable financing, especially through the integration of Environmental, Social, and Governance (ESG) principles into every business process and the development of innovative financial products that focus on sustainability. Concrete examples of these efforts are the implementation of Green Sukuk and Blue Financing instruments, which allow the financing of environmentally friendly projects as well as mitigation and adaptation to climate change.<sup>22</sup> However, this study also found that limited institutional capacity, a lack of inter-agency coordination, and an uneven understanding of green finance practices are still major obstacles that need to be addressed immediately to ensure the optimization of sustainable budgeting at the national level.

On the other hand, government policies play a fundamental role as the foundation that strengthens the implementation of sustainable budgeting. These policies include fiscal incentives, the implementation of a carbon tax, and the construction of green infrastructure and related agencies. However, the effectiveness of these policies depends heavily on the consistency of implementation, the clarity of regulations, and the strengthening of integrated monitoring and evaluation mechanisms. The experience of several countries shows that a combination of clear fiscal policies, effective market regulations, and the active involvement of the private

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<sup>22</sup> Khairunnisa Musari and Sutan Emir Hidayat. "The role of green sukuk in maqasid al-shariah and SDGs: Evidence from Indonesia." In *Islamic finance, fintech, and the road to sustainability: Reframing the approach in the post-pandemic era*, pp. 181-203. Cham: Springer International Publishing, 2023.

sector can significantly increase the effectiveness of green financing and the sustainability of projects financed by these instruments.

The financial literacy of the public, including MSME actors, is also a key factor that determines the success of sustainable budgeting. The level of public understanding of green financial instruments greatly influences public participation in sustainable projects. This increase in literacy allows the public to understand the long-term benefits of sustainable investment, so that financed projects can be more effective and have a wider impact. In addition, financial technology (fintech) offers various solutions that can overcome obstacles to financing access, expand the reach of services, and increase the transparency of environmental and social impact reporting.<sup>23</sup> The clean energy transition in Indonesia also faces significant structural challenges, including a high dependence on fossil energy, limited infrastructure that supports renewable energy, and volatile market risks. Mitigation strategies to face these challenges include developing local capacity, increasing international collaboration, and establishing clear and consistently applicable ESG standards. The synergy between the government, financial institutions, and the community is the main key to ensuring that the energy transition is carried out fairly, inclusively, and sustainably.<sup>24</sup>

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<sup>23</sup> Felipe Arias Fogliano de Souza Cunha, Erick Meira, and Renato J. Orsato. "Sustainable finance and investment: Review and research agenda." *Business Strategy and the Environment* 30, no. 8 (2021): 3821-3838.

<sup>24</sup> Mazlinawati Abdul Majid and Intan Sazrina Saimy. "Strategic Marketing of Blue Financing for Advancing Blue Economy Activities: A Comprehensive Review." In *International Conference on Business and Technology*, pp. 219-229. Cham: Springer Nature Switzerland, 2024.

The results of this literature study emphasize the need for a holistic approach, which combines supporting government policies, the active role of financial institutions, innovation in green financial products, and broad public participation. The optimization of instruments such as Green Sukuk and Blue Financing can be an effective strategic solution to support the achievement of the Net Zero Emissions (NZE) target by 2060 while strengthening national economic growth that is sustainable and inclusive. This study provides a basis for policymakers and financial institutions to formulate more effective strategies in sustainable budgeting.

## **6. Conclusion**

Sustainable budgeting in Indonesia is a strategic instrument for achieving a balance between economic growth, environmental sustainability, and social justice. Financial institutions play an important role through the integration of ESG principles, product innovation such as Green Sukuk and Blue Financing, and increasing the financial literacy of the public and MSMEs. Meanwhile, the government supports sustainable budgeting through fiscal policies, carbon tax incentives, and the construction of green infrastructure.

Although there is great potential, the implementation of sustainable budgeting still faces various challenges, including limited institutional capacity, a lack of inter-agency coordination, incomplete regulations, and a lack of public understanding. The optimization of green financial instruments, policy harmonization, collaboration between the public and private sectors, and the use of financial technology are key to overcoming these obstacles.

The results of this literature study show that strengthening the role of financial institutions, consistent government policies, and active public participation will accelerate Indonesia's transition to a green economy. With a holistic approach, Green Budgeting, Green Sukuk, and Blue Financing can be an effective mechanism to achieve Net Zero Emissions 2060, support inclusive economic growth, and improve social welfare. This study provides a basis for policymakers and financial institutions to formulate more effective strategies in sustainable budgeting.

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