Implementation of Green Banking in Indonesia: A Literature Review

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Abstract*: The climate crisis has become a global issue. Almost all parties do not deny that the climate crisis has caused many ecological disasters. The ecological disaster caused by the climate crisis has disrupted a nation's economic growth. It is not surprising that the business sector has begun to portray itself as part of those pushing for the reduction of greenhouse gases as a cause of the climate crisis.

One of the business sectors that identifies the role of the company in driving the reduction of greenhouse gases is banking. Green banking is a banking effort to protect the environment through lending or operational activities. Banks are not directly related to activities that destroy nature, such as plantations, mining, or other industries. However, banking cannot be separated from the problem of increasing natural damage. Bank policies in providing loans or financing can be a trigger for activities that have an impact on the environment.

This article tries to review the literature on the implementation of Green Banking and find problems in the implementation of green banking in Indonesia.

Keyword: Green Banking, Green Financing, Sustainability Banking.

I. Introduction:

The issue of climate change is a problem that is familiar to the ears of today's society. The temperature of the earth which is getting warmer makes people aware of changes in the environment of the planet we live on. Research conducted by British Meteorological Agency found the possibility of an increase in the average annual temperature of the earth of more than 1.5 degrees Celsius in the next five years. It is even predicted that there will be the hottest temperature record in the range of 2022 to 2026. The increase in earth's temperature will cause disasters for human life such as forest fires, heat waves, melting polar ice, and so on.

Responding to this, all parties need to work to overcome this environmental problem. One of the efforts that have been made by international organizations is the formation Sustainable Development Goal sat 2015 United Nations conference. Sustainability. It will be maintained if every organization can behave ethically by not only focusing on making profits, but also paying more attention to environmental and societal aspects. Thus, all industries need to move to carry out various transformations in their business to support environmental sustainability, including the banking sector.

In fact, banking is one of the industries with the least risk of environmental pollution. In carrying out its operational activities such as the use of water, energy and other natural resources, it is not as large as other industrial sectors. However, this does not separate banks from being involved in environmental pollution because bank lending activities to debtors can be one of the factors causing global warming. This can happen when banks do not consider the environmental impact of the business sector to be funded.

One of the things that can be done by banks to minimize environmental pollution due to their business activities is to apply the concept of green banking. Green banking is a concept to support environmentally friendly practices and reduces the impact of the carbon footprint of banking activities. The implementation of green banking is referred to as ethically responsible behaviour because it not only advances banking initiatives but can also influence the socially responsible behaviour of other business people.

Forms of the concept of green banking include those related to environmentally friendly lending or green financing, the use of energy-efficient equipment, environmentally-based policies, saving on paper use, and so on. When banking wants to minimize the use of paper or paperless, banks need to transform their business activities into digital. Transformation Such as providing Automated Teller Machines (ATMs) which enable customers to make transactions without the need to go to a branch office and introducing SMS banking, internet banking, and mobile banking as applications for conducting various banking transactions using the internet network.

In recent decades, green financing has emerged in the banking sector as a way to protect banks and society to mitigate unforeseen future economic problems (for example, climate change, financial instability, social unrest, and so on) (Ziolo et al., 2019). As a result, the traditional banking paradigm is developing towards providing environmentally friendly products (Dikau and Volz, 2021). At the One Planet Summit in Paris in December 2017, central banks and major banking institutions from around the world pledged their support for the development of green financial solutions (Akomea-Frimpong et al., 2021). The World Bank (WB) has also stated that it will no longer allow funds to be received by companies and countries that do not prioritize environmental protection (Urban and Wojcik, 2019)

II. Objective of Paper:

This article aims to study theories related to green banking including:

- Green Banking and Green Financing
- Sustainable Banking Framework
- Review of Literature
- Case Study of Green Financing in Indonesia
- Challenges and obstacles

Green Banking and Green Financing:

The United Nations Conference on Environment and Development (UNCED) in 1992 produced the Rio Declaration on Environment and Development. The declaration aims to encourage the importance of sustainable development that pays attention to environmental balance where the role of all stakeholders involved is needed. The increasing awareness of the international community on the importance of sustainable economic growth which pays attention to environmental factors has also encouraged efforts from various parties to minimize environmental damage caused by economic activities. One way to achieve this is by strengthening the financial sector. This is done because financial institutions, as parties that distribute venture capital (have an intermediary function), The Collevecchio Declaration is an initiative of a group of non-governmental organizations concerned with the involvement of banks in projects that pose risks to the environment, society and human rights. The declaration, supported by more than 200 civil society organizations, encourages financial institutions to actively participate in protecting the environment. In addition, financial institutions are also encouraged to commit to implementing sustainable development by taking more into account environmental factors in disbursing loan funds. In an increasingly modern financial market system where government intervention is increasingly reduced, financial institutions have a very important role in encouraging development that is no longer based solely on profit orientation. But also pay more attention to the balance between development and environmental protection from damage that will ultimately harm society in general. In this Collevecchio Declaration, financial institutions are encouraged to commit to the following six points:

1. Commitment to sustainability; financial institutions can integrate awareness of the importance of environmental sustainability into their work strategies.
2. Commitment not to spoil; financial institutions make policies and regulations that encourage investment in economic activities that do not cause environmental damage.
3. Commitment to be responsible; financial institutions are also responsible for the negative impacts and environmental and social damage resulting from their funding.
4. Commitment to accountability; Financial institutions must be accountable to all stakeholders to ensure that environmental protection is carried out through procedures and activities implemented by these financial institutions.
5. Commitment to transparency; Institutions must be able to provide information regarding existing funding policies, procedures and activities to stakeholders who need them.
6. Commitment to sustainable governance and markets; financial institutions need to support policies, regulations or mechanisms that promote sustainability.

The Equator Principles are a standard minimum mechanism framework created as a guide for financial institutions to carry out assessments of projects that have potential negative impacts on the environment and matters related to social issues. Currently, these principles are officially adopted by nearly 80 financial institutions in 34 countries. Under the Equator Principles, financial institutions that have adopted these principles are required to carry out a comprehensive assessment of the impact on the environment for projects that will be financed by these financial institutions. As part of the assessment, the financial institution needs to measure the potential impacts and risks related to the environment and social issues of the proposed project. Various requirements need to be met in order for the project to receive funding approval from a financial institution that has adopted the Equator Principles. Among them is the existence of a management system and action plans related to mitigation and monitoring of the identified potential impacts and risks. In addition, the project evaluation must go through a consultation process with various related parties and also obtain a review from an independent environmental or social problem expert.

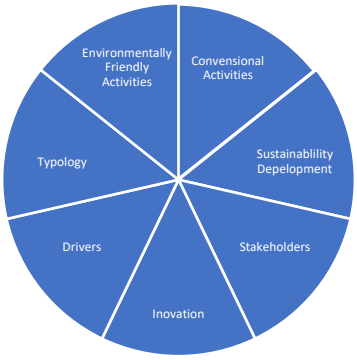
According to the World Bank, green banking is based on the four elements of life, namely nature, prosperity, economy and society. Green banking is a long-term business strategy that, in addition to seeking profits, also creates benefits for empowering and preserving the environment in a sustainable Development.

Green Financing is a broad term that can refer to financial investments flowing into sustainable development projects and initiatives, products environment and policies that promote sustainable economic development (Hohn, 2012). The focus of the Green Financing activity itself is to provide financing for projects or developments that pay attention to the balance between economy, social and environmental. To unite the steps of commercial banks in Indonesia in green financing, the government issued a regulation through PP OJK No 51/POJK.03/2017 concerning the Implementation of Sustainable Finance for Service Institutions Finance, Issuers and Public Companies

III. Sustainable Banking Framework:

Jeucken (2004), formulates a basic framework for sustainable banking into seven main layers. The seven layers start from conventional banking activities, environmentally friendly activities, Typologies, Drivers, Innovations, Stakeholders then sustainable banking activities, which lead to sustainable development. The more toward the sustainable development layer, the wider the scope or problems that must be accommodated by banks. This means that banks have to consider external conditions.

Banking in the end must face various conditions. Starting from the economic activity itself, sociocultural society, technological changes, to the political climate. These aspects have "actors" and their respective characteristics. Banks, in their transformation process towards a sustainable stage, must be able to adapt to conditions, which may have a major impact on banking operations. These stages are a means for banks to increase their role from those that were originally oriented only to internal affairs, to a broader role. Bank as an entity cannot be separated from other development actors. In other words, banking cannot ignore the common goals and objectives, namely sustainable development.



Pigure 1: Sustainable Banking Framework
Source: Modified from Jeucken (2004)

IV. Literature Review:

Walley and Whitehead (1994) argue that the regulatory environment imposes additional costs on the part of companies. They consider pollution control measures will increase production costs, if marginal costs continue to increase, pollution control and environmental performance improvement will reduce the marginal net profit. That is, green finance has a negative side effect on the company's green performance.

Deng and Lu's study(2017) shows that green finance policies can improve the environmental performance of food companies.

Zhou et al(2020) found green finance to have a significant positive impact on the environment and the economy.

Ratnasari et al(2022), found that implementing green banking daily operations will increase the level of capital adequacy, reduce overhead costs and increase bank liquidity and also maintain low levels of non-performing loans.

Winarto et al(2021), found that the application of green banking in Islamic banks can increase firm value.

Malinton et al(2019), stated that green banking can moderate corporate social responsibility ongoing concerns, but does not have a strong influence. These findings imply that going- concern banks are not only assessed from the financial aspect but also assessed from the impact that the company has on its social environment.

Jha and Bhome(2013) conducted a similar survey as mentioned above to examine and thereby create awareness of consumers for Green Banking. Conducting interviews and using a specially structured questionnaire for their survey stated certain steps required in Green Banking. Online Banking, Green Current Accounts (ATM, Special Touch Screen), Green Loans (low rates for those who want to buy solar equipment). supporting eco-friendly housing projects, electricity- saving equipment, Green Credit Cards, Paper Saving Mobile Banking are some of the steps suggested by them. Green Banking will ensure the organization's movement toward sustainability

Chen et al (2022), found that bank employees, day-to-day operations, and policy-related GB practices had a significant positive effect on green financing, as opposed to bank customer-related GB practices, which were not statistically significant. In addition, the bank's green project financing shows strong strength and positive influence on the bank's environmental performance. In addition, the bank's daily operations and policy-related GB practices were observed to have a significant impact on the bank's environmental performance, in contrast to GB practices regarding bank employees and customers.

Haque et al(2022), found that green banking disclosure and ROA have a sizable positive relationship. In contrast, LR and DAR, do not have a statistically significant relationship with green banking spending. The findings of this study will encourage highly profitable listed banks to invest more in green finance, ultimately leading to sustainable development.

Rahman et al(2019), found that the application of green banking affects the level of profitability.

Julia et al(2017) found that there are no banks that fully comply with the requirements of environmentally friendly/sustainable policies, but Islamic banks excel in maintaining faith, reason, and circulation of wealth.

Zhang et al(2022), Empirical results reveal that green banking activities show a significant positive effect on bank environmental performance and green financing sources, and that green financing sources significantly affect bank environmental performance. In addition, it is observed that green financing mediates the relationship between green banking activities and the environmental performance of banks. In addition, this study identified a lack of customer awareness of green banking, high investment costs, technical barriers, a lack of capable and competent staff in assessing green credit/loans, and difficulties and complexities in assessing green projects as the main challenges affecting the development of green banking in Bangladesh. In addition, this study also found that increasing bank competitiveness, reducing long-term costs and expenses,

V. Case Study of Green Financing in Indonesia:

- The Indonesian government has stipulated Law Number 32 of 2009 concerning Environmental Protection and Management. In order to achieve optimal sustainable economic growth, economic activities must be balanced with efforts to protect the environment and society from the negative impacts that arise from these business activities. Activities carried out by business actors in Indonesia should have started to pay attention to the importance of environmental sustainability in planning and implementing their business strategy. Through this Law, the Government regulates how a business activity must go through the Environmental Impact Analysis (AMDAL) process. In the process, planning business activity needs to integrate a thorough analysis to identify potential negative impacts that can be caused to the environment. The analysis process must be carried out in a transparent and accountable manner and take into account suggestions and responses from the community as a basis for preparing plans for environmental management and monitoring. Furthermore, through Government Regulation Number 27 of 2012 concerning Environmental Permits and Regulation of the Minister of State for the Environment Number 5 of 2012 concerning Types of Business Plans and/or Activities Required to Have an Analysis of Environmental Impacts, the government provides more detailed guidelines regarding the AMDAL process. that must be carried out and the requirements that must be met in order to obtain an environmental permit for a business activity. Bank Indonesia has also accommodated the requirements related to the AMDAL as one of the references for banks in channeling capital investment to business actors. In Bank Indonesia Regulation No 14/15/PBI/2012 Concerning Commercial Bank Asset Quality Assessment. In this regulation - followed by Bank Indonesia Circular No. 15/28/DPNP regarding the assessment of the quality of commercial bank assets-, Bank Indonesia encourages banks to increasingly consider environmental feasibility factors in assessing a business prospect. Bank Indonesia requires that business actors who apply for funding from banks conduct an environmental feasibility assessment of their business activities in accordance with regulations drawn up by the government. Besides that,
- In implementing sustainable finance in the banking sector, OJK together with other related institutions has prepared a Sustainable Finance Roadmap. This Road Map then becomes the main reference for OJK and financial services industry players as well as other parties in supporting sustainable development.
- The International NGO Forum on Indonesian Development (INVID) and the Indonesia Working Group and Forest Finance (IWGFF) (2016), launched the Indonesian banking Green Investment Index (IIH). This index aims to see the extent of green investment commitments made by banks in Indonesia. Based on the criteria, there are 12 national and international banks operating in Indonesia included in the index assessment. These banks include Bank Negara Indonesia (BNI 46), Bank Rakyat Indonesia (BRI), Bank Mandiri, BCA, Danamon, Panin Bank, CIMB Niaga, Citibank, Permata, Robobank, Sumitomi, DBS Bank. the findings of this index are that there are no banks that have a 'very good' percentage because based on the results of the assessment and measurements carried out there are no banks that are included in the value interval of 81-100 percent. "
- In Indonesia, several banks have started channeling credit funds to small and medium enterprises through the Food and Energy Security Credit (KKPE) mechanism. This credit is channeled to farmers, ranchers, etc., to support guaranteed food supply and the development of bio-energy, namely sugar cane and cassava, as well as animal husbandry, which can be processed into bioethanol and biogas.
- Bank Mandiri channeled funds totaling 41.3 million dollars in eight cassava starch producing regions for the construction of a biogas power plant system. From wastewater treatment, starch producing factories are expected to generate up to 23.6 MW of electrical power and reduce CO2 emissions by up to 543 thousand tons per year.
- In 2012, Bank BRI disbursed Rp.127 billion in loans to PT Geo Dipa Energi Persero, which manages geothermal power plant facilities in Central and West Java. With these credit funds, PT Geo Dipa can revitalize and optimize the facilities they manage so that they can produce 800 MW of electricity.

VI. Barriers and Challenges to Sustainable Financing:

The implementation of sustainable finance by First Movers is not without obstacles. Various criticisms, suggestions, and input from various parties are discussions that deserve criticism. Some national banks are currently considered to be less committed to implementing sustainable finance because they are still financing the coal sector, both for steam power plants (PLTU) and mining (Katadata, 2022). The emergence of public concern for environmental issues in terms of financing has made most financial institutions stop financing in sectors that are contrary to sustainable business activities.

Limiting and stopping fossil energy financing cannot be done in the blink of an eye, this step taken by BRI is the right step and deserves to be emulated by other financial institutions. Overall, the banking commitment to implementing sustainable finance certainly has an impact on the small percentage of lending to the mining and quarrying sector. More commitment is needed for banks in implementing sustainable finance by gradually reducing fossil energy financing and increasing renewable energy financing. This is because the renewable energy sector is considered to have long-term benefits, in contrast to coal which is clearly not long-term because it damages the environment.

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