



Research Article



Development of Green Banking Concept in Banking Policy for Considering Environmental Protection

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Abstract: The principles of green banking can strengthen bank risk management strategies, especially related to the environment, and encourage banks to increase investment in environmentally friendly financing. Green banking has developed in its practice with the emergence of regulations, changes, or reconstruction of policies in the banking sector in Indonesia. Therefore, this study aims to examine and analyze the development of the application of green banking in banking policies. Then, it will also find out and analyze the importance of green banking in banking policies in fulfilling banking responsibilities in considering environmental protection in Indonesia. This chapter uses doctrinal legal research methods and is analyzed analytically and qualitatively. The role played by banking corporations is very significant in having a broad impact on the application and efforts to achieve the goals of the green banking concept. The weakness of policies in the banking sector and other implementing regulations in Indonesia has resulted in not a few violations occurring and resulting in damage to the existing environment. Clear regulations as legality in regulating the implementation of green banking and supervision and evaluation are needed to have a broad positive impact on the sustainability and preservation of nature.

Keywords: Environment; Green Banking; Policy;



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INTRODUCTION

The World Economic Forum report entitled The Global Risk Report 2021, one of the important issues is how to deal with the increasingly real threat of climate change and environment damage in the world. In addition to the Covid-19 pandemic, the issue of climate change is a critical discussion, lockdowns in various countries in 2020 caused overall global emissions to fall, thus there are concerns that the world will take the risk of doing more environmental damage for the sake of economic recovery and growth or dealing with socio-economic problems in the short term.¹ The concept that the world has long believed in to reduce and prevent climate change and environmental damage is the concept of green economy, this concept is the driving force of sustainable development. Sustainable national development is an effort to

¹ Suardi Nur, Bruce Burton, and Ariel Bergmann, 'Evidence on Optimal Risk Allocation Models for Indonesian Geothermal Projects under PPP Contracts', *Utilities Policy*, 81 (2023), 101511 <https://doi.org/https://doi.org/10.1016/j.jup.2023.101511>



improve welfare and prosperity for all aspects of the life of the community, nation and state in the long term.²

Sustainable development focuses on how to advance the economy of the community, nation and state by taking into account environmental. The economy and the environment have a very complex relationship, it is believed that environmental damage caused by unsustainable industrial governance has adverse effects on the economy.³ This situation encourages several countries, including Indonesia, to continue to make and change policies that support economic growth and the environment. The principle of sustainable development and environmentally friendly is a mandate from Article 33 paragraph (3) of the Constitution of the Republic of Indonesia, this is emphasized by the birth of Law Number 4 of 1982 concerning Basic Provisions for Environmental Management, which was replaced by Law Number 23 of 1997 concerning Environmental Management, and then amended by Law Number 32 of 2009 concerning Environmental Protection and Management.⁴

The government through the PPLH Law has accommodated environmental economic instruments to be considered in the economic context. Environmental damage that often occurs cannot be separated from human intervention, where much damage is caused by human business activities in order to gain profit from environmental resources that can provide economic benefits.⁵ Banking is a financial institution that certainly participates in paying attention to environmental sustainability, in the banking world, the concept of green banking has long been recognized. In several developed countries, such as the United States and Australia, many financial institutions have emerged that are environmentally friendly, they apply environmental requirements in running their business (environmental ethic), for instance in providing credit financing to their customers.⁶

According to World Bank, Green banking is a financial institution that prioritizes sustainability in its business practices. This concept has also been recognized in the Indonesian banking sector.⁷ Banks will give priority to environmentally sustainable development in their business activities, thus in banking, the basic principles of green

² Nurcahyanto, Yeliz Simsek, and Tania Urmee, 'Opportunities and Challenges of Energy Service Companies to Promote Energy Efficiency Programs in Indonesia', *Energy*, 205 (2020), 117603 <https://doi.org/https://doi.org/10.1016/j.energy.2020.117603>

³ Benjamin Miranda Tabak, Igor Bettanin Dalla Riva e Silva, and Thiago Christiano Silva, 'Analysis of Connectivity between the World's Banking Markets: The COVID-19 Global Pandemic Shock', *The Quarterly Review of Economics and Finance*, 84 (2022), 324–36 <https://doi.org/https://doi.org/10.1016/j.qref.2022.03.002>

⁴ Harendra Behera, Iman Gunadi, and Badri Narayan Rath, 'COVID-19 Uncertainty, Financial Markets and Monetary Policy Effects in Case of Two Emerging Asian Countries', *Economic Analysis and Policy*, 78 (2023), 173–89 <https://doi.org/https://doi.org/10.1016/j.eap.2023.03.001>

⁵ Dewa Ayu Putu Eva Wishanti, 'Alleviating Energy Poverty as Indonesian Development Policy Inputs Post-2015: Improving Small and Medium Scale Energy Development', *Procedia Environmental Sciences*, 28 (2015), 352–59 <https://doi.org/https://doi.org/10.1016/j.proenv.2015.07.044>

⁶ Bastian Muzbar Zams, 'Frictions and Empirical Fit in a DSGE Model for Indonesia', *Economic Modelling*, 99 (2021), 105487 <https://doi.org/https://doi.org/10.1016/j.econmod.2021.03.006>

⁷ Lan Khanh Chu and others, 'A Step towards Ecological Sustainability: How Do Productive Capacity, Green Financial Policy, and Uncertainty Matter? Focusing on Different Income Level Countries', *Journal of Cleaner Production*, 426 (2023), 138846 <https://doi.org/https://doi.org/10.1016/j.jclepro.2023.138846>



banking are an effort to strengthen bank risk management strategies, especially those related to the environment, and also encourage banks to increase investment in environmentally friendly financing.⁸

Both to win market competition and to contribute for environmental sustainability, banks cannot exist without an adequate environment. Project financing at environmentally sound banks has been proven to increase competitiveness and provide advantages in business strategy. The concept of green banking, in addition to being in line with the mandate of the Constitution and the Environment Law, this concept has been described in several articles of Law Number 10 of 1998 concerning Banking including Article 4, Article 22, Article 36, and Article 66-Article 68, which means that banks also have a responsibility and role in national development through efforts to protect and manage the environment, including through the implementation of green banking principles in banks activities.⁹

This is not just a concept, green banking has developed in its application, this can be seen from the emergence of regulations in encouraging the course of this concept which influences the change or reconstruction of policies in the banking sector in Indonesia as mentioned above. Therefore, this chapter will be studied and analyzed more deeply regarding the development of the green banking application in policies, in order this policy becomes important in supporting banking responsibilities in environmental protection in Indonesia.

RESULT AND DISCUSSION

The Green Banking Policy

In its development in the world, the application of the concept of green banking has experienced various kinds of progress, including the incorporation of banks in the world in the United Nations Environment Programme Finance Initiative (UNEP-FI) organization which houses institutions both banks, insurance companies, and investors who run the concept of green banking. As for the data reported from the official UNEP-FI website, the bank from Indonesia that has joined the organization is Bank Negara Indonesia.¹⁰ The concept of green banking has actually been a hot issue in Indonesia, but in its application, it has just actively participated in implementing this concept in banking policy, this is marked by the holding of policies based on the concept of sustainability by banking institutions in Indonesia.¹¹

⁸ Gang-Jin Wang and others, 'Connectedness and Systemic Risk of the Banking Industry along the Belt and Road', *Journal of Management Science and Engineering*, 7.2 (2022), 303–29 <https://doi.org/https://doi.org/10.1016/j.jmse.2021.12.002>

⁹ Yan Xue and others, 'Natural Resources Policy Making through Finance? The Role of Green Finance on Energy Resources Poverty', *Resources Policy*, 85 (2023), 104023 <https://doi.org/https://doi.org/10.1016/j.resourpol.2023.104023>

¹⁰ Ruijie Cheng, Bhavya Gupta, and Ramkishan S Rajan, 'Do Green Financial Policies Offset the Climate Transition Risk Penalty Imposed on Long-Term Sovereign Bond Yields?', *Research in International Business and Finance*, 65 (2023), 101976 <https://doi.org/https://doi.org/10.1016/j.ribaf.2023.101976>

¹¹ Paola D'Orazio and Lilit Popoyan, 'Fostering Green Investments and Tackling Climate-Related Financial Risks: Which Role for Macroprudential Policies?', *Ecological Economics*, 160 (2019), 25–37 <https://doi.org/https://doi.org/10.1016/j.ecolecon.2019.01.029>



Then, what kind of policies are issued or implemented by banking institutions in terms of implementing this green banking concept? Before entering into a discussion of the form of policies issued by banks in Indonesia based on the concept of green banking, it is to know that in carrying out its activities, banking in Indonesia has a function that is generally regulated in Article 3 of Law Number 7 of 1992 concerning Banking, namely as a collector and distributor of public funds. Banks are institutions that collect funds from the public or credit recipients, channel funds to the public or as lending institutions and facilitate trade and payment transactions. Banks have an important role in the financial system.¹²

Asset Transmutation is a transfer of funds / assets from surplus units to deficit units. This means that the source of funds provided to the borrower comes from the owner of the funds, namely the surplus unit, whose time period can be arranged according to the wishes of the owner of the funds. In this case the bank acts as a transfer of liquid assets from the lender to the borrower. Banks have various facilities for economic actors to make transactions. Nowadays, transactions of goods and services are never separated from financial transactions. Therefore, the products issued by banks (current accounts, savings, deposits, shares and so on) are substitutes for money and can be used as a means of payment.¹³

Surplus units can place the funds in the form of products issued by banks, which can be in the form of current accounts, savings, deposits, and others. These products certainly have different levels of liquidity. In terms of liquidity interests, fund owners can place their funds according to their needs and desired interests. Thus, banks provide liquidity management facilities to parties experiencing liquidity surpluses and channel them to parties experiencing liquidity shortages. One of the roles of banks is to find borrowers and users of capital without changing the product. Banks only facilitate and bring together parties who need each other, or in other words as intermediaries for the parties. The existence of asymmetric information between borrowers and investors can lead to incentive problems. The role of banks here becomes important to solve these problems. Because of this, the role of the bank in this case is to become an intermediary for two mutually interested parties to harmonize understanding and imperfect information, resulting in economic cost efficiency.¹⁴

As a comparison, there are banks in the world that have implemented the concept of green banking in terms of achieving the Sustainable Development Goals (SDGs) are Bank of America, Industrial Bank from China, Standard Bank from Africa and others. These banks have implemented explicit environmental and social risk management standards in their lending policies. For example, at Bank of America, they established

¹² Franklin Amuakwa-Mensah and Elin Näsström, 'Role of Banking Sector Performance in Renewable Energy Consumption', *Applied Energy*, 306 (2022), 118023
<https://doi.org/https://doi.org/10.1016/j.apenergy.2021.118023>

¹³ Nicky Roberts and others, 'Patron-Client Relationships Shape Value Chains in an Indonesian Island-Based Fisheries System', *Marine Policy*, 143 (2022), 105142
<https://doi.org/https://doi.org/10.1016/j.marpol.2022.105142>

¹⁴ J Malcolm Dowling and Chin-Fang Yap, 'Indonesian Economic Development: Mirage or Miracle?', *Journal of Asian Economics*, 19.5 (2008), 474–85
<https://doi.org/https://doi.org/10.1016/j.asieco.2008.09.012>



a policy framework called Environmental and Social Risk Policy Framework (ESRP) which aims to provide additional clarity and transparency on how they address environmental and social risks that touch almost every aspect of their business. Furthermore, the policy also regulates the forms of business relationships and activities that are worthy of financing or establishing a business relationship.¹⁵

Prior to the establishment of Financial Services Authority (OJK), Bank Indonesia had issued Bank Indonesia Regulation No. 14/15/PBI/2012 on Asset Quality Assessment of Commercial Banks. Based on this regulation, Bank Indonesia encourages national banks to consider environmental feasibility factors in conducting an assessment of a business prospect or business. The regulation is a follow-up regulation to Law No. 32 of 2009 on Environmental Protection and Management, Government Regulation No. 27 of 2012 on Environmental Permits, and Minister of Environment Regulation No. 5 of 2012 on Types of Business Plans and/or Activities Requiring Environmental Impact Assessment (AMDAL). But now, the regulatory basis relating to green banking practices is Financial Services Authority Regulation number 51/POJK.03/2017 regarding sustainable finance. The existence of this regulation aims to support the creation of sustainable finance in the financial services sector that supports economic, social and environmental sustainability in the implementation of the development process in Indonesia, one of which realizes the concept of green banking. The Financial Services Authority states that there are eight banking financial services institutions that have committed to become the main driving force in financing the green banking.¹⁶

The commitment was outlined in the signing of a green banking pilot project by eight banks namely Bank Mandiri, BRI, BCA, BNI, Bank Muamalat, BRI syariah, BJB and Bank Artha Graha Internasional. The policies applied to banks in Indonesia related to the concept of green banking that have long been implemented are the application of Environmental Impact Analysis (AMDAL) as one of the factors required in the procedure for evaluating creditworthiness (credit compliance) to be given to prospective debtors. In connection with the above, the banking sector in financing industrial projects in general can examine matters based on the provisions in Article 22 paragraph (2) Environmental Act, namely to determine an activity that has an important impact on the environment is determined by the number of people who will be affected, the size of the impact distribution area, the intensity and duration of the impact, the number of other environmental components affected, the cumulative nature of the impact, reversible or irreversible nature of the impact and other criteria in accordance with the development of science and technology.¹⁷

As a manifestation of Article 1338 of the Civil Code, credit agreements are often referred to as freedom of contract, meaning that what will be included in the credit agreement is left to the parties. Although the contents of the credit agreement are left to the parties to be negotiated, in fact, the contents of the credit agreement are more inclined to the bank as the creditor, so that the bank can impose or impose certain qualifications on the debtor to comply with what has been determined by the bank

¹⁵ Eleni Sardianou and others, 'A Materiality Analysis Framework to Assess Sustainable Development Goals of Banking Sector through Sustainability Reports', *Sustainable Production and Consumption*, 27 (2021), 1775–93 <https://doi.org/https://doi.org/10.1016/j.spc.2021.04.020>



beforehand,¹⁸ however in the application of AMDAL tends to be interpreted only as a form of license, even though AMDAL is a requirement that must be met to obtain a license in creditworthiness.¹⁹

Another policy that is currently apparent in the implementation of green banking is that banks avoid the use of paper by utilizing online transactions such as green banking such as online banking, internet banking, green checking accounts, green loans, mobile banking, electronic banking outlets and saving energy use that contributes to environmental sustainability programs, and they can strive for the paperless principle which means it will reduce the use of paper and can reduce deforestation. Paper Work or Paperless is a paper reduction policy in administrative activities, especially in the banking business.²⁰ The form of this policy is reflected in the maximization of the use and utilization of technology in banking activities, such as online banking services, internet banking, green checking accounts, green loans, mobile banking, electronic banking outlets, and so on. A concrete example, can be seen in the paperless banking services (e-billing, formless transfer) implemented by Bank Negara Indonesia (BNI), as reported by BNI's official website, as for some services developed by BNI as a solution that makes it easy for customers to apply for issuance, monitoring and checking of bank guarantees online and has advantages in terms of supporting the concept of green banking, namely the benefits in terms of reducing the use of paper (paperless).²¹

That is checking the correctness of the bank guarantee document via mobile-apps through scanning QR Code on the bank guarantee. In addition, BNI has also issued various policies that support the implementation of the green banking concept. Until now, BNI's green portfolio or environmentally sound lending throughout 2020 has reached Rp. 139.4 trillion or 25.4% of the total loans disbursed. This is proof that BNI is one of the banking institutions in Indonesia that maximizes the concept of green banking. Another policy BNI has is a comprehensive program called "BNI Go Green". Internally, BNI also focuses on increasing the knowledge capacity of

¹⁶ Solikin M Juhro and others, 'Is There a Role for Islamic Finance and R&D in Endogenous Growth Models in the Case of Indonesia?', *Pacific-Basin Finance Journal*, 62 (2020), 101297 <https://doi.org/https://doi.org/10.1016/j.pacfin.2020.101297>

¹⁷ Dr. M Anna Gustina Zainal and others, 'A Decentralized Autonomous Personal Data Management System in Banking Sector', *Computers and Electrical Engineering*, 100 (2022), 108027 <https://doi.org/https://doi.org/10.1016/j.compeleceng.2022.108027>

¹⁸ Fitri Nurfatriani and others, 'Redesigning Indonesian Forest Fiscal Policy to Support Forest Conservation', *Forest Policy and Economics*, 61 (2015), 39–50 <https://doi.org/https://doi.org/10.1016/j.forpol.2015.07.006>

¹⁹ Christina Mediastika and Karen Lie, 'Occupants' Perception on Green-Rated Office Building in Surabaya, Indonesia', *Procedia Engineering*, 118 (2015), 546–53 <https://doi.org/https://doi.org/10.1016/j.proeng.2015.08.479>

²⁰ Kinan Salim and others, 'The Impact of Sustainable Banking Practices on Bank Stability', *Renewable and Sustainable Energy Reviews*, 178 (2023), 113249 <https://doi.org/https://doi.org/10.1016/j.rser.2023.113249>

²¹ Gulcay Tuna and Hamed Ahmad Almahadin, 'Does Interest Rate and Its Volatility Affect Banking Sector Development? Empirical Evidence from Emerging Market Economies', *Research in International Business and Finance*, 58 (2021), 101436 <https://doi.org/https://doi.org/10.1016/j.ribaf.2021.101436>



employees; ranging from employee green attitude, energy saving measures, to training on environmental and social risks in creditworthiness analysis.²²

BNI also prepares retail products and services that encourage green lifestyles such as Green KPR, BNI-WWF credit cards, Orangutan Adoption and Tree Planting features, and paperless banking services (e-billing, formless transfer). In addition to the activities and policies implemented by BNI internally, there are also external implementation efforts made. BNI consistently implements environmental conservation programs both forestry and non-forestry, as well as in the realm of renewable energy utilization. These programs are implemented through both CSR and commercial credit schemes. BNI provides financing to projects that have environmentally friendly concepts run by BNI clients such as geothermal power plants, biomass, biogas, hydro and waste management. In addition, BNI also established a nursery center for a million perennials in Sentul Bogor and built Forest and City Parks in several cities in Indonesia.²³

A banking institution which participates in issuing policies to implement the concept of green banking is Bank BJB. They are involved in various activities organized by UNEP-FI, such as conducting capacity building, implementing and formulating research instruments on green banking, and formulating global green banking standards. In 2011, Bank BJB has implemented the concept of green banking in a sustainable program called "BJB Lestari Bumi Movement". Bank BJB participated in implementing various policies in supporting the program such as striving for an integrated IT system and striving for the implementation of paperless concepts, as well as implementing Corporate Social Responsibility (CSR) programs that have a special focus on the environment. With these policies, Bank BJB seeks to minimize the environmental impact of the company's operational activities. In 2014, Bank BJB signed a project called Green Banking Pilot Project launched by OJK with the aim to realize sustainable finance.²⁴

Then, Bank Mandiri is also a banking institution that adapts the concept of green banking in banking activities within the company. This is done through a sustainable finance initiative by developing risk management practices that are aligned with environmental, social and governance aspects. Bank Mandiri's Corporate Secretary provided an explanation regarding this matter, that the initiative was poured into a sustainable finance action plan which was implemented through three strategic pillars, namely Sustainable Banking, Sustainable Operations and Sustainable CSR and Financial Inclusion. Bank Mandiri implements several programs green Building within

²² Alexander Sasu, Graham Squires, and Arshad Javed, 'Land Banking and Land Markets: A Literature Review', *Habitat International*, 130 (2022), 102698 <https://doi.org/https://doi.org/10.1016/j.habitatint.2022.102698>

²³ Paulo Júlio and José R Maria, 'The Magnifying Role of the Banking Sector during Depressions', *Journal of Macroeconomics*, 79 (2024), 103569 <https://doi.org/https://doi.org/10.1016/j.jmacro.2023.103569>

²⁴ Paola D'Orazio, 'Dataset for the Climate-Related Financial Policy Index (CRFPI)', *Data in Brief*, 48 (2023), 109044 <https://doi.org/https://doi.org/10.1016/j.dib.2023.109044>



the head office, all work units or wherever Bank Mandiri is active, energy consumption/utilization efficiency and water usage efficiency.²⁵

The implementation of the green banking concept can also be seen in the Community, Community Development and Business Program, which focuses on encouraging investment in more responsible businesses, in this case, they prioritize sustainable sectors such as credit to the plantation sector, green building, and renewable energy. In addition to the banking institutions mentioned above, the Financial Services Authority states that there are eight banking financial services institutions that have committed to become the main driving force in financing the concept of green banking, it is noted that as many as eight banks in Indonesia have signed a pilot project (sustainable finance projects), namely PT Bank Arta Graha Internasional Tbk, PT Bank Central Asia (BCA) Tbk, PT Bank Negara Indonesia (BNI) Tbk, and PT Bank Rakyat Indonesia (BRI) Tbk, PT Bank BRI Syariah, PT Bank Mandiri, PT Bank Muamalat Indonesia, and PT BPD Jabar and Banten Tbk (BJB). In its implementation, the three banks mentioned, BNI, Bank BJK and Bank Mandiri are the most active and progressive developments in implementing the concept of green banking.²⁶

This shows a rapid development of the awareness of banking institutions in participating in realizing the objectives of the green banking concept which aims to realize banking that only focuses on financial responsibility, namely managing its business as well as possible to generate profits for shareholders, but must also focus its responsibility on efforts to preserve the environment and the universe and improve social welfare to the community.²⁷

The Concept of Green Banking in Fulfilling Banking Responsibilities for Considering Environmental Protection

Indonesia is currently carrying out sustainable development efforts in order to realize a just and prosperous society in accordance with the mandate of Pancasila and the 1945 Constitution. Indonesia is also currently actively exploring natural resources as development capital for the welfare of the people. However, this is also a serious threat to the wider community. Various forms of development policies have become large-scale exploitation. As a result, various environmental crises are rife. Moreover, it can be said that economic development in Indonesia will face more complex challenges, thus requiring more complex reactions and actions to face these challenges so that Indonesia can take the profitable side without sacrificing the preservation and balance of nature. Thus, it is not impossible that the economy and the environment

²⁵ Djoko Santoso Abi Suroso and others, 'Revisiting the Role of International Climate Finance (ICF) towards Achieving the Nationally Determined Contribution (NDC) Target: A Case Study of the Indonesian Energy Sector', *Environmental Science and Policy*, 131 (2022), 188–95 <https://doi.org/10.1016/j.envsci.2022.01.022>

²⁶ Chi-Wei Su and others, 'Resource Extraction, Greenhouse Emissions, and Banking Performance', *Resources Policy*, 79 (2022), 103122 <https://doi.org/10.1016/j.resourpol.2022.103122>

²⁷ Qianli Ma and others, 'Banking Competition and the Use of Shadow Credit: Evidence from Lending Marketplaces', *Global Finance Journal*, 58 (2023), 100884 <https://doi.org/10.1016/j.gfj.2023.100884>



can go hand in hand to create sustainable development that is sustainable between the two.²⁸

UNEP came up with the idea of a green economy where the idea of a green economy aims to provide a great opportunity for how to utilize the conception of a green economy in order to support the implementation of environmentally and ecosystem-oriented development. Then, the concept of green economy is expected that in sustainable development, especially in the economic sector, can be sustainable with the preservation of the environment. Green economy aims to improve the welfare of society, provide equal opportunities/fair and minimize environmental damage and economic development in accordance with the carrying capacity of the environment. It can also be interpreted that a green economy is a condition of improving well-being and social equity by significantly reducing environmental risks and ecological scarcity.²⁹

One of the economic sectors that affects the business world is the banking sector. Banking itself is a business entity that contributes to the development of the country. The bank's contribution to the country's development is also part of the bank's role as an agent of development, banking itself has a role one of which is channeling funds to each business sector, but with the realization that the role of banks still sees the economic aspect as one aspect that is still considered the main aspect in channeling financing without regard to other aspects that have a wider impact, for example related to the environment. Banks are not directly classified as high contributors to environmental pollution. However, despite this, banks are not free from the problem of increasing environmental degradation. This occurs through the issuance of loans or financing to customers that can trigger activities that have an impact on the environment.³⁰

The concept of green economy, which basically encourages that every economic activity must minimize its impact on the environment, is also adopted by the banking world. One of them is through the concept of green banking. The basic principle of green banking is an effort to strengthen risk management capabilities, especially those related to the environment and encourage banks to increase their portfolio of environmentally friendly financing, such as renewable energy, energy efficiency, organic agriculture, eco-tourism, environmentally friendly transportation, and various other programs. According to the World Bank, green banking is a financial institution that provides behavior on sustainability in its business practices, where banks apply the concept of green banking will produce corporate output, competitive advantage, good corporate identity, and a strong brand image in achieving the company's targets that have been set. The results of several previous studies, it has been shown that

²⁸ Dharen Kumar Pandey and others, 'Mapping the Landscape of FinTech in Banking and Finance: A Bibliometric Review', *Research in International Business and Finance*, 67 (2024), 102116 <https://doi.org/https://doi.org/10.1016/j.ribaf.2023.102116>

²⁹ Paola D'Orazio and Steffen Thole, 'Climate-Related Financial Policy Index: A Composite Index to Compare the Engagement in Green Financial Policymaking at the Global Level', *Ecological Indicators*, 141 (2022), 109065 <https://doi.org/https://doi.org/10.1016/j.ecolind.2022.109065>

³⁰ Jannis Langer and others, 'Geospatial Analysis of Indonesia's Bankable Utility-Scale Solar PV Potential Using Elements of Project Finance', *Energy*, 283 (2023), 128555 <https://doi.org/https://doi.org/10.1016/j.energy.2023.128555>



daily green banking operations have a significant influence and positive impact on bank profitability.³¹

Green Banking is an environmentally-based bank concept. This concept has been widely implemented in several developed and developing countries. Green banking is inseparable from the term green business, according to Glenn Croston, green business is a profitable business concept because it can provide adequate profits and economies of scale so that it is very beneficial for overall business continuity. By considering environmental aspects in making business decisions, it can reduce the negative impact of financial institutions operating activities so that it can help corporate social responsibility efforts and achieve sustainability.³²

Banks are not directly classified as high contributors to environmental pollution. However, despite this, banks are not free from the problem of increasing environmental degradation. This occurs through the issuance of loans or financing to customers that can trigger activities that have an impact on the environment. Green banking also means promoting environmentally friendly practices and reducing the level of carbon emissions in the banking activities carried out, the green banking customer segment is business entities that have a concern for environmental preservation and carbon emission reduction.³³

Bank Indonesia has interest in developing green banking, which responds to current environmental laws that require all economic activities to comply with encouraging environmental sustainability by providing sanctions both criminal for the perpetrators to the revocation of environmental licenses. Banking has high potential as a role model for other industries in implementing the principles of Sustainable Development. The Ministry of Environment and Bank Indonesia agreed to coordinate to implement green banking, which is to increase the role of the banking sector in the context of environmental protection and management. This agreement is motivated by the increasing global awareness to implement sustainable development principles in various industries, including the banking industry.³⁴

Indonesia's commitment to the implementation of green banking or what in the terminology of the Financial Services Authority (OJK) is called sustainable finance is shown by the launch of the sustainable finance roadmap in December 2014, and also the regulatory framework related to green banking in Indonesia, namely the OJK issued the Financial Services Authority Regulation (POJK) Number 51 /POJK.03/2017 concerning the Implementation of Sustainable Finance for Financial Services Institutions, Issuers and Public Companies confirmed in article 2 paragraph 1 that all

³¹ Solikin M Juhro, 'Future Central Banking in Emerging Market Economies', in *Reference Module in Social Sciences* (Elsevier, 2023) <https://doi.org/https://doi.org/10.1016/B978-0-44-313776-1.00118-5>

³² Grégory Leveuge, Yannick Lucotte, and Florian Pradines-Jobet, 'The Cost of Banking Crises: Does the Policy Framework Matter?', *Journal of International Money and Finance*, 110 (2021), 102290 <https://doi.org/https://doi.org/10.1016/j.jimonfin.2020.102290>

³³ Kyunghoon Kim and Andy Sumner, 'Bringing State-Owned Entities Back into the Industrial Policy Debate: The Case of Indonesia', *Structural Change and Economic Dynamics*, 59 (2021), 496–509 <https://doi.org/10.1016/j.strueco.2021.10.002>

³⁴ Daniel Ofori-Sasu and others, 'The Role of Board Dynamics in Explaining Payout Policy and Shareholders' Wealth: Evidence from the Banking Sector in Africa', *Research in Globalization*, 5 (2022), 100086 <https://doi.org/https://doi.org/10.1016/j.resglo.2022.100086>



Financial Services Institutions, Issuers and Public Companies are required to implement sustainable finance and their business activities. Where previously the regulations governing green banking policies in Indonesia were Bank Indonesia Regulation (PBI) No. 14/15/PBI/2012 concerning Assessment of Asset Quality of Commercial Banks, in article 11 paragraph 1 point e of the PBI which states that the assessment of business prospects includes efforts made by debtors in order to maintain the environment.

This concept emerged in response to the demands of the global community for the banking industry to actively participate in efforts to address the increasingly serious environmental crisis and global warming. The concept also emerged in response to the growing global collaboration to realize the action agendas for Sustainable Development and poverty eradication agreed upon by heads of state at the 1992 Earth Summit in Brazil. Banking corporations have a strategic role in collecting and channeling public funds to support the realization of the vision and goals of national development. As an intermediary institution that has a strategic role, banks have a crucial role to encourage or even "force" debtors who apply for credit to be more friendly to green economy and green business issues in managing their business or business. As an economic and social entity, banking corporations must also play an active role in assisting the government and society in efforts to realize the green economy and green business movements to realize sustainable development. Before trying to green the debtors and the banking financial system, banking actors must first green the banking corporation management system and its business processes correctly based on the principles of green banking and sustainable business.³⁵

Regarding the management system applied in internal corporations or banking companies, it has been carried out and continues to develop in several banking institutions based on the regulations and agreements that have been signed such as several regulations and agreements at the international level mentioned earlier. One of the channeling and implementation of green banking is the use of corporate social responsibility (CSR) funds from banking companies that prioritize environmentally friendly rules. Reporting the use of CSR funds has been mandatory for public companies in Indonesia, Thailand and Singapore since 2012, 2014 and 2017 which has had a good impact on the very high reporting rate in Indonesia which reached 90% based on the KPMG Survey in 2015. When referring to the Publication of Research Results by the ASEAN CSR Network with the National University of Singapore in 2015, CSR disclosure in Indonesia is still inferior when compared to other neighboring countries with 48.4%(ALDAMA et al., 2021). The low percentage of disclosure of CSR funds has a negative impact on the responsibility given to banking institutions as debtors to companies in carrying out their business without considering the damage that will occur from excessive exploitation of nature and prioritizing economic benefits.³⁶

³⁵ George Fane and Ross H McLeod, 'Lessons for Monetary and Banking Policies from the 1997–98 Economic Crises in Indonesia and Thailand', *Journal of Asian Economics*, 10.3 (1999), 395–413 [https://doi.org/https://doi.org/10.1016/S1049-0078\(99\)00033-0](https://doi.org/https://doi.org/10.1016/S1049-0078(99)00033-0)

³⁶ Xiangyu Wang and others, 'Impact of Banking Development and Renewable Energy Consumption on Environmental Sustainability in Germany: Novel Findings Using the Bootstrap ARDL Approach', *Heliyon*, 9.10 (2023), e20584 <https://doi.org/https://doi.org/10.1016/j.heliyon.2023.e20584>



Sustainable development can simply be understood as an effort to maximize existing natural resources for the benefit and prosperity of the wider community while maintaining the balance of nature to meet the needs of human life and other living things in the future. In other terms, it is an effort or process of meeting the needs of the present without reducing the ability of future generations to also meet their needs. In national development efforts, of course, it cannot only rely on the efforts of the government as the authorized party in controlling almost all aspects of the life of the nation and state, but it needs help from other parties to contribute so that national development can be carried out properly. In this case, the private sector has a very large role in the smooth implementation of national development that can synergize with the government.³⁷

Its implementation, we commonly know that the government takes a role in determining policies, the direction of national development and also as a supervisory role. On the other hand, the private sector takes on the role of technical implementers in the field of national development efforts. In addition to taking on different roles, there are also things that need direct synergy in one field, namely regarding funding that cannot rely on one party. Typically, the government conducts investment mechanisms or investments that are partly from foreign parties for the smooth running of national development, as is being intensively carried out by the government in recent years, and one of them that relies on this is the relocation of the national capital from Jakarta to East Kalimantan.³⁸

Combined development funding is a public-private partnership (PPP) and a form of social responsibility through corporate social responsibility. It is a commitment by a business to act ethically, operate legally and contribute to improving the quality of life of its employees and their families, the local community, and the wider community in which it is responsible for an active and dynamic partnership between the government, the company and the local community. The banking sector certainly has a big role in national development and at the same time, the responsibility borne by banking institutions not to override the concept of an environmentally friendly economy must also be more selective and strict supervision procedures. Because the implementation of national development on a large scale will certainly exploit nature a lot. The damage to nature caused by excessive exploitation by companies in various sectors that are also financed by banking corporations has so far been quite severe.³⁹

In addition to environmental damage, it also affects the affected communities who are victims of greedy companies that carry out massive exploitation that only prioritizes economic benefits. Based on a case example, there is a case of

³⁷ Łukasz Kurowski, Joanna Rutecka-Góra, and Paweł Smaga, 'Is Knowledge on Climate Change a Driver of Consumer Purchase Decisions in Poland? The Case of Grocery Goods and Green Banking', *Journal of Cleaner Production*, 369 (2022), 133444 <https://doi.org/https://doi.org/10.1016/j.jclepro.2022.133444>

³⁸ Petir Papilo and others, 'Palm Oil-Based Bioenergy Sustainability and Policy in Indonesia and Malaysia: A Systematic Review and Future Agendas', *Heliyon*, 8.10 (2022), e10919 <https://doi.org/https://doi.org/10.1016/j.heliyon.2022.e10919>

³⁹ Kelly Sims Gallagher and others, 'Banking on Coal? Drivers of Demand for Chinese Overseas Investments in Coal in Bangladesh, India, Indonesia and Vietnam', *Energy Research & Social Science*, 71 (2021), 101827 <https://doi.org/https://doi.org/10.1016/j.erss.2020.101827>



environmental damage that occurred at the unconventional tin mining site on the coast of Bangka-Belitung Island and it cannot be determined who is responsible for the damage that occurred because the mining activities were carried out by unlicensed mining people who were chasing deposits to PT Timah. Tbk results in pollution of sea surface water and public waters, land becomes barren, coastal abrasion occurs, and marine damage. Another case also occurred in West Kalimantan, where three companies engaged in the oil palm sector cleared land for oil palm plantations by burning, resulting in a total forest fire of nearly 2000 hectares. In addition, there are still 24 companies that have been sealed and the investigation process from various provinces with a total of around 4,490 hectares of burned area.

In the implementation of the legal process through the criminal law system, most of them are tried without any consideration and examination of the injection of funds from banking corporations, in this case banks that provide financing for the smooth running of a company's business activities. Whereas the role played by banking corporations is very significant in having a broad impact on the realization of the application and efforts to achieve the goals of the green banking concept. The lack of laws governing CSR activities in Indonesia has resulted in many violations occurring and causing damage to the existing environment. It is important to immediately do the right thing is to increase the awareness of companies, communities and governments to synergize in an effort to implement regulations or provisions that are mutually agreed upon between the parties concerned.⁴⁰

The role of the law as legality in regulating the implementation of CSR is needed. Evaluation of the level of success of companies in implementing CSR is also very necessary to determine the seriousness of corporate attention or concern for environmental sustainability and socio-economic life of the community. After a few cases that occurred in several provinces in Indonesia that resulted in very serious natural damage, of course, it must also be accompanied by an understanding that the role and contribution of corporations, communities and governments and based on the Legislation as a strong foundation in the implementation of the concept of green banking is expected to have a broad positive impact on the sustainability and preservation of nature.⁴¹

CONCLUSION

Based on the description of several cases in the discussion, the implementation of the Green Banking policy still needs to be evident. There is still natural damage caused by excessive exploitation by companies in various sectors that banks also finance. In addition to environmental damage, it also affects the affected communities, who are victims of massive exploitation that only prioritizes economic benefits. In applying the legal process to cases that occur, the parties involved are tried without any consideration and examination of the injection of funds from banking

⁴⁰ Md. Hasanur Rahman and others, 'Green Banking Initiatives and Sustainability: A Comparative Analysis between Bangladesh and India', *Research in Globalization*, 7 (2023), 100184 <https://doi.org/https://doi.org/10.1016/j.resglo.2023.100184>

⁴¹ Juliansyah Noor and others, 'Green Human Resources Management Practices, Leadership Style and Employee Engagement: Green Banking Context', *Heliyon*, 9.12 (2023), e22473 <https://doi.org/https://doi.org/10.1016/j.heliyon.2023.e22473>



corporations, in this case, banks that provide financing for the smooth business activities of a company. At the same time, the role played by banks is very significant in having a broad impact on the realization of the application and efforts to achieve the goals of the green banking concept. Lack of regulations and policies, as well as supervision in their implementation, have resulted in many violations occurring and resulting in environmental damage. Therefore, it is important to immediately increase the awareness of companies, communities and governments to synergize in an effort to implement regulations or provisions mutually agreed upon between stakeholders. The role of legislation as legality in regulating the implementation of the green banking concept is indispensable. Evaluation of the assessment of the company's success rate in carrying out its activities is also essential to increase the seriousness of corporate attention or concern for environmental sustainability and the socio-economic life of the community so that it can have a broad positive impact on the sustainability and sustainability of nature.

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