Blue Finance: Is this supporting SDG 14 Financing Gap

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Abstract

The stagnation of the worlds traditional land-based economies and the depletion of natural resources on land has fuelled interest in the development of the marine economy. Indonesia is the largest archipelagic country in the world, with 70% of its area covered by ocean. Its potential to establish a Blue Economy as a government revenue source can help achieve the targets of SDG 14. Indonesia Minister of Finance and Ministry of National Planning reiterated that the President had asked government officials to look into potential aspects of the maritime sector so that the Blue Economy becomes an important aspect. To establish Blue Economy, need effort to develop Blue Finance and the governance. The following question will be addressed in the paper: How Blue Finance in Indonesia support the achievement of SDG 14?. The primary method employed in this research is qualitative and involves a desk study and interviews with relevant respondents. The results reveal that currently, Government of Indonesia (GoI) focus to complete 14.4.1 (proportion of fish stocks within biologically sustainable levels) and 14.5.1 (protected area coverage in relation to marine areas). There are no figures available regarding the ideal financial needs to achieve SDG 14 in Indonesia until 2030 until yet, however process in on going. There is an essential collaborate with all potential stakeholders to speed up the establishment of Blue Economy in Indonesia in order to achieve SDG 14 target. Furthermore, the Blue Finance Advisory Committee in Government should establish to synergize and coordinate all stakeholder

Keywords: Blue Economy, Blue Finance, SDG 14, SDG 14 Indonesia

I. INTRODUCTION

The phenomenon of the worlds traditional land-based economies stagnating and natural resource depletion on land has fuelled interest in the development of the marine economy (Voyer, Quirk, et al., 2018; Winder & Le Heron, 2017). However, various pressures from climate change and the negative consequences of overexploitation of marine resources have raised awareness and the need to change management practices that have been implemented thus far in order to comply with the principles of a sustainable economy (Sumaila et al., 2021).

Indonesia, with over 17,500 islands, 108,000 kilometres of coastline, and 5.8 million km2 of sea area, has a diverse range of manageable aquatic and fishery resources. The fishing industry, maritime expeditions, coastal tourism, biotechnology, marine construction, and sea transportation have the potential to become major development hubs for Indonesia prosperity (OECD, 2016; World Bank, 2021).President Jokowi stated emphatically at the National Development Planning Meeting on 4 May 2021 that Indonesia has strength in the Blue Economy. Sustainable Blue Economy is an agenda that must be prioritized in all of Indonesia coastal areas. In line with the Presidents statement, Suharso Monoarfa, Minister of National Development Planning (PPN)/Head of the National Development Planning Agency (Bappenas), stated in October 2021 that the Blue Economy can be used as a source of new economic growth that is more inclusive and sustainable, and that it is capable of responding to the challenges of recovery and post-pandemic economic transformation.

The economic potential based on marine ecosystem services can reach US$1.33 billion, or Rp.1.9 trillion, and can support 45 million jobs (www.bisnis.com, November 2021). Mrs. Sri Mulyani, Minister of Finance (MoF) of the Republic of Indonesia, reiterated in her speech at the SDG Annual Conference on November 23, 2021, that the President had asked government officials to look at potential aspects of the maritime sector so that the Blue Economy becomes a very important aspect.

This is also in line with the Sustainable Development Goals, which are global initiatives aimed at eradicating poverty, protecting the environment, and improving the quality of life for all. In 2015, all UN Member States approved the 17 Goals as part of the 2030 Agenda for Sustainable Development, which outlines a 15-year

strategy for achieving the Goals. Although there has been growth in several places recently, the Objectives have not yet been attained in terms of pace or scope.

Life below the Water, one of the SDG targets, is directly related to the Blue Economy and Blue Finance. SDG 14 has ten goals that must be met. Overfishing is one of the main problems in the marine industry as a result of poor sea management. It is estimated that the fishing business causes $50 billion in annual economic losses worldwide. Poor ocean management techniques, according to the United Nations Environment Program, are estimated to cost at least $200 billion annually. If no mitigation efforts are taken, climate change would raise the cost of ocean damage by US$322 billion year by 2050. Careful management of this crucial global resource is necessary for a sustainable future.

Notwithstanding the enormous potential for maritime economic growth in Indonesia, the declared contribution of the marine industry to GDP is less than 30%. This figure continues to be modest when measured against Indonesia Blue Economy potential (Conway, 2018; Indonesia.go.id, 2018). Comparatively, the maritime industries of China, South Korea, Japan, and Vietnam each contribute up to 48.5% of the country GDP, while some European nations each contribute around 60%. (indonesia.go.id, 2018). In comparison, it is anticipated that 44% of other capture fisheries are completely fished in 2017 and that 38% of national sea capture fisheries are overfished (excessively fished) (at the maximum catch target limit) (Conway & Sihombing, 2016; Conway, 2018).

Blue financing refers to financial instruments or investments that ensure the conservation of the marine environment and related resources, as well as the enhancement of the Blue Economy. (Shiiba et al., 2021; Pratama et al.,2022). The development of blue funding is thought to be essential for supporting and driving worldwide change toward economic growth consistent with ocean sustainability. (Shiiba et al., 2021). The main goal of this text is to indicate blue financings ability to respond to the challenges of achieving SDG 14, which focuses on the development of the marine and fisheries sector. Based on this purpose, the paper aims to answer the following questions How Blue Finance in Indonesia support the achievement of SDG 14?

II. LITERATURE REVIEW

Sustainable Development Goal (SDG) No. 14
The central theme of the SDG 14 Definition, The Sea, is Conserve and sustainably use oceans, seas, and marine resources for sustainable development also known as Life Below. Ten goals that make up SDG 14 give further direction on the priorities for effective implementation. They include regulating ocean acidification, safeguarding coastal ecosystems, reducing the effects of land-based pollution on the seas, and conserving marine life, especially fisheries. Explain the SDG 14 target and indication in the table below;

Table 1: SDG 14 Target and Indicator

Goal	Target
14.1	By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.
14.2	By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans.
14.3	Minimise and address the impacts of oceans acidification, including through enhanced scientific cooperation at all levels.
14.4	By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plants, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.
14.5	By 2020, conserve at least 10% of coastal and marine areas, consistent with national and international law and based on the best available scientific information.
14.6	By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, and eliminate subsidies that contribute to IUU fishing, and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the WTO fisheries subsidies negotiation.

14.7	By 2030, increase the economic benefits to SIDS and LDCs from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism.
14.A	Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account IOC criteria and guidelines on the transfer of marine technology to improve ocean health and enhance the contribution of marine biodiversity to the development of developing countries, in particular, SIDS and LDCs.
14.B	Provide access for small-scale artisanal fishers to marine resources and markets.
14.C	Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want.

Blue Economy

The term Blue Economy first appeared in 2012 at the Rio+20 Conference, also known as the United Nations Conference on Sustainable Development (UNCSD), but it can be traced back to the 1992 Rio Earth Summit (United Nation, 1987). A Blue Economy is an ocean-based economy that aims to promote good well-being and social justice while significantly lowering environmental risk and ecological scarcity, according to a United Nations (UN) concept paper published in 2014. UNCTAD (2014). According to the World Bank (2015), the Blue Economy refers to the sustainable use of marine resources for economic development, expanded livelihoods, and job creation while preserving the health of marine ecosystems. A Blue Economy, on the other hand, is defined by The World Wildlife Fun (2015) as an ocean-based economy:

1. Contribute to current and future generations food security, poverty eradication, livelihoods, incomes, jobs, health, safety, equality, and political stability.
2. Ensure the diversity, productivity, resilience, core functions, and intrinsic value of marine ecosystems and the natural capital that supports them are restored, protected, and sustained.
3. To ensure long-term economic and social stability while remaining within the boundaries of one planet, rely on clean technologies, renewable energy, and circular material flows (WWF Baltic Ecoregion Program, 2015).

The fact that the Blue Economy is a fluid notion that is used differently in different situations and by different players is one widely accepted aspect of it (Eikeset et al., 2018). The contested discourse around the Blue Economy is inherently characterized by the conflicting aims, values, and worldviews of the individuals involved. The business sector, which is quickly adopting Blue Economy concepts and ideas to understand the potential of investing in and exploring sea-based resources and services, is one of the key areas of concentration.

Blue Finance to Development The Blue Economy

The focus of ocean finance, sometimes known as Blue Finance, is on the supply and demand of capital for investments in ocean-related business ventures. The focus of ocean finance is on the supply and demand of money for funding investments in governance and economic activities involving the ocean. To ensure the long-term viability of the ocean economy, financial resources must be made available for investments in ocean-related economic activity and governance. Funding must be adequate and directed toward sustainability initiatives and governance for the ocean economy to succeed. If the Blue Economy is to succeed, ocean financing must be adequate and focused on the responsible use and management of the ocean and its resources. Generating, investing, aligning, and accounting for financial capital are critical components of Blue Finance. (Sumaila et al., 2021.)

In order to establish suitable financial mechanisms to ensure a consistent input of financial resources while luring new investment, Blue Finance refers to financial instruments or investments that ensure the conservation of the marine environment and related resources, as well as the growth of the Blue Economy (Shiiba et al., 2021). It is believed that expanding Blue Finance will be essential in accelerating the transition of the world economy toward one that is consistent with ocean sustainability (Shiiba et al., 2021). Private placements, securitizations, and covered bonds are just a few of the several ways that blue financing may be implemented

Figure 1: Type of Capital & Investment

Capital types and sources	
Natural capital	Ecosystem services, natural infrastructure
Commodities	Fisheries, aquaculture, marine bioprospecting
Marine and coastal development	Nature-based infrastructure, coastal and marine ecotourism, maritime transportation, renewables (wind, tidal, wave, solar), waste management
Investment models	
Impact-only models	Grants, corporate social responsibility (CSR) investment
Debt models	Microfinance loan, revolving loan fund, bank loans, conservation impact bonds, project bonds, sovereign bonds
Hybrid models	Conservation Trust Funds, carbon credit schemes, debt swaps
Equity models	Impact investing, seed financing, crowd investment

(Source: FOA, 2020)

Friends of Ocean Action (2020) summarizes the types of capital and investment models commonly practiced in blue financing (Figure 1). There is still a scarcity of appropriate literature on the phenomenon of Blue Finance practices, as well as the opportunities and challenges for sustainable ocean-based development. Several studies acknowledge that encouraging private financiers to finance ocean sustainability is a high priority. However, there are no internationally or domestically agreed financing mechanisms that encourage private sector engagement and public-private partnerships (Shiiba et al., 2021).

III. METHODS

The main method used in this study is a qualitative method. The researchers role is to obtain a holistic (systemic, comprehensive, and integrated) picture of the context under study, including its social context, how it operates, and various explicit and implicit regulations (M. B. Miles, Huberman, & Saldaa, 2014). The goal of a qualitative methodology is to comprehend the meanings conveyed by respondents to the phenomenon under investigation (Bandur, 2019). This approach was chosen in order to better understand the role of sustainable Blue Finance in meeting the needs of SDG 14.

According to Moleong (2006), when conducting qualitative research processes, an effort is made to elicit descriptive information from the subjects and the observed behaviour in the form of written or spoken words. The goal of qualitative research is to present an issue, circumstance, or event in its true context. The research findings are focused on and emphasized in an effort to present an accurate and in-depth assessment of the current state of the study object of interest.

The data collection process is carried out to find the essence of the phenomenon that is the subject of the study through desk study and interview. Desk study in term of material such as pictures and charts and documentation related SDG 14 In Indonesia and Worldwide. Interviewed was conduct with respondent from Ministry of National Planning that involve with SDGs 14 activities in National level. The research findings are directed and emphasized to provide an objective and detailed description of the object of study actual situation.

IV. RESULT AND DISCUSSION

Green to Blue Economy in Indonesia

in order to identify challenges and useful lessons for implementing Blue Finance, it is critical to understand the journey and milestones of sustainable finance in Indonesia more broadly. Many Indonesian sustainable finance initiatives serve as the foundation for Blue Finance tools, mechanisms, or instruments. Sustainable finance practices in other sectors, such as forestry, landscape (land), and energy (green sector), as well as sustainable banking, can serve as a useful foundation for developing Blue Finance. A green economy, according to the United Nations Environment Program (UNEP), is one that increases human well-being and social equity while

significantly reducing environmental risk and ecological scarcity (UNEP, 2011, 2019). The green economy is also one of the factors that can improve human living conditions and social justice, as well as significantly reduce environmental risks and scarcity of environmental resources. According to Bappenas book, Strategic Initiative for the Development of the Green Economy Concept, a green economy is one that continues to grow, creates jobs, and reduces poverty while protecting the environment, particularly ecosystem functions, and prioritizing social justice.

A green economy growth strategy also allows a country to advance its national development agenda in a strong local context while also pursuing joint implementation of the Paris Climate Agreements common global goals. As a densely populated country and biodiversity hotspot, Indonesia is expected to be one of the top five world economies by 2050. (PWC, 2017).

At the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) in Paris in 2015, President Joko Widodo stated Indonesia commitment to reduce greenhouse gas (GHG) emissions by 29% under Business as Usual (BaU) by 2030 and up to 41% with international assistance. The UNFCCC COP21/CMP11 meeting in 2015 was the culmination of discussions that began at COP-17 in Durban in 2011 to negotiate a new regime in dealing with post-2020 climate change that applies to UNFCCC Party States under the principle of Common but differentiated responsibility and respective capability (CBDR-RC) (Ministry of Environment and Forestry, 2017), but has failed to achieve the State Parties agreed upon targets.

Following President Joko Widodo commitment to COP-21, the Paris Agreement was ratified by Law No. 16 of 2016. Almost simultaneously, Indonesia submitted to the UNFCCC Secretariat the Nationally Determined Contribution (NDC) document, which was a further elaboration of and replaced the Intended Nationally Determined Contribution (INDC) document submitted by Indonesia prior to COP-21 Paris. As part of its pre-2020 commitment, Indonesia has been making voluntary efforts to reduce GHG emissions since 2020, with a GHG emission reduction target of 26% from BaU in 2020, and up to 41% if international support is obtained.

Indonesia has made significant economic progress since ratifying the Paris Agreement by implementing a sustainable economy and a green economy. Indonesia real GDP is expected to grow by USD 5.163 trillion in 2030, putting the country among the top five most powerful economies in the world. This is consistent with Indonesia 2045 Vision, according to which the country is expected to become a high-income country in 2036 and have the fifth-largest GDP in 2045. This notable economic progress has been accompanied by an increase in living standards, as evidenced by a steady increase in real GDP per capita, as well as a massive reduction in poverty from 23.4% in 1999 to 9.78% by 2020, qualifying the country for upper middle-class status (Bappenas, 2017).

Unfortunately, nearly half of Indonesia forest cover has been lost in the last 50 years, and Indonesia is now the second-largest contributor of plastic waste to the oceans, trailing only China. Aside from environmental concerns, Indonesia is dealing with economic inequality, with income inequality gradually increasing since 2002, with the Gini Ratio rising from 0.34 in 2002 to 0.38 in 2020. (Bappenas, 2017).

This strengthens the argument that the terrestrial sector is not the only one that must be considered in terms of economic potential and sustainability, given that water covers 72% of the earth surface. As a result, the blue sector, namely maritime, marine, and fisheries, must also be considered. Global leaders convened the Rio+20 Conference in 2012 to combine the green economy and Blue Economy paradigms to create a Blue Green Economy based on the premise that the oceans influence all-natural cycles and are involved directly or indirectly in all economic sectors. As a result, the blue component cannot be overlooked in order to successfully transition to a greener and more sustainable global economy. The Rio+20 Conference declared a green and Blue Economy, which includes wastewater infrastructure, pollution prevention or plastic recycling, fisheries infrastructure, and sea transportation. Table 2 shows the milestone of Blue Financing In Indonesia;

Table 2: Milestone of Green & Blue Financing in Indonesia

Year	Note
1998	For large or high-risk loans, Bank Indonesia Law 10/1998 requires banks to conduct an Environmental Impact Assessment (AMDAL). This law serves as the foundation and initial arrangement for financial institutions' obligations to consider the environmental impact of movement or economic activity.
2005	Later, Regulation No.7/2/PBI/2005 concerning Asset Quality Rating for Commercial Banks was issued, which further developed the regulation. This regulation requires banks to consider the debtor's steps taken to preserve the environment when evaluating the debtor's business prospects.
2010	A Joint Agreement on Coordination of Increasing Banking Roles in Environmental Preservation and

Year	Note
	Management was signed by the Governor of Bank Indonesia and the Ministry of Environment (KLH). Bank Indonesia and KLH agreed on a joint work program for 2011-2013 that includes a number of seminars and workshops for bankers on environmental risk assessment and green finance prospects, joint green finance research, and the development of practical steps to promote green finance.
2015	The Financial Services Authority (OJK), in collaboration with the Ministry of Maritime Affairs and Fisheries, held the JARING (Reach, Synergy, and Guidelines) Program once more.
2016	The Sustainable Finance Information Center has been established. The information center is an integrated Sustainable Finance information system on green lending models, new financial products, and supervisory procedures provided by relevant ministries and institutions.
2017	OJK implemented two new regulations: 1. POJK (OJK Regulation) No. 51/POJK.03/2017 (Sustainability Provisions / OJK Regulation on Sustainability-P51/2017). 2. POJK (OJK Regulation) No. 60/POJK.04/2017 Green Bond/OJK Regulation on Green Bonds issued by private banks or financial institutions.
2018	▪ Introduction of POJK Implementation Technical Guidelines No. 51 of 2017 For Banks. ▪ Establishment of the First Mover Bank for the Indonesian Sustainable Finance Initiative (IKBI) or the Indonesian Sustainable Finance Initiative. ▪ OJK introduced the Blended Finance Scheme which provides sustainable financing options. ▪ The Government of Indonesia issued a Green Bond/Sukuk Framework
2019	▪ Indonesia becomes the first to take the lead in developing-country sustainable finance initiatives. ▪ Issuance of the second sovereign green sukuk ($750 million). ▪ The world's first Green Retail Sukuk is issued (Ministry of Finance, 2021) ▪ The implementation of OJK Regulation No. 51/2017 requires BUKU 3 and BUKU 4 banks, as well as foreign banks, to report on sustainable activities in an Annual Report or Sustainability Report. ▪ Bank action plans are monitored. ▪ Bappenas and PT. SMI signed an agreement to accelerate the achievement of SDG 14
2020	▪ The Minister of National Development Planning/Bappenas and the MMAF sign a Memorandum of Understanding on Collaboration to Accelerate the Achievement of SDG in the Marine and Fisheries Sector Through Sustainable Blue Financing Support.
2021	• Documents Published by Bappenas and the OECD; Blue Economy Development Framework for Indonesia's Economic Transformation ▪ The Republic of Indonesia SDG Government Securities Framework has been launched.
2022	▪ The Indonesian Green Taxonomy version 1.0 is published by OJK. ▪ Coordinating Ministry of Maritime and Investments Affairs, with the assistance of UNDP, issued the **Blue Financing Strategic Document**. ▪ The Blue Finance Instrument Development Guideline document is published by Bappenas-ICCTF. ▪ The World Bank and Bappenas-ICCTF issued Blue Finance Policy Notes.

(Source: Indonesia Blue Finance Policy Note, 2022 & processed by author, 2023)

Following implementation and evaluation, the blue sector, which has also become part of the green, has not been fully highlighted. There are still many specific sectors in the blue sector that have not been optimally focused, such as marine conservation, sustainable fisheries, marine tourism, and marine renewable energy, which has given rise to the concept of the Blue Economy, which was discussed at the Sustainable Blue Economy Conference in Bali in 2018. Development of long-term Blue Finance in Indonesia is a lengthy process, but the government is constantly pursuing and launching various Blue Economy development projects and programs. This is done, of course, so that the Indonesian marine system can be better managed and processed for the sake of peoples lives and the States development.

Document Strategic Blue Economy & Blue Finance in Indonesia

As of 2022, Indonesia has five documents strategic regarding Blue Economy and Blue Finance as follow;

1. Republic of Indonesia SDGs Government Securities Framework (2022.
   Ministry of Finance Republic Indonesia); The Framework was developed by the Ministry of Finance (MoF) in collaboration with the Ministry of National Development Planning (BAPPENAS) and the Coordinating Ministry of Maritime and Investment Affairs (CMMIA), with joint advisory support from UNDP, HSBC, and Credit Agricole. The Framework was verified as part of a globally recognized external review process by the Centre for International Climate and Environmental Research (CICERO) and the International Institute for Social Development (IISD), and it was classified as Medium Green, citing its strong outlook for medium-to-long-term low-carbon development, and the overall governance structure was given a Good rating. The Republic of Indonesia SDG Government Securities Framework specifies the different types of Eligible SDG Expenditures that can be funded or refinanced.

2. Blue Economy Development Framework. In 2021, BAPPENAS launched the Blue Economy Development Framework for Indonesia Economic Transformation in collaboration with the OECD. The framework is intended to improve policy formulation and implementation of the Blue Economy in Indonesia. It

emphasizes long-term development and innovative advancements in the Blue Economy, while highlighting the potential benefits of various marine and coastal-based economic activities. The framework acknowledges the challenges of limited institutional and technological capacities and social and economic trade-offs that come with transitioning to a Blue Economy. It emphasizes the importance of integrating different funding sources and partnerships to support innovation in the Blue Economy. The document is the first of its kind in Indonesia, and it will be a valuable resource for policy planning and implementation related to the Blue Economy, as well as for fostering collaboration among relevant stakeholders. (PPN/Bappenas, 2021).

3. Blue Financing Strategic Document.

This publication was published in 2022 by CMMIA with assistance from the UNDP and the Archipelagic & Island States Forum. The Blue Finance Strategic Document aims to unleash the economic potential of marine-based economic activities by identifying appropriate financial instruments that are relevant for public and private investment. Financial instruments include blue bonds (sukuk) trust fund structures, credit lines for blue projects or SMEs in blue sectors from the banking sector, blended finance that targets the blue sector, impact investment, a social and development impact bond, insurance products and crowdfunding. National and international standards for safeguarding blue investments ensure environmental and social risks can be effectively minimized. The foundations for the eligibility requirements for choosing a Blue Project are one of the goals of the Blue Finance Strategy. The eight sectors that the strategy identified as eligible were also categorized according to their relevance and impact in the three dimensions of sustainable development, i.e., the environment, economy, and social factors, in order to prioritize funding for investments with the highest positive impact. High relevance industries come under the Navy-Blue category, giving investors a clear indication that funding is a top priority. They cover such things as waste management, sustainably fished, marine and coastal protection, and ecosystem and biodiversity restoration. Sectors designated as Sapphire Blue are those that are somewhat relevant, such as disaster management. (CMMIA;UNDP, 2022)

4. Indonesia Blue Finance Policy Note.

This document launched by BAPPENAS in 2022 with supported by The World Bank. The document elaborate guidance and recommendations for the Indonesian government to develop sustainable Blue Finance policies. In this document, identifies the significant potential of Indonesia Blue Economy sectors such as fisheries, tourism, and marine energy. However, the sector faces many challenges, such as unsustainable resource management, climate change, and limited access to financing. The document proposes several Blue Finance solutions to help overcome these challenges, including the development of financial instruments such as blue bonds/sukuk, the use of funds from private investors and international financial institutions, and the development of insurance mechanisms to protect fishermen and salt farmers. This book also provides several policy recommendations to support the development of Blue Finance, such as strengthening regulations and policies to reduce environmental and social risks, improving transparency and accountability in the use of funds, and building institutional capacity and human resources to support the development of Blue Finance in Indonesia. The policy document is expected to help the Indonesian government develop a sustainable Blue Finance strategy and increase access to the financing needed to support the development of the Blue Economy sector in Indonesia. This document proposes to establish a Blue Finance Advisory Committee in Indonesia.

5. Blue Finance Instrument Development Guideline.

Blue Finance Instruments Development Guideline is a guide published Bappenas in 2022. This guideline aims to provide guidance and direction for the development of financial instruments that can support sustainable blue economic development in Indonesia. The guideline contains information about the types of financial instruments that can be used to support blue economic development, including traditional financial instruments and innovative financial instruments such as blue bonds/sukuk. The guideline also provides case examples from other countries on the use of financial instruments in supporting the Blue Economy sector. In addition, the guideline also discusses the challenges and opportunities in developing financial instruments to support blue economic development in Indonesia, such as the lack of accurate and integrated data, the lack of capacity and experience in developing financial instruments, as well as regulatory and policy issues. The guideline provides several recommendations to overcome these challenges, such as strengthening collaboration among stakeholders and increasing transparency and accountability in the use of financial instruments. This document is expected to be a reference for the government, private sector, and other stakeholders in developing and implementing financial instruments to support blue economic development in Indonesia.

Financing Gaps of SDGs in Indonesia

According to Bappenas (2019), Indonesia requires an investment of IDR 7.721 trillion in a business-as-usual scenario up to IDR 10.397 trillion in a high scenario until 2030 to achieve 17 (seventeen) SDG. According to UNDP (2019), IDR. 3,545 trillion, or the equivalent of US$ 247 billion, is required for the implementation of climate change mitigation by 2030. This estimate will change and grow as a result of the Covid-19 pandemic crisis that has afflicted Indonesia and the rest of the world, as well as the need for recovery programs. economy, which is not insignificant to the Indonesian government.

As a result, it is necessary to seek alternative funding and financing for the development of the blue economy, which is not limited to the Stated Budget (APBN) or Province Budget (APBD). This is what motivates BAPPENAS to look for innovative alternatives to changing the economy. Various initiatives necessitate the development of larger-scale infrastructure, not just for APBN, but also for other stakeholders, such as Private, philanthropist, CSR, and a variety of other initiatives. Because of this, the effort to establish Blue Economy has become a very viable option in terms of accelerating economic growth.

The government sector continues to play a significant role in SDG investment. This role will gradually diminish as the role of non-government organizations grows, from 63.5% in 2020 to 58% in 2030. (High scenario). In the high intervention scenario, on the other hand, the role of non-government will increase from 38.2% (2020-2024) to 42.3% (2025-2030) in SDG investment, namely IDR 7,638 trillion (2020-2024) to IDR 20.197 trillion in 2025-2030. (Bappenas, 2019). One of the options taken by the GoI to close the funding gap is by issuing SDG Bonds in 2021 and 2022 worth USD 500 million dollars and IDR 3.2 trillion.

Blue Financing in Answering SDG 14 in Indonesia

The SDGs Government Securities framework of the SDG explains several sectors, sub-sectors, and eligible projects in various Blue sectors. Several important factors from the environmental, economic, and social dimensions are considered during the sector selection process. The table below summarizes the division of sectors, sub-sectors, and Blue projects:

Table 3: Blue Sector Scope & Potential Project

Sector	Sub-sector	Project Form
High Relevance		
Waste management	o Marine Debris Management o Waste to Energy o Water Waste Management	o Garbage Collection o Plastic waste is converted into infrastructure materials
Protection and restoration of biodiversity and ecosystems of marine and coastal areas	o Mangroves o Seagrass beds and coral reefs o Ecosystem Preservation o High seas activities o Conservation and o Research on migration o Species on the high seas	o Expansion and management of Marine Protected Areas (MPAs) o Replanting of mangroves and seagrasses o Coral reef rehabilitation o Abrasion mitigation (Buildings with Nature)
Sustainable Fisheries	o Sustainable fisheries o Sustainable aquaculture o Food security o Food processing	o Fish stock rebuilder o Promotion of practices and policies throughout o Fisheries value chains (eg fish o Processing equipment, fish feed o Supply, packaging, marketing, & sustainable distribution o Investment in goods and services for o Ensure effective fisheries management o Monitoring in protected areas and o Enforcement of regulations against IUU fishing
Moderate Relevance		
Disaster management and risk reduction	o Infrastructure research to reduce disaster risk o Research into marine disaster management (mitigation, preparedness, response, recovery)	o Disaster risk reduction o Disaster mitigation program o Disaster preparedness program o Development of disaster risk reduction infrastructure
Marine renewable energy	o Renewable energy for small islands	o Development of wind, water, river, and tidal

Sector	Sub-sector	Project Form
	and coastal communities o Energy transmission from renewable resources o Installation of solar-powered lights in coastal areas for consumption and ship navigation.	power plants in coastal/sea areas o Marine thermal energy conversion plant
Ecotourism	o Ecotourism in coastal/sea areas	o Coastal/sea areas specially designated for ecotourism development o Eco-friendly hotels/homestays and services in coastal/sea areas

Sources: Republic of Indonesia SDGs Government Securities Framework, 2021

There are strategies related to marine, fishery, and coastal issues in the current National Medium Term Development Plan, which runs from 2020 to 2024. This is a 5-year plan with less than two years to complete. However, there is a significant gap between the current funding that can be provided by APBN and APBD to meet targets for all sectors. This is because current government funds, which total approximately 1.64 trillion US dollars, can only finance approximately 20-25% of the total budget required to meet development targets. Including the marine and fishing industries. As a result, we must find new and creative ways to close the development gap.

Bappenas has been running the SBFI (Sustainable Blue Financing Initiative) program since 2020. SBFI will use and develop four different types of financial instruments: grants (CSR), debt, equity, and hybrid. Grants and loans will be implemented first in the early stages to stimulate the small and medium circular economy in the project area. When the circular economy works well, it attracts a lot of private and non-public investment. Equities and hybrids will be available as financial instruments. It will integrate programs and financing at all stages to achieve the SBFI objectives of the project. It was explained that, since 2020, Bappenas has been carrying out activities to develop funding concepts for the marine and fisheries sectors through the ICCTF, which is supported by the World Bank. The document is intended to be a companion piece to the Blue Finance Policy Notes Document.

SDG 14 Global Financing

Sustainable Blue Financing is inextricably linked to achieving SDG 14 of Life Below Water. The authors highlight the critical need for funds to achieve SDG 14 in this sub-chapter. The Convention on Biological Diversity (CBD) estimates that the financial needs for the Aichi Target, namely a Strategic Plan for Biodiversity adopted by the CBD Conference of the Parties in accordance with SDG 14 and 15, are between US$ 150 and US$ 440 billion per year, while currently around US$ 52 billion is spent on biodiversity per year. At the 2017 UN Ocean Conference, a total of US$25.5 billion was committed for SDG 14, while several previous studies summarized in Table 2 estimated that the funding requirement for these Goals would average US$174.52 billion per year.

Table 4: Global Financial Require SDG 14

SDG 14 Targets	Resources Required per year
SDG 14.1: Reducing Marine Pollution	US$ 87.3 billion
SDG 14.2: Protect and Restore Ecosystems	US$ 34.1 billion
SDG 14.3: Reduce Ocean Acidity	Not yet known This is because the available data overlaps with the sources required by SDG 13 and SDG 14a
SDG 14.4: Sustainable Fisheries	US$ 28.4 billion
SDG 14.5: Preservation of Coastal and Marine Areas	US$ 5.9 billion
SDG 14.6: End subsidies	US$ 20 billion
SDG 14.7: Increasing Economic Benefits for SIDS and LDCs	Not yet known This is because the available data overlaps with the funding sources required by SDG 14.4
Total Cost :	US$ 155.7 billion

Sources: CBD. (2010)

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SDG 14 Indonesia Financing

In accordance with the Blue Financing Strategic Document by MMAF (2022), the average annual investment required for the marine, maritime, and fisheries sectors is estimated to range between IDR 3.64 trillion and IDR 3,307.21 trillion per year, depending on the Blue Economy targeted contribution to national GDP, while the depletion rate of ocean resources occurs annually and gradually increases. Additionally, the total investment required each year is expected to vary between IDR 87.22 trillion and IDR 79,373 trillion. However, based on interviews with all respondents it was stated that there is currently no available data on the figures needed to achieve SDG 14 in Indonesia. This is due to several factors;

1. lack of coordination of multiple stakeholders from different ministries and institutions with regards data financial
2. fragmented economic and financial data
3. deficiency of a proper methodology how to calculate the figures.

In the non-financial aspect, the GoI is currently focusing on achieving two targets related to SDG 14: 14.4.1 (proportion of fish stocks within biologically sustainable levels) and 14.5.1 (coverage of protected areas in relation to marine areas). The respondents suggest that in order to establish the figures needed to achieve SDG 14 in Indonesia, the government needs to set up or extend an institution with a mandate to coordinate all stakeholders involved in SDG 14.By coordinating all stakeholders, the institution will be able to calculate how much funding is needed to achieve SDG 14. This idea agrees with Indonesia Blue Finance Policy Note (2022) that need establish Blue Finance Advisory Committee in order to synergize and coordinate all stakeholder (public, private, philanthropy and people) in Blue Finance activities and financing.

In Indonesia Blue Finance Policy Note (2022;61-63) stated according to the disclosure in the Annual Report or Sustainability Report on Bank BUKU 3 & BUKU 4 from 2017 to 2019, many banks financing (excluding CSR) the marine and fishing industries for about IDR 33 Trillion/USD 2,3 Billion (Table 4). The majority of the banks (BUKU 3 and BUKU 4) supplied finance to micro and small-scale fishers. Banks Transparency on Marine & Fisheries Funding in 2017-2019 (million) in BUKU 4, Bank BNI has the greatest level of transparency on its support of the marine and fisheries industry. Based on the 2019 Sustainability Report, Bank BNIs marine industry loan portfolio has grown year after year, with loan amounts total IDR 16.82 trillion in December 2019 and a default rate of less than 4%. The banks Loan for Poor People (Kredit Usaha Rakyat-KUR) products have the best collectability rate, with a payback rate of 99.1%.

Table 5. Bank Disclosure on Financing on Marine and Fisheries Sector from 2015-2019 (million)

Bank	2017		2018		2019		Total	
	IDR	USD	IDR	USD	IDR	USD	IDR	USD
BUKU 3	6,300,009	450	7,783,060	556	13,443,336	960	27,526,495	1,966
BUKU 4	1,723,507	123	1,770,368	126	1,931,158	138	5, 425,032	388
Total	8,023,606	573	9,553,428	682	15,374,494	1,098	32,951,527	2,354

Sources: Indonesia Blue Finance Policy Note, 2022

The portfolio of BNI in the maritime sector, including marine and fisheries, is shown in table below:

Table 6. Portfolio of Bank BNI on Marine and Fisheries Sector from 2015-2019

	2015	2016	2017	2018	2019	Total
Portfolio	10.38	12.01	15.41	15.24	16.82	69.86
Percentage	14.9%	17.2%	22.1%	21.8%	24.1%	100%

sources: Indonesia Blue Finance Policy Note, 2022

BNI has pledged to constantly developing marine and fisheries ecosystems, including upstream and downstream, in its 2020 Annual Report. BNI collaborates with the CMMAI and the Indonesian Fisheries Perum (Perindo) to deliver funds in July 2020. BNI is a UNEP FI member that follows the equator principle. BNI distributed IDR 317 billion (USD 22.7 million) in finance for sub-sectors of the small segment fisheries processing industry in 2020. Several innovations from BNI for the fisheries and marine sector includes:

1. Fishermans card Kusuka. This is a multifunction card for BNIs customers from the fishermen communities, that functions as an identity card that enables them to access various BNIs financial services.
2. BNI also work together with FishON and Aruna in developing tools that help fishermen in finding the good fishing spot using technology, as well as in providing buyers and the marketplace for fish products.

Meanwhile, the number of companies in the marine and fisheries sector listed on the Indonesian stock market was below 10 companies until 2020 (Pratama et al., 2022), which is almost equal to 0.6% of the total number of companies listed on the Indonesia Stock Exchange and their stock prices (Wanta & Gunawan, 2021). It means, GoI or OJK give more support or provide incentive and governance in order to attract company interest in fisheries (Blue) business.

V. CONCLUSION

Indonesia, as a maritime country, has a high natural marine and fishery potential. Nonetheless, the process of absorbing Indonesia marine economic potential remains inadequate. Indonesia urgently needs to improve its ability to absorb the potential of the Blue Economy in order to advance the welfare and prosperity of its people. This capacity development can be realized through long-term blue financing. As of 2022, Indonesia already have 5 documents strategic regarding Blue Economy and Blue Finance there are SDGs Government Securities Framework, Blue Economy Development Framework, Blue Financing Strategic Document, Indonesia Blue Finance Policy Note and Blue Finance Instrument Development Guideline. Those documents could become a guide for all stakeholder involve in Blue Economy and Finance in Indonesia

In term of finance aspect to achieve SDG 14 (Blue Finance) there are no figures available regarding the ideal financial needs to achieve goal the goal yet. This is due to several factors; First lack of coordination of multiple stakeholders from different ministries and institutions with regards data financial. Second, fragmented economic and financial data. Third, deficiency of a proper methodology how to calculate the figures.

Private sector especially Bank, already involve to financing blue sector (fisheries). BNI is the bank with massive provide financing for blue aspect meanwhile private institution register in Indonesia Stock Exchange is only 0,6%. It means, GoI or OJK give more support or provide incentive and governance in order to attract company interest in fisheries (blue) business. in order to achieve SDG 14, GoI need more effort to collaborate and synergize with all stakeholders (Public, Private, Philanthropy and People) in term of activities of financing to accelerate the establishment of Blue Economy in Indonesia. Establish the Blue Finance Advisory Committee in Government should one option to synergize and coordinate all stakeholder in Blue Economy and finance to achieve SDG 14 target. Further research suggests to create framework of governance of Blue Finance in Indonesia in term of public financing and blue taxonomy finance with regards private institution.

The vast potential of Indonesia's Blue Economy must be properly managed and directed in its development. As the main policymaker in implementing the national economy to develop a blue economy, this author can serve as a reference and provide advice to the Indonesian government. The development of the blue economy will be one of the mainlands used by the Indonesian government to increase state revenue other than taxes.

This paper has implications for becoming an important reference in the process of establishing blue financing in Indonesia, particularly in fulfilling one of SDG 14's strategic roles and figures that GoI needed to achieve a target in 2030. Theoretically, blue financing is not limited to funding and developing the maritime sector in Indonesia to maintain the maritime ecosystem of marine resources, but this paper has also become an important reference in the government's efforts to manage marine resources and increase state revenues. In terms of management, this paper can be viewed as an early stage in the development of a strategic governance structure of collaboration between institutions and all stakeholders especially from both the public and private sectors.

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