

OCEAN ACCOUNTING  
IMPLEMENTATION ROADMAP

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## EXECUTIVE SUMMARY

Vietnam's sea has great potential for socio-economic development. Over the years, the marine economy has made important contributions to the national economy (about 49.5% of the country's total GDP, 13% in 2013), but the scale of development is not commensurate with the potential. The marine natural resources and environment is being depleted at an alarming rate.

The Central Party in October 2018 adopted the Resolution on Sustainable Development of Blue Economy. This has an overarching goal of enhancing the sustainable socio-economic development and environmental protection in marine and coastal areas and islands with the direction of development of a society with the transition to the sea. The Resolution recognizes that it should ensure the ecological balance, harmonize the linkages between conservation and development, and bridge territorial, coastal areas and islands. It also sets targets to key priority sectors such as sea and island tourism, maritime economy, petrol and other resource exploitation, aquaculture, shipbuilding industry, and renewable energy. MONRE is currently developing proposal on development of Blue Economy modes towards marine sustainable development to implement the strategy of sustainable development of Vietnam's marine economy to 2030, with a vision to 2045 which supposed to submit to Prime Minister for approval by 2022.

Ocean accounts organize ocean data (social, environmental, economic) into a common framework using the same structure as national accounts maintained by the National Statistical Offices or Finance Ministries. These provide the means to measure progress towards growth and sustainability of the ocean economy beyond Gross Domestic Product (GDP), in line with Sustainable Development Goals 14, 15.9 and 17.19 as well as international statistical standards. In addition, ocean accounts provide a common information infrastructure for ocean development policy, marine spatial planning, integrated environmental management, and international reporting including but not limited to the Sustainable Development Goals, Aichi Biodiversity Targets under the Convention on Biological Diversity and the Paris Agreement on Climate Change.

A comprehensive sequence of ocean accounts enables countries to monitor three critical trends: (1) changes in ocean wealth, including produced assets (e.g. ports) and non-produced assets (e.g. mangroves, coral reefs); (2) ocean-related income and welfare for different groups of people (e.g. income from fisheries for local communities); (3) ocean-based economic production (e.g. GDP from ocean-related sectors). Change in ocean wealth, not GDP, is the most important indicator of sustainability.

Monitoring these trends can be addressed by developing ocean accounting system. To support this, the Ocean Account Implementation proposal identify the priority accounts and timeline for development. The key accounts recommended are: (i) physical asset account; (ii) Flows to economy; (iii) Flow to environment and (iv) Governance

The requirements for implementation of the ocean account are: (a) Awareness-raising and capacity-building; (b) Institutional strengthening and collaboration; (c) Data collection and generation; (d) Planning, monitoring and assessment; and (e) Establishment of National Platform on ocean accounting.

## I. BACKGROUND

Vietnam's sea has great potential for socio-economic development. Over the past few years, marine economy has made significant contributions to the national economy (about 49.5% of the country's total GDP, 13% in 2013), but the scale of development is not commensurate with the potential and “natural capital” of the sea which suffers from depletion at an alarming rate.

Vietnam has a long coastline of over 3,000 km and an exclusive economic zone and continental shelf three times larger than its land area, which is home to important ecosystems and rich resources. Over the past years, the management, exploitation and use of marine and island resources have greatly contributed to the national socio-economic development. However, the management of marine and island resources still mainly relies on the sector-based approach, while the exploitation and use have not yet been based on a comprehensive analysis of functions of each marine area. There remains a lack of harmony of benefits of stakeholders in the exploitation and use of resources in the same marine area. While activities on the sea are interrelated and interacting, the sector-based management, in some cases, seeks to maximize benefits for individual sectors without considering the exploitation, use and protection of marine and island resources and environment as a whole. Therefore, this management approach has affected overall development and caused some problems such as deterioration of resources, especially renewable ones, environmental pollution, serious ecosystem damage, and depletion of living resources (Vu Si Tuan, 2017).

It can be seen that Vietnam's marine economy is not sustainable and the potential of marine resources has not been promoted. The largest contribution to the marine economy is oil and gas extraction, an industry based on the extraction of non-renewable resources. However, currently, oil and gas production is on the decline due to the depletion of resources and increasingly difficult exploitation conditions. Marine economic sectors that use renewable resources such as aquaculture, fishing, tourism and marine resorts have only made modest contribution. Compared with other countries in the region, especially Thailand, revenue from sea tourism in Vietnam is still much lower.

Pollution of the marine environment is still increasing while marine conservation remains limited. The area of marine protected areas is still very small, only about 0.67% of the sea area is in the territorial sea and is far from meeting Vietnam's commitment in implementation of the Aichi goals (CBD, 1992). Management of many marine protected areas is still inefficient, so the existing marine protected areas have not made important changes in the restoration and regeneration of aquatic resources.

Policy and legal framework for marine economic development has not been synchronized to regulate marine economic development activities. There still remains the lack of awareness of the officials and the public in effective and sustainable development of the marine economy. The concept of a blue economy is not widely understood and applied uniformly in Vietnam. Disaster prevention planning is not synchronized and natural disasters occur frequently, resulting in considerable damage to the economy.

### **1.1 Growth drivers from coastal provinces**

According to data of Ministry of Planning and Investment, over the past 10 years (2008-2017), the gross regional product (GRDP) of coastal localities has grown at an average rate of 7.5%/year, higher than that of overall growth rate of the whole country (the whole country increased by 6%/year). In 2017, GRDP of coastal localities accounted for 60.5% of GDP of the whole country, GRDP per capita reached VND 64.9 million, higher than the national average of VND 53.5 million. In which, some localities have high GRDP per capita such as Ba Ria-Vung Tau (more than 225 million VND), Quang Ninh (more than 90 million VND), Da Nang (more than 70 million VND).

A number of prioritized marine economic sectors have developed strongly, contributing to economic growth, such as: development of sea and island tourism; exploiting and processing aquatic resources; coastal economic zones; Transport systems of coastal localities (roads, airports, seaports, fishing ports...).

The coastal localities have actively attracted investment in the construction and development of many new and modern coastal tourist zones, attracting a large number of domestic and international tourists. There are quite a few investment projects in high-class sea resorts, coastal sports and entertainment resorts with capital from 500 million USD to 1 billion USD. Along the country's coastline, chains of modern tourist resorts and resorts of international standards (4-5 stars) have been constructed in coastal localities. A number of popular marine tourism destinations in the region, such as: Van Don, Da Nang, Phan Thiet, Phu Quoc... have been constructed, attracting millions of international tourists every year. Sea and island tourism currently contributes about 70% of the total annual revenue to the country's tourism industry.

Policies on supporting fishermen in fishing and offshore fishing vessels building have created positive impacts. The annual production of seafood has increased rapidly and continuously, from 2006 to 2017, the output has increased from 1.8 million tons to 3.2 million tons. Seafood processing enterprises have increased rapidly in both quantity and product quality. Up to now, there are more than 620 industrial-scale seafood processing

establishments, of which 415 processing factories have meet the standards for exporting to markets with high requirements for quality and food safety (Japan, US, EU...).

Currently, there are 17 coastal economic zones (EZs) established nationwide with a total area of land and sea surface of nearly 845,000 ha. By the end of 2017, coastal economic zones have attracted more than 390 foreign investment projects with a total registered investment of 45.5 billion USD, realized investment capital reached 26.5 billion USD and 1,240 domestic investment projects with total investment capital of 805,000 billion VND, realized investment capital reached 323.6 trillion VND. Some EZs such as Nghi Son, Vung Ang, Chu Lai, Dung Quat... have attracted large investment projects, playing an important role in enhancing the production capacity of the industry in the whole country, and at the same time creating favorable conditions that promote the development of many other industries. In 2017, total revenue of coastal economic zones has reached 14.3 billion USD, more than 7.2 billion USD of export, contributing about 40,000 billion VND to the state budget.

The seaport system has been built and developed in terms of scale, quantity and density in coastal areas. Up to now, the country has 45 seaports, including 3 international gateway ports, international transshipment (Hai Phong, Ba Ria-Vung Tau and Van Phong), 11 regional hub ports, 17 local general ports, in addition, there is a system of specialized ports for concentrated industrial zones and economic zones; a total of 241 wharves, 18 mooring and transshipment zones, total designed capacity of 534.7 million tons/year; there are more than 10 ports that can harbor large vessels from 20,000DWT to more than 40,000DWT. Lach Huyen international gateway and port is under construction, expected capacity of harbouring container ships, general cargo ships up to 50,000DWT at full load and 100,000DWT vessels offload.

The living standards of people in the coastal areas and on the islands have been improved, both materially and spiritually. From 2006 to 2016, income per capita per month in coastal localities has increased 4.8 times; income per capita in 2016 reached 3,035 million VND/person/month (the national average is 3,049 million VND/person/month). In the period 2011-2016, about 4.67 million labours in coastal provinces and cities have been employed, accounting for 49.73% of the total number of jobs created in the country.

## **1.2 Limitations in development of marine economy**

The exploitation and use of marine and coastal resources in many places remains inefficient, especially in terms of exploitation and use of coastal land and sea surface. Economic development coupled with protection of marine resources and conservation of

marine and coastal ecological environment remains limited. Exploiting the potential of aquatic resources is not highly efficient, unsustainable, and the limit of fishing licenses for each sea area is not under control, leading to the gradual depletion of aquatic resources in coastal areas. Coastal ecosystems (mangroves, intertidal zones, coral reefs...) tend to be severely degraded due to the impact of economic activities and construction.

Environmental pollution of coastal seawater, estuaries, pools and bays due to economic and daily activities (industrial production, mining, aquaculture, seaport operations, wastewater from coastal urban areas...) occurs in many places that have not been resolved. Implementation of solutions to respond to climate change and sea level rise has not been synchronized, the effects remain limited.

Some marine economic sectors are prioritized to create breakthroughs but in reality, the extent of development of these sectors is quite low, not commensurate with potential. The seaport economy develops slowly and inefficiently. The seaport system has been invested in construction and developed quite quickly in terms of infrastructure, the total designed capacity of ports in the country has reached 534.7 million tons/year. However, the port management model has not been renewed, port services and logistics services have developed slowly and are not synchronous, many ports have not been fully exploited. The annual volume of goods through the main seaports (managed by the Central Government) increased slowly, in the 2007-2017 period, the average volume was only 5.4%/year.

### 1.3 Ocean Accounting

An Ocean Account is a structured compilation—of consistent and comparable information: maps, data, statistics and indicators—concerning marine and coastal environments, including related social circumstances and economic activity. The general purpose of such accounts is to inform and enable public policy decision-making about oceans, and related analysis and research. The function of these accounts is to provide coherent structures for standardizing fragmented data to produce reliable integrated indicators of interest to policy.

Ocean Accounts are designed to support coherent and holistic reporting and assessment of the wide range of social, economic, and environmental conditions related to oceans.

The general structure and groups of component tables of the Ocean Accounts Framework are illustrated in **Figure 1** below, and can be summarised as follows:

*Ocean assets (natural capital)*: recording the physical status and condition, and monetary value, of marine and coastal environmental assets (natural capital) including minerals and energy, land and soil, coastal timber, aquatic resources, other biological resources, water, and ecosystems including biodiversity.



*Flows to economy* (supply and use of ocean services, including goods): recording inputs from marine and coastal environmental assets to the economy, including ocean-related materials, energy, water, and ecosystem services. These inputs can be recorded in terms of physical quantities and monetary value.

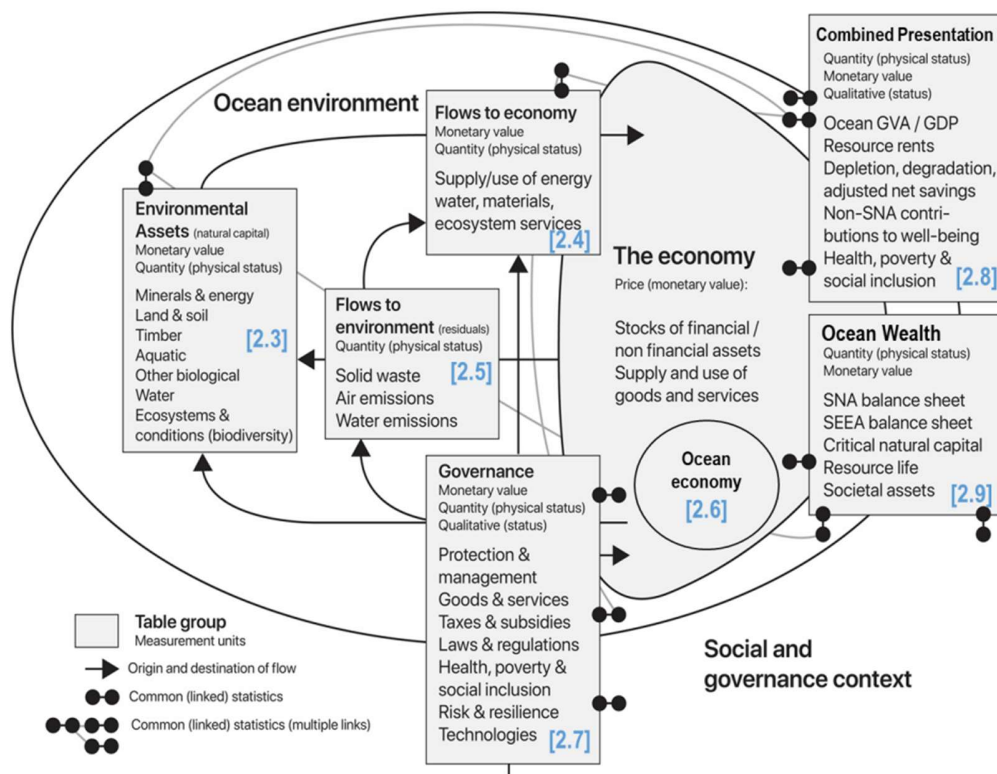
*Flows to environment* (residuals including ecosystem impacts): recording in physical units the outputs from the economy to the ocean environment including: solid waste, air emissions, water emissions, and impacts on ecosystems.

*The ocean economy and the economy*: recording the monetary value of production, consumption, accumulation, imports, and exports in economic sectors deemed relevant to the ocean, as well as non-market services in comparison to the economy of a nation. The economy is reflected in the Ocean Accounts as users of ocean services and suppliers of residuals (pollutants) and activities that affect the ocean.

*Governance*: recording a range of information (physical status, monetary value, and/or qualitative status) concerning collective decision-making about oceans, and the wider social and governance context in which such decisions are made. Information recorded in governance tables includes the status and/or value of: protection and management of ocean environment; the “environmental” goods and services sector of the ocean economy; relevant taxes and subsidies; applicable laws and regulations; health, poverty and social inclusion; risk and resilience; and ocean-related technologies.

*Combined presentation*: recording a “report card” of summary information (physical quantities, monetary value, and/or qualitative status) and indicators concerning the flows of benefits and costs (the latter broadly defined as maintenance and restorations costs, disservices and externalities) between the ocean environment and the economy. This information includes but is not limited to: the share of Gross Value Added / Gross Domestic Product attributable to the ocean economy; ocean resource rents; depletion, degradation and adjusted net savings relevant to oceans; contributions of oceans to human well-being (employment, sense of place) that are not recorded in the SNA; and relevant information concerning health, poverty and social inclusion.

*National Wealth*: recording summary information (in terms of physical quantities, and/or monetary value) concerning a country’s (or other region’s) stock of ocean wealth, including relevant stocks of environmental assets recorded on a SEEA balance sheet; economic/financial assets recorded on an SNA balance sheet; a subset of environmental assets that are defined as “critical” according to agreed criteria; the resource life of environmental assets; and relevant societal assets such as education and health systems



## II. POLICY CONTEXT

With the emphasis on the importance of oceans and coasts to the country, Viet Nam has adopted the ecosystem based integrated coastal and ocean management. For this, the country has been integrating oceans into national and indicative plans and policies. The main legislation framework for sustainable marine resources can be described as below:

- Solution No. 36/NQ/TW dated 22 October 2018 of the Central Committee of the Viet Nam Communist Party on the Promulgation of the Strategy for Sustainable Development of Viet Nam Maritime Economy until 2030, Vision 2045;
- Decision No. 622/QĐ-TTg dated 10 May 2017 of the Prime Minister of Viet Nam on the promulgation of the National Action Plan (NAP) for the Implementation of the 2030 Agenda for Sustainable Development;
- Decision 681/QĐ-TTg dated June 4, 2019 of the Prime Minister on promulgating a roadmap for the implementation of Vietnam's sustainable development goals up to 2030;
- Decision 1393/QĐ-TTg in 2012 of the Prime Minister approving the National Strategy on Green Growth;

- National Strategy for Environmental Protection to 2020, with a vision to 2030, approved in Decision No. 1216/QĐ-TTg dated September 5, 2012 of the Prime Minister;
- Decision No. 1570/QĐ-TTg dated 06 September 2013 of the Prime Minister on the approval of the Strategy for sustainable extraction and use of marine natural resource and protection of marine environment until 2020, vision 2030;
- Decision No. 798/QĐ-TTg dated 11 May 2016 of the Prime Minister of Viet Nam on the approval of the national action plan for the implementation of the strategy for sustainable extract and use of marine natural resources and protection of marine environment until 2020, vision 2030
- Decision No. 2295/QĐ-TTg dated 17 December 2014 on the approval of the Viet Nam National Strategy for Integrated Coastal Management Until 2020, Vision 2030
- Decision No. 1746/QĐ-TTg of Prime Minister on National Action Plan for Management of marine plastic litter by 2030
- Decision No. 914/QĐ-TTg dated 27 May 2016 on the Approval of National Action Plan for Implementation of Viet Nam National Strategy for Integrated Coastal Management Until 2020, Vision 2030
- National Strategy on Biodiversity to 2020, with a vision to 2030, approved in Decision No. 1250/QĐ-TTg dated July 31, 2013 of the Prime Minister;
- Strategy on minerals to 2020, with a vision to 2030, approved in Decision No. 2427/QĐ-TTg dated December 22, 2011 of the Prime Minister;
- National strategy on climate change approved in Decision No. 2139/QĐ-TTg dated December 5, 2011 of the Prime Minister;
- National master plan on biodiversity conservation until 2020, with a vision to 2030, approved in Decision No. 45/QĐ-TTg dated January 8, 2014 of the Prime Minister;
- Law on Planning 2017;
- Law on Environmental Protection 2020;
- Law on Water resources 2012;
- The Law of the Sea of Viet Nam 2012;
- Law on sea and island natural resource and environment 2015;

### III. IMPLEMENTATION ROADMAP

#### III.1. The objectives

- **Support the sustainable use of Viet Nam's ocean assets.** The overriding purpose for developing ocean account implementation proposal is to improve decision making, by providing better information on the linkages between the economy and ocean assets to

decision makers. and thereby contributes to the long term sustainable development of the country.

- **Ensure ocean account development is focused on Government policy priorities and available data.** The ocean account presents the Government’s prioritized programme of action for sustainable marine exploitation in Viet Nam.
- **Attract technical and financial support.** The proposal seeks to attract additional financial resources from the Government domestic budget, as well as international funding, and to avoid potential duplication of activities.

## III.2. Ocean Account Implementation Roadmap

### III.2.1. Selection of Ocean Accounts

The Ocean Account Implementation Roadmap follow the Technical Guideline for Ocean Account prepared by GOAP<sup>1</sup>. The proposal sets out where the initial focus will be directed taking account of the priority policy drivers across the sectors and the feasibility of building the accounts given the data and resources available. The following accounts should be taken in consideration for ocean account implementation proposal:

- Environmental assets (extent and condition of biotic and abiotic components);
- Flows of goods and services (ocean services) from the ocean to the economy;
- Flows from the economy (pollutants, residuals) to the ocean environment;
- “Ocean Economy Satellite Accounts” comprising economic contributions of ocean-related industry sectors;
- Features of ocean governance that shape our impact on the ocean environment and economy;

#### *Physical asset account*

It is important to understand the extent of the assets because the type of asset and its condition influences its capacity to provide services. Ocean assets, including ecosystem assets provide services that are spatially significant and, in some instances, relevant to other assets. Physical asset accounts should be developed for Viet Nam to provide information on the wealth of ocean assets. Following accounts should be taken in consideration for the environmental asset:

- Land
- Timber
- Aquatic

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<sup>1</sup> <https://oceanaccounts.atlassian.net/wiki/spaces/WP/overview>

- Ecosystem extent and conditions

#### *Flows to economy*

Ocean Economy Satellite Accounts calculate the annual production of ocean-related sectors as their contribution to national GDP based on data extracted from the SNA and other economic statistics.

Economic activity that is physically located on the ocean (e.g. shipping, fisheries, offshore oil and gas);

- Economic activity that is physically proximate to the ocean (e.g. coastal tourism, coastal aquaculture);
- Economic sectors, located on land, that depend on natural inputs from the ocean environment, either biotic or abiotic (e.g. fish processing, construction materials);
- Economic activity that provides goods or services to sectors located on the ocean (e.g., shipbuilding, marine engineering)

#### *Flow to environment*

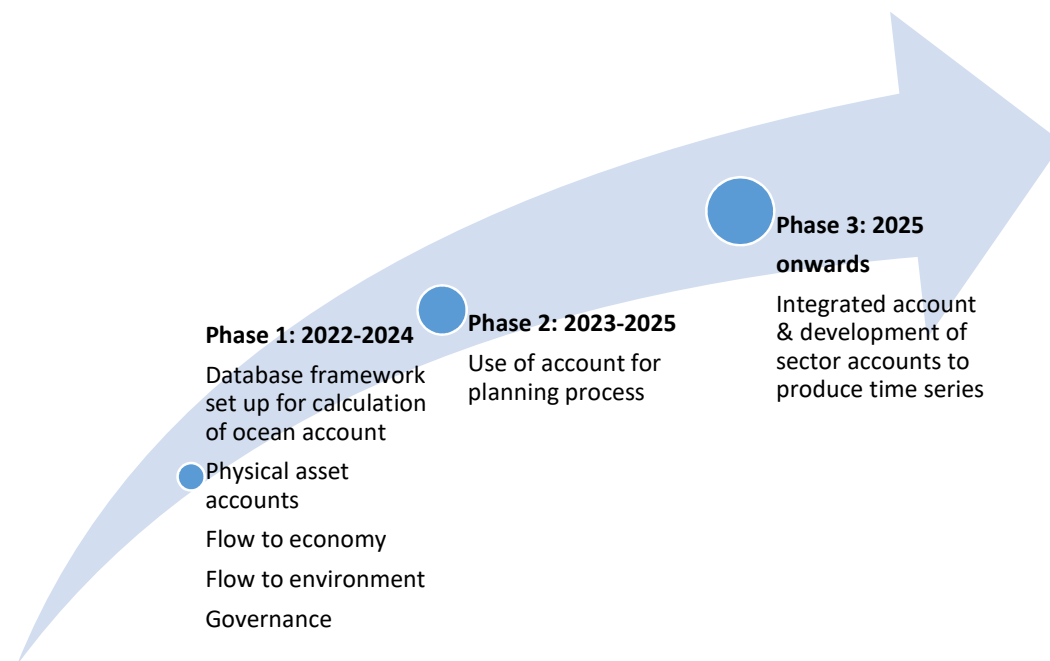
Impact from different sectors should be assessed to understand the impacts to marine environment. Following account should be taken in consideration:

- Solid waste
- Water discharge

#### *Governance*

The experimental Governance Accounts present information on collective decision making about the ocean in combination with the context in which decisions are made

- Actors/institutions: including governments, intergovernmental organisations (IGOs), private entities from commercial and non-profit sectors, and diverse communities within civil society.
- Norms: including treaties, laws, regulations, policies, contractual agreements, technical standards.



**Figure 1: Ocean Account Implementation Proposal**

### III.2.2. Scale of implementation

#### *Upscale the pilot to other coastal provinces of Viet Nam*

Experiences from Quang Ninh province in establishing of ocean account would be replicated in other provinces of Viet Nam. It can be expanded to one central and one South province of Viet Nam (i.e. Da Nang and Kien Giang) in the short time (2022 – 2023) and consider to applied for other coastal provinces of Viet Nam in the long-term (2023 – 2025).

#### *Applied selected account at national level*

Selected account such as physical account (i.e. timber) and flow to economy can be considered to be applied at national level in the long-term (2023 – 2025). Technical guidance for developing of the accounts based on pilots would be required for upscaling in to national level.

### III.3. Requirements

- **Awareness-raising and capacity-building.** Awareness of the importance of blue economy is growing in Viet Nam, but it is still a relatively new area and broad awareness raising programmes are needed at the central and provincial level to build support for ocean accounting initiatives. Further support from GOAP for capacity

building is required to line Agencies (i.e. MONRE, GSO, local authorities, etc.) tailored to the accounts to be developed

- **Institutional strengthening and collaboration.** Collaboration among line Ministries/sectors such as MONRE, MARD, MOC, MOIT, MPI, MOF is crucial to the successful implementation of the Roadmap and institutional strengthening and support is required to ensure effective collaboration and data sharing.
- **Data collection and generation.** A detailed review of data to inform the various accounts is required in order to properly assess the feasibility of generating accounts within the proposed timescales. Where key data is lacking new surveys will need to be initiated. Where necessary new databases will need to be established to support the accounts.
- **Planning, monitoring and assessment.** Detailed workplans for the proposed accounts should be developed supported by monitoring and assessment framework to track progress and ensure the ocean accounting Agenda is met in a timely manner.
- **Establishment of National Platform on ocean accounting** to bring all related stakeholders, including policy makers (i.e. GSO-MPI, Ministry of Natural Resources and Environment (MONRE), MARD, development partners, Non-Government Organizations (NGO), etc. together to ensure mobilization of all resources for ocean accounting. The platform partnership will review and discuss ocean capital objectives in national sector policy, as well as will play a key role for advocacy in term of enhancing awareness/knowledge of policy makers on ocean accounting and promoting integration of ocean accounting in to national planning process of sectors such as tourism and agriculture related to their dependency as well as impact on coastal and marine resources

### **III.4. Policy application**

#### **III.4.1. Marine Spatial Planning**

Marine Spatial Planning (MSP) is a framework that promotes integrative management and considers the entire ecosystem (beyond jurisdictional boundaries), which helps overcome fragmented efforts by sectoral management. MSP aims to balance economic, environmental, and social values by allocating access of ocean activities through space and time. The Ocean Accounting framework helps MSP achieve its objectives through supports evidenced-based decision making, by having transparent and accountable ocean data.

The government of Viet Nam is developing National Marine Spatial Planning (MSP) and development of Master Plan on Sustainable exploitation and Use of Coastal Resources in the Period of 2021-2030, with Vision to 2045. The MSP is expected to be submitted to the Government for approval in 2022. Ocean accounting would be applied to ensure the balance between economic sectors and marine environment at national level.

#### **III.4.2. Proposal for Blue Economy Model development**

According to the World Bank, the blue economy is the "sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystem." <sup>2</sup>

MONRE is currently developing proposal on development of Blue Economy modes towards marine sustainable development to implement the strategy of sustainable development of Vietnam's marine economy to 2030, with a vision to 2045 which supposed to submit to Prime Minister for approval by 2022. Ocean Account can be proposed under the proposal as an approach for monitoring of sustainable marine environment.

#### **III.4.3. Monitoring of SDGs implementation**

Ocean account can support to monitor SDGs implementation (i.e. SDG 15 and 16), Ocean account can be mainstreamed in to routine government indicators and reporting procedures for SDG reporting in Viet Nam by integrating in to SDG indicators' reporting (i.e. Circular 03/2019/TT-BKHĐT on SDGs indicators of Viet Nam) and supported the ongoing baseline program on the National Statistical Indicator System (NSIS) led by GSO

#### **III.4.4. Provincial Master Planning of Quang Ninh**

The provincial ocean account would also assist tracking Protected Areas (PA) condition using the Ecosystem Condition account to inform decision makers on required actions to be taken, e.g. as part of the socio-economic development planning process. Ocean Account would be used as input to the development of the government baseline provincial Socio-economic Development Plan 2026 – 2030, including optimizing spatial planning and natural capital resource allocation.

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<sup>2</sup> [What is the Blue Economy? \(worldbank.org\)](https://www.worldbank.org/)