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KEY POINTS

- Blue finance, which is becoming more prominent in sustainable economic development frameworks, currently falls short of global expectations in terms of capital and debt mobilization for bankable projects.
- This brief shares the Asian Development Bank's experience of developing a blue taxonomy in Qingdao city, Shandong province, the People's Republic of China, which involved adapting international principles, standards, and guidelines.
- The lack of precise, consistent frameworks and definitions of what qualifies as a "blue activity" can be addressed through the development and adoption of a blue finance sector taxonomy (blue taxonomy).
- To promote sustainable development standards, such as a blue taxonomy, a financial institution can consider adopting a gradual stepping-up process to ease the burden for transitioning industries while ensuring continued development momentum. However, this must be accompanied by timely enhancement of such standards to meet the highest international requirements.

Blue Finance Development in Shandong Province, People's Republic of China

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INTRODUCTION: SAVING THE OCEANS—FROM OURSELVES

Healthy oceans are vital to the environment and natural biodiversity. They are also critical to humankind's well-being and long-term survival. Yet, the demand for greater resources has caused grave physical impacts on the environment and inflicted ever-growing damage on the oceans.

Degradation and Depredation. The oceans are often used as garbage dumps and septic tanks. Soaring production, consumption, and disposal have polluted the land and river systems, and through them or by other means, many of the Earth's blue waters. Overfishing contributes to the rapid depletion of fish stocks and causes an imbalance in the underwater ecosystem.

Rising Cost. Worsening climate change patterns have led to oceans' growing acidity, rising temperatures, and shifting currents. The rising ocean temperature also creates storms and droughts of unprecedented intensity, melting the ice caps and raising sea levels in ways that can make populated parts of Earth uninhabitable.[1] The sea life on

Notes: In this brief, "CNY" refers to Chinese Yuan.
ADB recognizes "China" as the People's Republic of China.

[1] NASA. *How Does Climate Change Affect the Ocean?* https://climatekids.nasa.gov/ocean/#:~:text=As%20Earth's%20climate%20warms%2C%20the,or%20stop%20in%20some%20places.

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which a large swath of humanity depends for food is increasingly imperiled by pollution and global warming, as are the livelihoods of more than 3 billion people who depend on marine and coastal biodiversity for a living.

Building a Blue Finance Solution. Blue finance supports the sustainable use and conservation of ocean resources and ecosystems, an area that was largely ignored. The initiative also supports a blue economy by providing capital for ocean-related activities while, among others, minimizing harm to the ecosystem. Building a blue economy advances the global agenda on climate change and sustainable development.

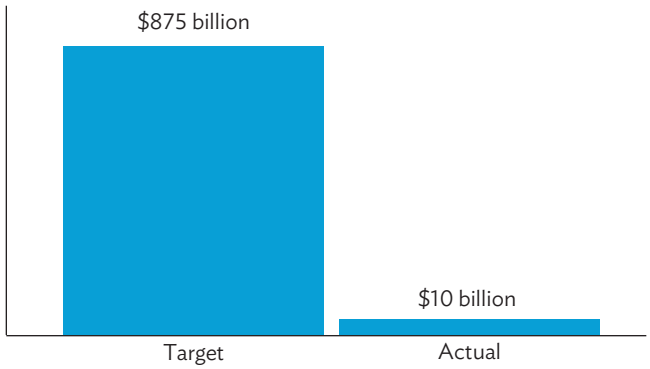
Next Steps to a Blue Sector Taxonomy. The Asian Development Bank's (ADB) support to the Bank of Qingdao, a provincial commercial bank in the People's Republic of China (PRC), is helping the latter attain its blue development goals. At the same time, it helps identify areas for improvement, including the need for better blue frameworks; management systems; and especially a formal blue sector taxonomy that can alleviate confusion among hesitant investors about blue activities, improve confidence among investors and lenders, and catalyze blue finance pipelines. The role of Bank of Qingdao is examined, and a preliminary blue sector taxonomy is proposed based on its own catalogue and adoption of international blue standards and guidelines.

HIGH AIMS, INADEQUATE FINANCING, FAULTY FRAMEWORKS

Global Agenda Set. The global community views ocean and marine ecology depredation and degradation as a crisis inflicting irreparable harm on the environment and humankind's well-being. Stopping, if not reversing, the damage and developing ocean resources more sustainably are now regarded as international priorities. The Sustainable Development Goals (SDGs) adopted by the United Nations (UN) in 2015 require the global community to "conserve and sustainably use the oceans, seas and marine resources for sustainable development."[2] Targets under SDG 14 include reducing marine pollution, protecting marine and coastal ecosystems, minimizing ocean acidification, ending illegal and excessive fishing, boosting investment in scientific knowledge and marine technology, and achieving global compliance with international law on the safe and sustainable use of oceans and marine resources.[3]

Global Agenda Vastly Underfunded. The pursuit of this global objective is severely lagging because it has not been backed by the adequate level of financing it needs to be successful. In fact, SDG 14 received less funding during 2015–2019 than the other 16 goals on the 2030 Agenda for Sustainable Development (Figure 1).[4]

Figure 1: Sustainable Development Goal 14—Actual Funding Gap, 2015–2019



Source: J. Conrad and G. Singh. 2022. *SDG14 Financing Landscape Scan: Tracking Funds to Realize Sustainable Outcomes for the Ocean. World Economic Forum: Friends of Ocean Action.* https://www.weforum.org/whitepapers/sdg14-financing-landscape-scan-tracking-funds-to-realize-sustainable-outcomes-for-the-ocean.

In fact, SDG 14 financing is exceedingly low compared with the costs of reversing ocean degradation such as overfishing, habitat loss, and the threat of climate change.[5] It is also far below the financing target of $875 billion set for 2015–2019 (Figure 1). Other estimates even put its total requirement in the global economy at approximately $3–$6 trillion annually.[6]

Need for Stronger Foundation and Better Structure. As awareness of the risks grows, so does recognition that much greater blue financial flows are needed if SDG 14 is to be met by 2030.[7] Interest in blue finance vehicles from global investors, financial institutions, and issuers is also growing as they offer some unique features such as the environment, social, and governance label for

2 United Nations. Oceans—*United Nations Sustainable Development*. https://www.un.org/sustainabledevelopment/oceans/#:~:text=Goal%2014%3A%20Conserve%20and%20sustainably,oceans%2C%20seas%20and%20marine%20resources&text=Goal%2014%20is%20about%20conserving,provide%20food%2C%20energy%20and%20water.

3 United Nations, Department of Economic and Social Affairs. *Goals: 14—Conserve and Sustainably Use the Oceans, Seas and Marine Resources for Sustainable Development*. https://sdgs.un.org/goals/goal14.

4 J. Conrad and G. Singh. 2022. *SDG14 Financing Landscape Scan: Tracking Funds to Realize Sustainable Outcomes for the Ocean. World Economic Forum: Friends of Ocean Action*. https://www.weforum.org/whitepapers/sdg14-financing-landscape-scan-tracking-funds-to-realize-sustainable-outcomes-for-the-ocean.

5 World Bank. *Social Dimensions of Climate Change*. https://www.worldbank.org/en/topic/social-dimensions-of-climate-change.

6 United Nations, Department of Economic and Social Affairs. *Exploring the Potential of the Blue Economy*. https://www.un.org/en/desa/exploring-potential-blue-economy.

7 J. Conrad and G. Singh. 2022. *SDG14 Financing Landscape Scan: Tracking Funds to Realize Sustainable Outcomes for the Ocean. World Economic Forum: Friends of Ocean Action*. https://www.weforum.org/whitepapers/sdg14-financing-landscape-scan-tracking-funds-to-realize-sustainable-outcomes-for-the-ocean.

greater compliance and less risk.[8] However, blue finance remains mired in early stage development globally, particularly in the PRC. This is in good part due to the lack of a stronger foundation and better structure on and within which it can grow. What is often missing, importantly, are definitions, standards, and systems with sufficient capacity for reliably certifying and categorizing blue finance activities and instruments, such as blue equity funds, bonds, and credit, to make them more attractive to financial markets and sectors.

WHY BLUE FINANCE LAGS BEHIND GREEN FINANCE

Lack of National Standard. The ocean economy is a vital growth center in the PRC. It was partly affected by the coronavirus disease pandemic and the subsequent slower-than-expected economic recovery. While understanding its importance, the government has not placed it at the top of its sustainable development agenda. In addition, while being discussed at the local government level and even in some research and academic institutions, the development of a comprehensive blue finance standard at the national level is lacking. Market awareness is also low. Thus, only a few blue projects have been developed.

Green Benchmark Not Matched. The constraints of blue finance in the PRC are magnified in comparison with the rapid growth in green finance—a well-developed benchmark, given the critical part each plays in responding to the global environmental and climate change crisis. For example, the PRC was a pioneer in building a green finance system. By 2015, it had achieved among the highest volume of renewable energy investments globally and become one of the leading green bond issuers in the world. In addition, government agencies issued green finance guidelines (e.g., taxonomies and macroprudential norms) as early as 2016 and refined them extensively.

Regulation, Policy, and Incentive Gaps

So, why is blue finance still lagging behind green finance? Weak blue finance regulatory frameworks are certainly one reason—as they are in other countries. Investors and other stakeholders shy away from areas where regulation is unclear or inconsistent. For example, while green finance guidelines may cover some blue finance activities (e.g., renewable energy sector covers offshore wind farms), the lack of specific blue finance policies to support the offshore wind subsector could create uncertainty for long-term investments.

The national government and its agencies also do not provide a clear incentive structure to make private sector blue finance projects attractive. Support for sustainable ocean-related projects should include necessary public sector assistance to achieve the minimum commercial bankability as well as clear and consistent policies to attract serious long-term investors. The National Finance Regulatory Management Commission, the PRC's banking regulator, and the China Securities Regulatory Commission could also encourage the launch of innovative blue finance products.

Missing Taxonomy, Standards, and Systems

Therefore, clearer definitions and boundaries in a unified taxonomy and a system of standards for classifying blue activities, projects, and finance will benefit the PRC (and other countries) to ensure lender and investor confidence and expand market potential. Blue bond issuance should be governed by precise rules, definitions, and standards, and supported by effective regulation and coherent government policymaking. These actions are critical to avoid "blue washing," a process that labels unqualified projects as blue.

Limited Investment Opportunities and Financial Instruments

Investors who are looking for blue sector opportunities will find a dearth of projects to invest in or financial instruments to utilize, both in the PRC and in developing economies. It is therefore essential that more blue projects are developed and mechanisms created through which potential investors can invest in them. In addition to blue bonds, the PRC could also develop commercial bank blue credit lines, blended blue finance products, insurance, blue carbon credits, and other targeted technology investments to help encourage blue finance projects.

Low Awareness and Knowledge among Stakeholders

Investors, financial institutions, and other stakeholders in the PRC such as government bodies, nongovernment organizations, environmental organizations, local communities, and other relevant parties generally have a low level of awareness of blue finance. Capacity development is needed to educate and disseminate information to investors, financiers, and other stakeholders who can help the blue economy grow by identifying opportunities and available benefits. For instance, potential investors may not yet know of tax incentives, available grants and subsidies, enhanced reputation, reduced risk, and long-term stable returns when entering the blue finance sector. More specifically, investors and financiers alike usually do not consider benefits such as higher credit quality and more stable returns of the blue finance projects, as they comply better with national regulations and global standards and are better protected from future regulatory changes.

FRAMEWORK, STANDARDS, AND GUIDELINES

In recent years, the PRC began to pay greater attention to a high-quality growth model by striking a balance between sustainability and economic development. Blue finance was a concept that gradually emerged in the late 2010s. The PRC's 14th Five-Year Plan (2021–2025) includes issues such as ocean economy, marine ecosystem protection, and sustainable

[8] International Finance Corporation (IFC). *Guidelines for Blue Finance*. https://www.ifc.org/content/dam/ifc/doc/mgrt/ifc-guidelines-for-blue-finance.pdf.

ocean principles.[9] The initial step to support such work is the development of a preliminary set of financing standards as the basis for blue finance development, by referencing existing standards. Thereafter, pilot projects can be identified, developed, and implemented. Project implementation can then help establish and refine the necessary policies, regulations, and standards. Concurrently, this can also enhance knowledge and awareness.

Step 1: Use the Green Finance Framework as a Reference
Referencing the existing green finance framework, the blue finance framework can include guiding principles, sustainability objectives, and a catalogue and classification of blue economy activities. This framework will guide the development of standards in determining whether an activity can be considered blue. Such a framework will also give investors and financiers greater clarity, consistency, certainty, and confidence to invest in the blue sector. Over time, these will also encourage more funding available for this sector.

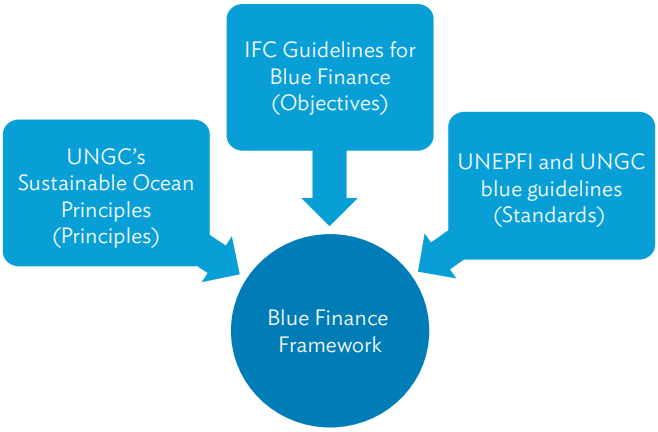
Step 2: Adapt Elements of other Existing Frameworks (Figure 2)

(i) **Principles.** The principles of a blue framework can be based on existing international architecture, such as the Sustainable Blue Economy Finance Principles proposed by the United Nations Environment Programme Finance Initiative (UNEPFI).[10] The UNEPFI principles are global and universal. This applies to the United Nations Global Compact Sustainable Ocean Principles, a principle-based approach to sustainable ocean business.

(ii) **Objectives.** The environmental objectives can be adopted from the International Finance Corporation (IFC) 2021 Guidelines for Blue Finance, which include pollution prevention, natural resources and biodiversity conservation, and climate change mitigation and adaptation.[11] The IFC guidelines classifies the extent of impact on ocean and coastal environments using varying shades of the color blue: "light blue" for projects with minor impact, usually activities that present some net positive impact; "medium blue" for stronger impact; and "dark blue" for the strongest impact and with most direct effect.

(iii) **Standards.** The UNEPFI Guidelines for Blue Finance and the United Nations Global Compact's blue guidelines have preliminary definitions of how economic activities can be considered sustainable, which emphasizes the need for standards. These guidelines can help in the development of standards to determine whether an activity can be classified as blue or not.[12]

Figure 2: Building Blocks for a Blue Finance Framework



IFC = International Finance Corporation, UNEPFI = United Nations Environment Programme Finance Initiative, UNGC = United Nations Global Compact.

Source: ADB. 2022. *Supporting Sustainable Finance and Regional Cooperation: Support to the Blue Finance Development of Bank of Qingdao and in Shandong Province—Construction and Development of Blue Finance Taxonomy and Systems.* Consultant's report. Manila (TA 6687-PRC). https://www.adb.org/sites/default/files/project-documents/54120/54120-001-tacr-en_1.pdf.

[9] Government of the People's Republic of China. 2022. *In "the 14th Five-Year Plan" China Will Make Efforts to Protect Blue Oceans from 5 Aspects.* http://www.gov.cn/xinwen/2022-01/18/content_5669025.htm.
[10] United Nations Environment Programme. 2023. *Sustainable Blue Economy Finance Principles*. https://www.unepfi.org/blue-finance/the-principles.
[11] IFC. 2022. *Guidelines for Blue Finance*. https://www.ifc.org/content/dam/ifc/doc/mgrt/ifc-guidelines-for-blue-finance.pdf.
[12] ADB. 2021. *Green and Blue Bond Framework*. Manila. https://www.adb.org/sites/default/files/publication/731026/adb-green-blue-bond-framework.pdf.

ADVANCING BLUE FINANCE IN SHANDONG PROVINCE

Shandong province (with a population of about 100 million) has transitioned into a more sustainable and "bluer" marine-based economy with stronger project development, financing, and implementation, recognizing the need for blue finance development in the PRC.

Role of the Finance Sector. While Shandong's provincial government announced its ambitions for expanding blue finance for its traditional and emerging marine industries and services, its 5-year plan (2021–2025) needs more guidance on how to maintain and contribute positively to the ecological environment through the blue economy. Financial institutions, such as state-owned banking and insurance companies, have taken the lead in supporting the development of marine-based ecosystems and industries through integrated environment protection and resource conservation. As Table 1 shows, the Bank of Qingdao took on this role in Shandong alongside the regulatory initiatives undertaken by the provincial government.

Blue Finance Taxonomy. The abovementioned milestones show improvements in Shandong province's blue economy, blue finance potential, and health and sustainability of its marine resources.

Table 1: Milestones in Blue Financing in Shandong Province

Milestone	Details	Implication for Blue Economy
Environmental protection standards have become a key criterion for financing shipbuilding.	In 2019, the Shandong government introduced measures governing the mortgage financing of shipbuilding in the province to broaden the financing channels for, and promote the sustainable development of, the industry. These measures introduced government support for financing the transition costs toward zero-emission ocean shipping.	The measures helped banks shift their lending criteria and portfolios toward support for reducing emissions from ships and the green and blue transformation of the shipbuilding industry. Shipping companies and owners, for their part, must now ensure they will build more fuel-efficient ships to obtain financing.
Financial support has been provided for coastal wetland conservation.	In 2021, the Qingdao branch of the PRC's private sector Industrial Bank granted the country's first wetland carbon-sink loan. The CNY18 million went to Qingdao Jiaozhou Bay Shanghe Demonstration Zone Development Company and was used to purchase Qingdao marine wetland and plant carbon-sink crops that raise carbon sequestration and protect the wetlands.	Organizations can now apply for the same type of loan if their projects will help protect marine resources and ecosystems.
The country's first marine carbon-sink index insurance contract is signed.	The first marine carbon-sink index insurance contract took effect on 14 February 2023, signed by the Shandong branch of the state-owned China Life Insurance and Shandong Rongcheng Chudao Fisheries Company.	Wider use of this kind of insurance will help reduce the risks of seagrass bed disasters, address the post-disaster funding to restore these carbon-sink resources, and further promote the marketization of marine carbon sinks.
Financing will be provided for marine ecology-safe offshore wind power generation.	In 2022, the Shandong Energy Bozhong Offshore Wind Power Project was connected to the grid, including a 501-megawatt wind power generation plant. The construction has been carefully designed to minimize the impact on the ocean's natural habitats and marine life.	Aside from replacing carbon-intensive power generation options, this project will pose little or no risk of marine pollution.
Marine pollution prevention and control have been supported by private finance sector loans.	The Bank of Qingdao provided an 8-year CNY200-million infrastructure project loan in 2021 for the construction and post-completion operations of a plant to treat urban domestic wastewater in Gaomi City. In May 2022, the Bank of Qingdao also provided a 1-year working capital loan (CNY10 million) to help companies expand their production of biodegradable plastic packaging and thus reduce the overall level of plastic pollution in the ocean.	The projects will reduce the pollution of marine environments.

Note: The information is compiled by the Beijing Institute of Finance and Sustainability, which is responsible for the accuracy of the information.

Source: ADB. 2022. *Supporting Sustainable Finance and Regional Cooperation: Support to the Blue Finance Development of Bank of Qingdao and in Shandong Province—Construction and Development of Blue Finance Taxonomy and Systems.* Consultant's report. Manila (TA 6687-PRC). https://www.adb.org/sites/default/files/project-documents/54120/54120-001-tacr-en_1.pdf.

However, such progress can be better replicated if a standard taxonomy is developed for blue sector projects. This can also help facilitate progress in other coastal provinces across the PRC and potentially beyond the country's borders. Under the ADB technical assistance Supporting Sustainable Finance and Regional Cooperation in the PRC, and in the context of the ADB support to Bank of Qingdao for blue finance development (Bank of Qingdao Blue Finance Project), a preliminary blue finance taxonomy (Table 2) was developed to promote blue finance development.[13]

The ADB team worked with the Shandong Ocean Bureau, Ministry of Natural Resources, National Marine Resources Data Service (Center), international organizations, commercial banks, and other public and private institutions. Subsequently, public sector and market consultations were carried out and aimed to mainstream the blue finance taxonomy in commercial bank operations in Shandong Province through policy and regulatory adjustments. This proposed taxonomy is the first step in strengthening the province's blue sector.

Table 2: Proposed Preliminary Blue Taxonomy for Commercial Banks in Shandong Province (Abbreviated Partial List)

Category	Explanation	Sustainability Activity Example
1. Prevention and control of land-based pollution in the oceans	It refers to the reduction of land-based marine pollution into the oceans, including solid wastes, wastewater, and agricultural runoff.	The production and disposal of plastic bags and other non-biodegradable products are strictly monitored and controlled according to provincial laws to minimize the impact on the ocean.
2. Marine ecological protection and restoration	It includes marine ecological protection, marine ecological restoration, marine environmental management, and related activities.	Development of ecosystem insurance products and "pledge loans" related to protecting key aquatic ecosystems (such as coral reefs, mangroves, and wetlands) are promoted.
3. Marine carbon sinks	It refers to processes, activities, or mechanisms by which the oceans remove greenhouse gases, aerosols, or greenhouse gas precursors from the atmosphere.	To incorporate the value of blue carbon ecosystems to fisheries and wetland development is promoted.
4. Sustainable coastal infrastructure development	It refers to the infrastructure and nature-based solutions adopted to enhance coastal resilience and are designed to withstand natural hazards such as storm tides, sea-level rise, seawater invasion, and land subsidence and coastal erosion, especially those caused by climate change.	Construction in protected areas or areas with conservation value is avoided.
5. Sustainable marine tourism development	It refers to sustainable activities such as sightseeing tours, recreation, vacation, accommodation, and sports facilities for the purpose of being close to the sea.	Destination development within protected areas; critical habitat for endangered, threatened, and protected species; or areas that provide important ecosystem services (e.g., coastal flood control) is avoided.
6. Offshore renewable energy development	It refers to the use of ocean wind energy, ocean energy, and other renewable energy sources for electricity generation activities.	Construction projects do not occupy natural shorelines or carry out land reclamation. The impact on marine life is minimized.
7. Development of sustainable marine fisheries	It includes sustainable mariculture, marine fishing, marine fishery professionals, and auxiliary activities undertaken in a sustainable way.	Existing infrastructure for sustainable mariculture is upgraded and improved. Impact on fish stocks is minimized.

continued on next page

[13] ADB. PRC: Supporting Sustainable Finance and Regional Cooperation. https://www.adb.org/projects/54120-001/main (TA 6687-PRC) and ADB. PRC: Bank of Qingdao Blue Finance Project. https://www.adb.org/projects/55246-001/main (Loan 7708).

Table 2 *Continued*

8. Sustainable marine aquatic products processing	It refers to sustainable production activities that take marine animals and plants as the main raw materials to process into food or other products.	Eco-friendly refrigerant replacement technologies are used.
9. Green port and zero-carbon emission shipping	It refers to sustainable and green activities that use ships as primary means of marine transportation and the provision of such transport services.	Special measures to prevent the release or loading of ballast water and sediments containing non-native species or contaminants are deployed.
10. Zero-carbon emission marine ship industry	It includes green and sustainable marine shipbuilding, marine ship conversion, dismantling and repair, marine ship ancillary equipment manufacturing, marine beacon equipment manufacturing, and other activities.	Ships that run on cleaner fuels such as biomethanol are built and ballast water treatment is used to avoid the spread of invasive alien species.
11. Seawater desalination and comprehensive utilization industry that is friendly to the marine ecological environment	It includes sustainable and eco-friendly seawater desalination, direct use of seawater, seawater chemical resource utilization, and other activities.	New or expanded water treatment, storage, and sustainable supply infrastructure with at least 20% water savings per unit of service compared to baseline are applied.
12. Sustainable marine industry and ocean-friendly marine engineering equipment manufacturing	It refers to sustainable and eco-friendly manufacturing activities of engineering equipment and auxiliary equipment used in the development, utilization, and protection of marine activities, including manufacturing and repair of marine engineering equipment.	The industrialization of offshore wind turbines and supporting equipment of more than 5 megawatts of installed capacity is accelerated.
13. Environment-friendly marine pharmaceutical and biological products	Sustainable production methods of medicines, functional foods, and biological products using marine organisms (including their metabolites) as raw materials.	Water pollutants discharged to the drainage system have terminal sewage treatment facilities that meet sustainability standards before releasing to the ocean.
14. Environment-friendly marine salt industry	It refers to sustainable production of salt products with sodium chloride as the main component from seawater (including shallow coastal underground brine).	Discharge of wastewater and waste liquid comply with the limits of each criterion in accordance with relevant regulations.
15. Environment-friendly marine chemical industry	It refers to sustainable activities of producing chemical products from raw marine resources such as sea salt, marine oil, and seaweed.	More efficient production methods are adopted.
16. Environment-friendly marine oil and gas industry	It refers to sustainable and eco-friendly production and service activities of exploration, extraction, transmission, and processing of oil and gas in the ocean.	The supervision and risk control of the whole process of exploration and development to ensure environmental viability and sustainability are strengthened.

Source: ADB. 2022. *Supporting Sustainable Finance and Regional Cooperation: Support to the Blue Finance Development of Bank of Qingdao and in Shandong Province—Construction and Development of Blue Finance Taxonomy and Systems.* Consultant's reports. Manila (TA 6687-PRC). https://www.adb.org/projects/documents/prc-54120-001-tacr-1; International Finance Corporation. 2022. *Guidelines for Blue Finance*. https://www.ifc.org/content/dam/ifc/doc/mgrt/ifc-guidelines-for-blue-finance.pdf.

BLUE SECTOR TAXONOMY FOR SHANDONG PROVINCE

The basic requirements for the preliminary blue sector taxonomy proposed in Table 2 include the PRC's established sustainable environment goals, UN guiding principles, and applicable prior work on blue economy and finance categorization by international institutions such as ADB and the IFC.

Sustainable Environmental Goals

The 14th Five-Year Plans (2021–2025) for the PRC, Shandong province, and Qingdao city provide for marine ecological and environmental protection. Their respective plans provide the sustainable blue environmental goals that should be reflected in the taxonomy (Figure 3).

Guiding Principles

Sustainable blue economy finance principles under SDG 14 are used as the basis of the preliminary blue sector taxonomy (Figure 4).

Proposed Preliminary Taxonomy

Table 2 shows the 16 categories of marine industries, sectors, and activities that may qualify as blue economy categories, alongside the sustainability requirements for eligibility and qualification for blue finance.

The taxonomy adopts standards from SDGs as reflected in the 14th Five-Year Plan (2021–2025) at the country, province, and city level, and from five selected UN guiding principles (Figure 4). The proposed taxonomy focuses on the marine industries and sectors prioritized by ADB's Green and Blue Bond Framework and the IFC's Guidelines for Blue Finance. These include reduction of land-based marine pollution—including from plastics, wastewater, and agricultural run-off—as well as marine ecological protection and restoration and sustainable coastal and marine development.

Blue finance activities are categorized by color based on local conditions in Shandong province. For example, depending on the extent of the net (sustainability) impact, prevention and control of land-based pollution into the oceans, and marine ecological protection and restoration can be categorized as "dark blue" projects, while more sustainable use of existing marine resources, particularly in high-impact industries, can be categorized as "light blue" projects. It is important that the categorization process is sensible, credible, and consistent. However, it is expected that the requirements will become stricter over time.

Figure 3: 14th Five-Year Plan Goals for the People's Republic of China, Shandong Province, and Qingdao City

Source: ADB. 2022. *Supporting Sustainable Finance and Regional Cooperation: Support to the Blue Finance Development of Bank of Qingdao and in Shandong Province—Construction and Development of Blue Finance Taxonomy and Systems.* Consultant's reports. Manila (TA 6687-PRC). https://www.adb.org/projects/documents/prc-54120-001-tacr-1 (p. 50).

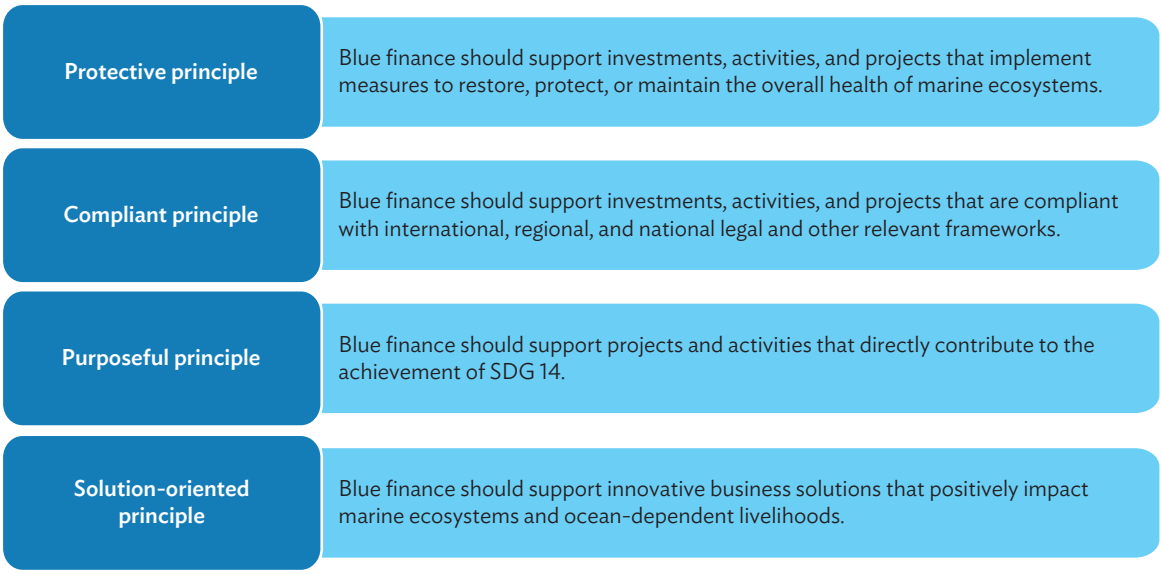
CONCLUSIONS AND RECOMMENDATIONS

Greater flows of blue finance can help grow marine-based economies, while at the same time making the utilization of marine resources more sustainable. The development and expansion of blue finance require a framework; taxonomy, precise standards; and a system of policy, regulation, and/or incentives. A well-formalized blue finance taxonomy will facilitate the adoption of sustainable marine economy principles by financial institutions and help mainstream the concept into their lending practices and financing operations. As a result, hesitant investors and financial institutions, often unsure of what is truly blue or not, will become more confident about blue financial instruments offered and engage in sustainable blue projects. Their greater participation in the blue economy, either directly or indirectly (e.g., through loans, blue bonds, or funds), will provide higher quality returns (e.g., due to the stronger compliance) and promote economic growth. The blue finance taxonomy will make it easier for the public and private sectors to prepare bankable blue projects and secure blue finance in the debt and equity markets.

A blue taxonomy should always be evolving and scalable to account for the transition phase through the inevitable disruptions to a more sustainable marine economy. The standards for qualification in a blue sector category—and therefore, the beneficial impact of the activity involved—can be set to suit the local conditions during the initial implementation phase. The threshold will be subsequently increased to higher positive impacts. Phasing enables existing polluters to remain economically viable for the transition period, while still delivering some net blue benefits up-front and setting the course for adoption of more robust sustainable business practices during the later project stages.

However, the primary goal must be to incentivize marine industries and financiers in a way that can phase out existing and potential environmentally harmful practices entirely and as rapidly as possible. Dark blue projects are the best and fastest route to a cleaner, healthier, and more sustainable future. This requires that government and regulators introduce policy and regulatory incentives, promote more knowledge development and public awareness, and develop more impactful blue projects to transform the blue sector and the economy as a whole.

Figure 4: Sustainable Blue Economy Finance Principles Suitable for a Shandong Province Blue Taxonomy



SDG = Sustainable Development Goal.

Source: ADB. 2022. *Supporting Sustainable Finance and Regional Cooperation: Support to the Blue Finance Development of Bank of Qingdao and in Shandong Province—Construction and Development of Blue Finance Taxonomy and Systems.* Consultant's reports. Manila (TA 6687-PRC). https://www.adb.org/projects/documents/prc-54120-001-tacr-1.

Definition of Key Terms

- "Blue sector" refers to the diverse industry and economic sectors related to the sustainable use of ocean resources, including fisheries, renewable energy, shipping, and tourism, among others.
- "Blue economy" refers to the activities that integrate economic development and sustainable use of ocean resources while improving human well-being and social equity.
- "Blue finance" provides the financial resources that support the blue economy in various blue sectors.

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