European Commission

RECOMMENDATIONS REPORT

UNSUSTAINABLE FINANCE IN THE BLUE ECONOMY: WHERE DOES THE MONEY COME FROM?

BLUE ECONOMY

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1 List of abbreviations

ABNJ	Areas Beyond National Jurisdiction
ADB	Asian Development Bank
AfDB	African Development Bank
B2B	Business-to-Business
B2C	Business-to-Consumer
BBP	Blue Bond Principles
CSIS	Center for Strategic and International Studies
DG DEVCO	Directorate-General for International Cooperation and Development
DG NEAR	Directorate-General for Neighbourhood and Enlargement Negotiations
E&S	Environmental and Social
EASME	Executive Agency for Small and Medium-sized Enterprises
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ECA	Export Credit Agencies
EEZ	Exclusive Economic Zone
EIB	European Investment Bank
EIF	European Investment Fund
EMODnet	European Marine Observation and Data Network
ESG	Environmental, Social and Governance
ESIA	Environmental and Social Impact Assessments
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GVA	Gross Value Added
HLEG	High-Level Forum Expert Group
IDB	Inter-American Development Bank
IFC	International Finance Corporation
IFIs	International Financial Institution
IPAs	Investment Promotion Agencies
IUCN	International Union for Conservation of Nature
IUU	Illegal, Unreported and Unregulated fishing
MDBs	Multilateral Development Banks
NCAs	National Credit Agencies
NOAA	National Oceanic and Atmospheric Administration
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
OpCo	Operating Company
PES	Payment for Ecosystem Services
PPP	Public–Private Partnerships
SDG	Sustainable Development Goal
SME	Small and Medium-sized Enterprises
SRI	Socially Responsible Investing
TCFD	Task Force on Climate-related Financial Disclosures
UN	United Nations
UNCLOS	United Nations Convention on the Law Of the Sea
UNCTAD	United Nations Conference on Trade And Development
UNEP FI	United Nations Environment Programme Finance Initiative
UNIDO	United Nations Industrial Development Organization
UNPRI or PRI	United Nations Principles for Responsible Investment
WRI	World Resources Institute
WWF	World Wide Fund for Nature

"The challenge of climate change only exacerbates the existing pressures coming from marine pollution, unsustainable resource use or illicit activities. At the same time, the blue economy offers opportunities for sustainable economic development. So, I am convinced that we can restore our marine environment while also bringing benefits to our coastal communities, and the economy at large."

Commissioner Virginijus Sinkevičius speech at Ocean Governance Stakeholder Forum, Brussels 22 April 2020

2 Abstract

The blue economy covers a range of traditional and emerging sectors that are essential sources of food, energy, health and leisure for people throughout the world. The blue economy is growing fast and attracting investment worldwide. However, businesses often remain unsustainable. **Illegal fishing, excessive tourism, polluting shipping and poorly designed port activities**, are examples that threaten marine eco-systems and jeopardise the biodiversity that is essential to the prosperity of the planet. By 2030, one third of investments in the blue economy could be unsustainable – i.e., at least 250 billion euros invested in activities harmful to the oceans and ultimately the planet. Why is money flowing into damaging activities? This study found many reasons, including a focus on short-term profits, inadequate impact assessments, weak regulatory frameworks and businesses' inability to attract impact investments. How can investments worldwide shift to activities that preserve the ocean and ensure long-term prosperity? While development banks are leading the change, they are unable to make significant changes alone. All financial players should be involved, including private equity funds, impact investors and policymakers. A sustainable blue economy is a global challenge that requires swift and coordinated global action. With this in mind, this report includes insights and recommendations for policymakers and investors.

3 Disclaimer

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PART 1

INTRODUCTION: CONTEXT AND DEFINITIONS ADOPTED

1.1 Supporting a shift of finance away from unsustainable blue economy

The European Commission's Directorate-General for Maritime Affairs and Fisheries seeks to support a shift in finance away from unsustainable marine and maritime activities to investments in the sustainable blue economy. In order to do so, it is necessary to identify and characterise current financial flows into the blue economy, and to develop a set of criteria for clearly defining the (un)sustainable financing activities.[1]

The current study is a step towards increasing the awareness and transparency of the features and characteristics of unsustainable financing in the blue economy. It also contributes to the European Commission's initiative on investment in the blue economy. Building on current global trends and practices, this study discusses a number of relevant actions aimed at addressing unsustainable financing practices and fostering fully sustainable ones.

Overall, this study therefore aims to:

- Identify and describe the financial practices in the blue economy that support unsustainable activities, particularly those which harm the ocean environment and local communities, and which expose companies, financial institutions and private and public sector investors to stranded assets, reputational risks and economic losses.
- Contribute to bringing together international and national public and private financial institutions around a joint agenda and common principles for sustainable funding and investment in the blue economy.
- Encourage the alignment of financial flows with a pathway towards a fully circular, low-carbon and climate-resilient economy, which would also allow for full societal benefits in line with the UN Sustainable Development Goals (SDGs).

The study is structured as follows:

- Chapters 2, 3 and 4 examine the main features in global funding and investment sources leading to unsustainable outcomes in relation to oceans – specifically, who is involved and how (Chapter 2), what are the main reasons and drivers behind such practices (Chapter 3) and how those practices are distributed across different global regions and what are the potential volumes of such unsustainable transactions (Chapter 4).
- Chapters 5 and 6 assess the areas to be addressed to support a shift away from unsustainable financing (Chapter 5) and outline the persisting gaps in the current policy framework (Chapter 6).
- Chapter 6.2 and 6.3 provide a set of recommendations including specific actions to be implemented ('game changers') for investors and policy makers, to help shift blue economy investments away from such unsustainable activities and to foster the responsible economic development of the blue economy worldwide.

1.2 The 'blue economy' concept and its main implications

The origins of the blue economy concept can be traced back to the 2012 UN Rio+ conference and the report on 'Green Economy in a Blue World'.[2] Building on a growing global consensus on the socio-economic relevance of the concept and its related activities, the term ocean economy was more recently adopted by international bodies such as the Organisation for Economic Co-operation and Development (OECD),[3] United Nations (UN)[4] and World Bank.[5] While the term ocean economy often implies a focus on 'in-water' activities, this study believes that both 'fresh water' and, importantly, 'inland-water'[6] should also be addressed as essential dimensions of the sector – especially when assessing the financing of sustainable blue economy in developing and emerging economies globally.

The **'blue economy' concept defined by the EU is adopted as the basis for this report**,[7] as it allows for the inclusion of relevant inland, port, and river/water human-related activities when assessing the sustainability of blue economy investments. This definition recognises the relevance of some more 'traditionally' established economic activities to the blue economy, such as extraction and commercialisation of marine living resources, shipping and maritime transport, ports activities, shipbuilding and repairs, coastal and maritime coastal tourism, etc. Further, the definition also encompasses a number of emerging but equally relevant innovative activities, such as maritime energy (offshore wind and ocean energy), blue biotechnology, desalination, etc.

Importantly, the concept also includes several ecosystem services[8] that are essential to secure, protect and respect coastal and marine ecosystems (i.e. the natural capital)[9] and related policy activities (maritime spatial planning, ocean governance, maritime surveillance, safety and security, etc.) Beyond these, ecosystem services are essential assets for other blue economy activities to flourish[10] and also a potential source of economic and financial returns on their own.[11] Overall, they can contribute towards a healthy planet and human well-being.[12]

Criteria for a sustainable blue economy have been elaborated in a parallel study on 'Sustainability criteria for the Blue Economy',[13] an EU supported study for a blue economy development framework.

1.3 Approach proposed to define 'unsustainable financing'

According to the EU High-Level Expert Group on Sustainable Finance (HLEG),[14] "sustainable finance is about a joined-up approach to the development of financial services that integrates the environmental, social and governance (ESG) dimensions across market practices, products and policy frameworks.' It will involve reallocating large-scale investments to close the sustainable development financing gap."[15] Sustainable finance highlights two imperatives: 'to improve the contribution of finance to sustainable and inclusive growth as well as the mitigation of climate change; and to strengthen financial stability by incorporating environmental, social and governance (ESG) factors into investment decision-making.'[16] The first imperative reflects the sustainability of the ultimate impacts of the investment being made, while the second relates to the policies in place in financial institutions that ensure sustainable practices.[17]

Additionally, consistent with the above definition, in the EU's policy context sustainable finance is defined as "finance to support economic growth while reducing pressures on the environment and taking into account social and governance aspects. Sustainable finance also encompasses transparency on risks related to ESG factors that may impact the financial system, and the mitigation of such risks through the appropriate governance of financial and corporate actors."[18]

In line with such an approach, this study considers unsustainable financing as any financing practice (public and private) that is inconsistent with international sustainable financing standards (where ESG factors are taken into account)[19] and global definitions of a sustainable financing taxonomy.[20] These aspects are particularly complex given the many and diverse sectors that comprise the ocean economy, and the fact that sustainability can mean very different things within each. In this study we do not explore the details of these ongoing processes and the pros and cons of the existing approaches – these are further discussed in a recent OECD report.[21]

However, it is worth noting that the above definitions have been consolidated in the so-called 'Taxonomy Regulation', which provides criteria for environmentally sustainable economic activities. According to Article 3 of the Regulation, "an economic activity shall qualify as environmentally sustainable where that economic activity:

A) contributes substantially to one or more of the environmental objectives [climate change mitigation; climate change adaptation; the sustainable use and protection of water and marine resources; the transition to a circular economy; pollution prevention and control; the protection and restoration of biodiversity and ecosystems];

B) does not significantly harm any of the environmental objectives;

C) is carried out in compliance with the minimum safeguards laid down in Article 18; and

D) complies with technical screening criteria that have been established by the Commission [...]."[22]

The latest report of the HLEG provides information on the design of the taxonomy, as well as guidance on how taxonomy users may develop taxonomy disclosures. It includes an overview of the economic activities to which the technical screening criteria apply.[23]

Due to the lack of a common understanding of which activities can be considered as sustainable across the sectors of the ocean economy,[24] we assume a number of criteria[25] for the identification of an unsustainable financing practice. In essence, we consider whether any financing practice (both public and private) underpinning blue economy activities:

- Results in local negative impacts, therefore destroying valuable natural, human, social or physical capital;
- Is unable to sustain positive returns over time, for current and/or future generations; and
- Does not allow for the development of local capacity towards financial independency of supported practice(s).

Some aspects which are essential for our definition and understanding of unsustainable financing are briefly illustrated below.

1.4 Unsustainable financing practices in the blue economy

Although certain activities are unquestionably unsustainable, for example intrusive deep-sea mining and/or natural resources and minerals extraction, the approach proposed in this study deliberately focuses on the financing practice itself rather than the type of activities which are financed. The rationale behind this approach is driven by our belief that it can help identify remedies and potentially steer a greater volume of public and private resources towards fully sustainable investments.

We are aware of the ongoing effort in the definition of a common taxonomy for sustainable investments. We believe that our approach avoids any duplication of efforts and builds on the results of the process.[26] For a specific analysis of the indicators to be selected in assessing the sustainability of the different blue economy activities, the reader can refer to the parallel study on 'Sustainability criteria for the Blue Economy'[27] supported by the European Commission, and to the broader discussion currently ongoing with respect to the blue economy in the context of the EU assessment of a sustainable taxonomy.[28]

Another important consequence of the approach adopted in this study is that **trade-offs amongst impacts of financing practices** (intended and unintended)[29] should always be assessed in order to maximise overall benefits. In the case of unsustainable financing, such trade-offs may tend to favour direct financial returns to investors over broader environmental and societal benefits (or damages). Investments in oil and gas operations, for example, may emphasise certain economic and social returns (e.g. access to energy and heating for a country) while disregarding relevant additional consequences (e.g. impact on marine ecosystems and/or local communities affected by the financed activities). By the same token, investments in touristic/cruising operations may benefit economic returns while neglecting social or environmental externalities.

Apart from deliberate criminal activities, such trade-offs might be the result of suboptimal decisions resulting from limited information on the operations, which may prevent investors from financing activities with uncertain results and high financial risks. These aspects are discussed further in Chapter 3 of this study.

The expected timeframe of the returns foreseen from the investments made (short-term vs. long-term) are also an essential element of sustainability. Despite the presence of positive impacts in the short-term, unsustainable financing may imply a lack of assessment of the longer-term impacts of the investment being made. Even if short-term impacts are positive, these may be neutralised by negative longer-term impacts, resulting in structural concerns for the affected communities and ecosystems. For example, investment in renewable marine energy may not consider the management/deterioration of infrastructure through time, with substantial longer term impacts for the ecosystem in which they operate. Similarly, while aquaculture practices may provide positive short-term returns (e.g. jobs and local revenues), if investments are not well designed, polluting chemicals may spill out through time and destroy nearby ecosystems (with negative impacts on the environment, local fisheries and local communities). Similar examples can be shown for other maritime activities.

Again, the lack of assessment of the longer term impacts of investments being made may be the consequence of a variety of reasons and factors, including actors with good intentions. A reflection on the reasons and drivers behind such unsustainable investments is also provided in Chapter 3.

Broader 'transformational' potential for blue economy investments should be considered when assessing sustainability. The impacts of investments for local communities in terms of project ownership and the ability to ensure financial self-sufficiency (e.g. through further generation of local revenues) are essential factors to be considered when assessing any financing practice. An investment with positive impacts for local communities in the short and longer term may still be considered unsustainable if it creates dependency on external sources of financing over time. Indeed, ensuring that the business model of the company is economically sustainable is essential for the local communities involved. A company can be deemed sustainable if it is able to obtain the necessary economic resources to make future investments in order to ensure the company's continuity over time. A company is sustainable in the medium and long term if it has the ability to make sufficient profit to finance future investments, or if it has access to external funding sources that enable it to access these resources (e.g. credit/ debt financing). In this sense, dependency on a single source of external financing may be a risk factor, which could cause a mission drift or, in the context of the blue economy, negatively impact local communities and the environment.[30] When assessing sustainable financing practices, it is therefore not sufficient to just ensure they do 'no harm', comply with the minimum safeguards or contribute to environmental objectives – it should also be questioned whether they allow for the (future) generation of local sources of revenues, tax returns and endogenous financing, beyond the external (public or private) support provided.

1.5 Results of unsustainable financing: 'unsustainable practices' and 'missed opportunities'

When assessing the impacts of unsustainable financing in the blue economy, it is also essential to address both:

- **Unsustainable practices** (financial returns for investors achieved while supporting locally harmful practices), which may range from intended and particularly harmful (black) investments (e.g. practices explicitly infringing human rights and destroying local communities and ecosystems), to unintended and less harmful, but still negative, (grey) investments (e.g. where negative effects are the result of a lack of full analysis and/or mismanagement).
- **Missed opportunities** (neglected local investment needs, assessed as unprofitable for investors) that are the result of failing to acknowledge and address the specific financing needs of the sector[31] – e.g. to be able to:
  - Diversify existing value chains through new products/services that appeal to ever-changing demand;
  - Adopt smart technologies (infrastructure) to reduce environmental impacts and address climate change;
  - Promote innovative business models that capture high economic value while respecting local assets;
  - Foster the adoption of innovative circular blue economy practices towards zero waste;
  - Support talent and provide organisational approaches that encourage constant innovation and learning;
  - Promote local, regional and global practices (clusters, accelerators, etc.) that address new ideas and needs;
  - Preserve ecosystems while accessing valuable ecosystem services.[32]

An overview of the economic performance of the various blue economy activities, as well as the challenges, highlighting potential unsustainable practices and missed opportunities, is provided as Annex II.[33]

PART 2

WHO: MECHANISMS AND MAIN ACTORS INVOLVED IN UNSUSTAINABLE FINANCE IN THE BLUE ECONOMY

2.1 An array of mechanisms and actors are available to finance the blue economy

Financial mechanisms are often defined as methods or sources through which funding is made available[34] and, more broadly, ways through which a specific business, organisation, or programme receives the funding necessary to support its operations.[35] It is therefore important to assess the main features and roles that such mechanisms play, as well as the actors fostering (un)sustainable financing in the blue economy. In this analysis we also include public funding instruments, which can be part of the broader range of mechanisms identified to support blue economy activities (e.g. directly or through public-private/blending mechanisms).

TABLE 2.1 Overview of main financial bodies: regional focus and overall financial products available

FINANCIAL BODIES (PRIVATE SECTOR / COMMERCIAL BANKS / PUBLIC FUNDS)	FINANCIAL MARKETS (STATUS / TRENDS)	FINANCIAL PRODUCTS (POTENTIALLY AVAILABLE FOR THE BLUE ECONOMY)	TAILORED OFFERS (SPECIFICALLY ADDRESSING SUSTAINABILITY AND / OR BLUE ECONOMY ISSUES)
"Private-finance" based mechanisms (actors and instruments involved)			
Private Sector Investment / Commercial Banks	Global Developed markets driven Consolidation in process	Structuring & funding of loans: corporate, project finance -based, trade finance guarantees & loans, money market, arrangement, underwriting & trading of equity capital markets, fixed income, asset-backed securities	Green, social, sustainability, blue bonds green loans, ESGs
Asset Managers, Wealth Management / Family Office	Global Critical size issue / Consolidation	Mutual funds, exchange trade funds, private debt, investment advisory	ESG / socially responsible investing (SRI) / impact funds very long-term investments
Foundations, Philanthropic Organisations	Global Anglo-Saxon dominant	Impact-first funds, giving funds	Socially & environmentally screened funds, "direct impact" / custom investments
Specialized Financial Institutions (Factoring companies, operational Leasing firms, Real Estate lenders)	Global Strong development in emerging markets	Supply chain finance, receivables finance, asset-backed lending, construction finance	Green or energy-efficient leasing
Private Equity Funds, Infrastructure Funds, Hedge Funds	Global Steady development in emerging markets	Private equity funds: investments in companies, project operating company (OpCos) e.g. public-private partnerships (PPPs), properties hedge funds: tradeable instruments (stocks, bonds, derivatives commodities)	Green infrastructure projects, equity in green companies
Insurance Companies / Pension Funds	Global More limited scope / specialized in Emerging Markets	Direct investments for insurance long term funds, insurance policies considering 'sustainability risks'	Investments in green bonds, long term infrastructure, ESG-referenced insurance policy underwriting
Export Credit Agencies[36]	National focus – Strong in developed markets	Government-backed loans, guarantees and insurance to facilitate exporting contracts, providing overseas working capital	No specific ESG screening, Funding driven by export focus

TABLE 2.1 Overview of main financial bodies: regional focus and overall financial products available (suite)

FINANCIAL BODIES (PRIVATE SECTOR/ COMMERCIAL BANKS/ PUBLIC FUNDS)	FINANCIAL MARKETS (STATUS / TRENDS)	FINANCIAL PRODUCTS (POTENTIALLY AVAILABLE FOR THE BLUE ECONOMY)	TAILORED OFFERS (SPECIFICALLY ADDRESSING SUSTAINABILITY AND/OR BLUE ECONOMY ISSUES)
"Public-finance" based mechanisms (actors and instruments involved)			
National Promotional Banks, Public Banks	National focus Strong in developed markets	Public investment/financing programmes, "patient capital", senior/junior loans	Active ESG project screening, green bonds, social bonds, green loans
Public Funds (Sovereign Wealth Funds, Sector Funds, Regional/City Funds, etc.)	Global strong in Developed Markets	Investments in public/private bonds Impact-driven Investment doctrines	ESG-dedicated funds investments in green bonds, social bonds, blue bonds
Multilateral/ National Development Banks & Institutions	Global Regional focus	Funding programmes, concessional lending, risk sharing instruments	Green project financing, green investments

Source: Finance for Impact (2019)

There is a great variety of financial mechanisms and involved actors – as illustrated in the table above. Each type of financial body has a multitude of financial products that can potentially serve activities/ projects/businesses in the blue economy. In order to understand the extent to which unsustainable financing practices persist, it is important to have a better understanding of the main actors engaged in the global financing market.

It is quite challenging to establish a clear taxonomy of the type of mechanisms specifically targeting the blue economy and those with a broader scope (which may or may not include the blue economy). For example, some of the above-mentioned products are clearly labelled as 'sustainable', 'green/ blue' and/or explicitly respect social and environmental norms (ESGs).[37] Such products are generally found in mature financial markets in which clients' access to and awareness of financial products are high and where financial international norms and standards are usually respected. Notwithstanding the maturity of these markets, sustainable investments only constitute a portion of much larger investments – as discussed in the next section of this chapter.

With regard to **financial actors in the private sector**, an important dynamic underlying their decision to invest in certain markets is the current trend towards increasing overall efficiency and reducing client acquisition costs. Investments may come from a range of sources, and our research has not pointed to specific streams of investments being more recurrent (e.g. mergers and acquisitions, debt and credit, or equity). Interviews suggest that the (equity-based) financing of sustainable projects in parts of the world where the cost of acquiring new clients is high constitutes a major obstacle for most financial actors. The high level of financial risks is a challenge which may be common to different forms of financing and is reinforced by the relatively poor presence of insurance systems in parts of the world where financial inclusion is a challenge,[38] and specifically with respect to the risk related to the blue economy.[39]

Public bodies[40] also play a pivotal role, particularly in large infrastructure investments, the intangible support provided to early stages of research and innovation, including support to skills, and capacity and knowledge transfer. However, public funding alone cannot ensure long-term sustainable financial support, and the transition from public to private financing requires efforts that project owners and financial actors are not always ready to make. In addition to direct funding, public bodies play an essential role in steering the private sector towards sustainability, by setting the right regulation and policy framework for the sector – as discussed in Chapter 3.

An interesting mapping of different financing models across the blue economy has recently been provided by The Ocean Finance Handbook.[41] The map suggests different levels of fit between various financing models and sectors in the blue economy, for an average compatibility of scale, risk and risk tolerance, and return potential. It is presented here as a good overview of the relevance and potential of various financing streams for the blue economy.[42]

FIGURE 2.1 **Overview of financing models and different activities within the blue economy**

STRONG MATCH  WEAK MATCH

		IMPACT-ONLY		DEBT							EQUITY			
		Grant	CSR investment	Microfinance loan	Revolving loan funds	Bank loans, small	Conversation impact bonds	Projects bonds	Sovereign bonds	Bank loans, big	Impact investment	Seed financing	Dept swaps	Crowd investment
Natural capital	Ecosystem services *e.g. Mangrove restoration*													
	Natural infrastructure *e.g. Wetlands restoration*													
Commodities	Fisheries industrial *e.g. Purchase new vessels*													
	Fisheries small-scale *e.g. Meliomar investment*													
	Aquaculture *e.g. Farm expansion*													
	Marine bioprospecting *e.g. Sealife pharma*													
Marine and coastal development	Nature-based infrastructure *e.g. Sand motor*													
	Coastal and marine ecotourism *e.g. Ecohotel*													
	Maritime transportation *e.g. Vessel retrofit*													
	Renewables - wind *e.g. GODE wind farm*													
	Renewables - tidal *e.g. Startup installation*													
	Renewables - wave *e.g. Company IPO*													
	Renewables - floating solar *e.g. Seed tech investment*													
	Waste management *e.g. Recycling innovation*													

Source: Ocean Finance Handbook (2020)

2.2 General trends in (un)sustainable finance and possible relation with the blue economy

The financial actors described in the previous section have all (to some extent) adopted strategies to ensure more sustainable financing practices, including in the blue economy. Despite this, **the substantial lack of available data about private investments directed to sectors of the blue economy makes it impossible to detail the flows and actors involved in sustainable and unsustainable financing in the blue economy**. This is a core bottleneck for any in-depth understanding of the challenges and opportunities faced by international actors, such as the EC, who are committed to steering financing away from unsustainable practices towards fully sustainable blue economy activities throughout the world.

It is therefore pivotal to improve the tracking of such flows, as further discussed in our recommendations (Chapter 6). Some relevant initial attempts are already being made by the OECD tracking of Official Development Assistance (ODA) for the Ocean Sustainable Economy.[43] Given such an essential gap, it is important for this study to understand the extent to which investments trends could be reflected in current and future financing flows targeting the various activities in the blue economy. General trends are therefore described here as a proxy, to understand the possible consequences for financing flows in the blue economy.

While financial flows throughout the world are increasingly integrating sustainability standards,[44] **the relevance of sustainability standards in addressing investments in the blue economy remains uncertain** – and the adoption is often on a voluntary basis. It remains a fact that over the past few decades the financing sector has become more cautious, both with respect to supporting specific assets identified as sustainable on the basis of ratings, and through ex-ante assessments of expected positive social and environmental returns on investments (e.g. conservation finance, impact investing, sustainable investing or responsible investing). Large global corporations (e.g. Walmart, Danone etc.) are also integrating sustainability principles and standards (e.g. ESGs) into their financing practices.

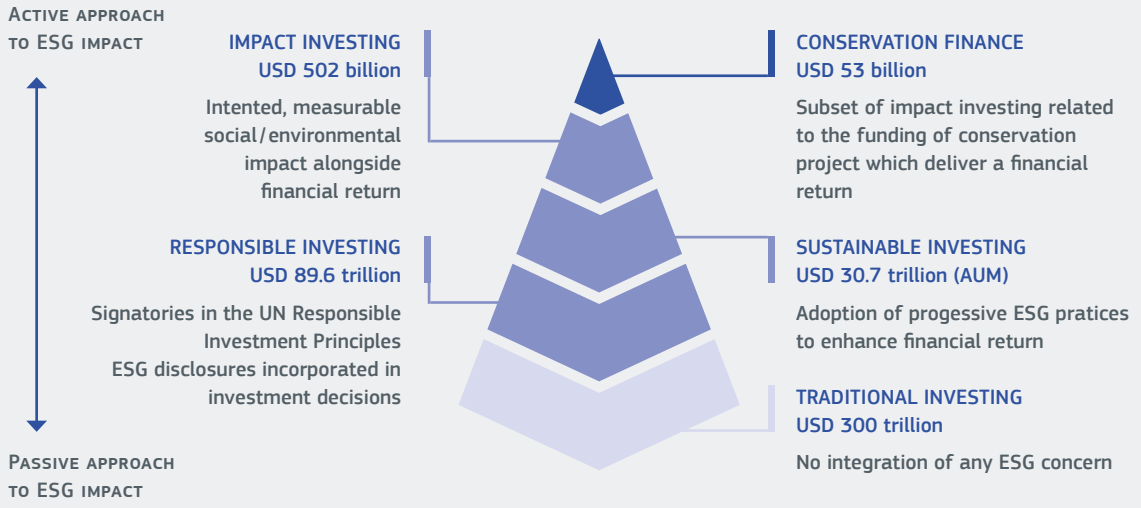
While not directly targeting the blue economy, such a trend shows the positive response of the financial sector in addressing growing sustainability concerns of global investments. Specifying this trend for the blue economy is hampered by the limited visibility of the sector to global investors. This was confirmed by interviewees, who said that the blue economy concept is 'too vague' and 'too recent' to be clearly understood by all actors. Such a lack of visibility, though mostly for private investors, remains one of the most significant obstacles in the full shift towards sustainable financing of the blue economy – see Chapter 3.

Investments specifically addressing pressing global challenges[45] have also increased, with the level of private equity or debt capital invested in relevant impact areas rising by 32 % over the 2013-2018 period. The issuance of green bonds growing to $ 500 billion in 2018 is in line with this positive sustainable trend.[46] This movement is being driven by a shift in the perception of investors and corporations who increasingly believe that ESGs are important not only for their reputation as law/norm abiding entities, but also for ensuring their financial returns and ability to pay dividends.

Positive trends include efforts to develop sound lending practices in the blue economy. This is the case with the Poseidon Principles developed by the shipping industry to ensure the sustainability of its financing processes,[47] as well as the Blue Economy Sustainable Financing Principles promoted by the EU and WWF in 2019.

However, over 70% of investments (see figure below) are made without assessing sustainability criteria – potentially providing access to unsustainable finance. As illustrated in the figure below, the investment pyramid is based on a solid 2/3 of global (traditional) investments that remain potentially unsustainable.

FIGURE 2.2 Conservation finance and impact, sustainable and responsible investing

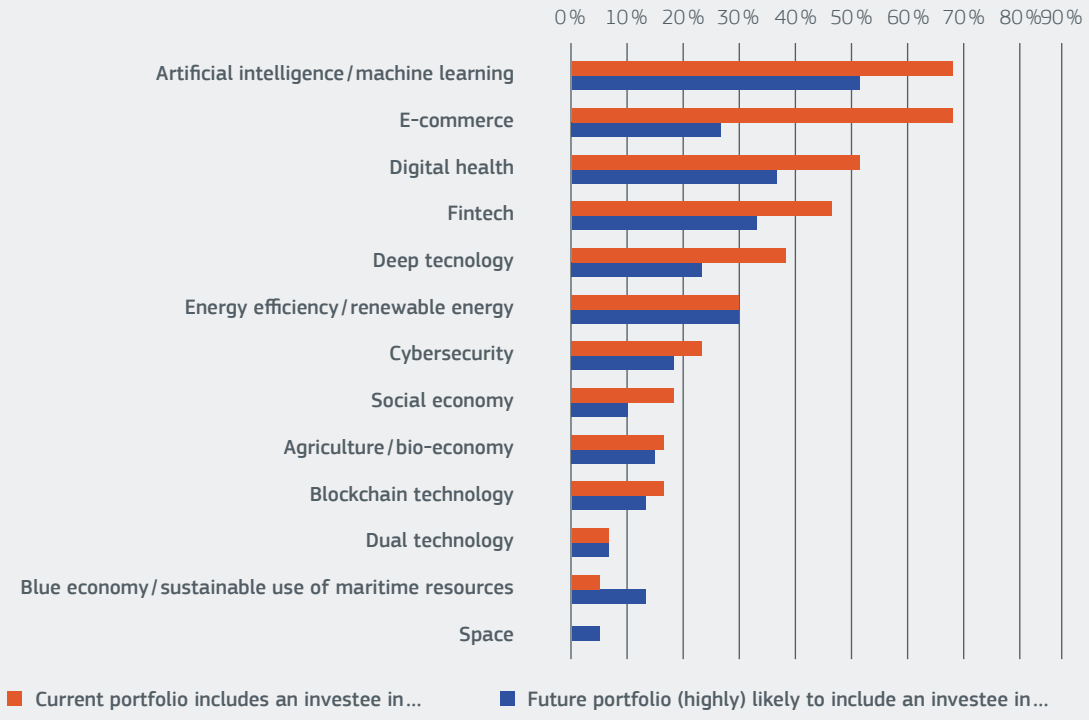


Source: Finance Watch (2018), adapted from City of London, Specialist Sources of Capital[48]

In addition, with respect to other global sectors, **the financial resources dedicated to the blue economy remain limited**, leaving marine and maritime economic activities with poor overall access to finance. If we look at the most recent available data,[49] the blue economy covers a limited portion of the whole investment portfolio in the venture capital market, both currently and into the future. Due to a lack of specific data, it is not possible to enter details on the various types of financial support, and whether issues differ between debt or equity. Nevertheless, evidence collected through interviews suggests access to both types of financing is equally problematic. Further, although the Ocean Finance Handbook 'demystifies' the concept of the blue economy, it still needs to be 'sold' as an investable concept to the private sector.

Thus, taken together, the interest in investing in the blue economy remains limited – as illustrated in the figure below. Moreover, the type of investment in blue economy projects depends on the specific sector. For instance, offshore wind is financed via established equity and debt investment consortia. Most of the financial resources spent on offshore wind come from private investment – as commercial and technology readiness levels are already high. Indeed, mature projects draw on banks and lending institutions.[50] In the aquaculture sector, there is a pent-up demand for mergers and acquisitions. In 2018, mergers and acquisitions amounted to €3.46 billion, more than 2017 (€1.50 billion) and 2016 ($1.67 billion) combined.[51]

FIGURE 2.3 **Likelihood for portfolio to include an investee in specific EU industries – current vs. future portfolio, 2018**



Source: European Investment Fund (EIF) (2019)[52]

Given that many sectors of the blue economy are largely SME-based (e.g. tourism) or still have limited return potential (e.g. blue biotechnology, offshore wind), they do not attract large amounts of private equity. Still, equity may be essential in boosting some activities at full speed, and targeted public funds are essential to raise the visibility and financial appeal for private investors. Some examples have emerged in the case studies – see the extract below.

BOX 2.1 **Case study extract: Complexities surrounding offshore wind investments in the North Sea basin**

Mobilisation of private investments is an essential element for the sustainable financing of maritime technologies such as offshore wind platforms. Although the technologies are relatively mature and the potential returns of such investments in the mid to longer term are high, the full phasing out of traditional energy sources and the transition to renewables remains a complex process. Ensuring strong commitments from private investors requires the transparent and relevant involvement from a range of other stakeholders, including policymakers, regulators, and businesses active in the maritime energy sector. For example, while several North Sea countries have been investing in offshore renewables as a part of their decarbonisation strategies, private investments in the sector remain limited as they are still deemed too risky. Traditionally, oil and gas have been major sources of energy and income to some of these countries, and a number of persisting factors remain relevant obstacles to full-scale private investment in sustainable sources of marine energy in the region. A specific case study is provided to illustrate the complexity in the transition from more traditional to innovative sources of marine energy on the North Sea. Further details are provided in the case study.

Source: Case Study (North Sea Region: the complex transition towards investing in marine offshore wind)

An alternative to private equity is of course debt finance. However, reliance on debt may equally pose other sustainability issues to blue economy enterprises. For example, economic actors might lack the track record and credentials needed to access private credit and therefore may have to rely on public subsidies. This is a recurring practice in some large and SME-rich sectors, such as that of coastal tourism, where public subsidies are offered to sustain local jobs – thus creating a dependency on public support without much incentive to innovate. It therefore exposes businesses in the blue economy to higher bankruptcy risk, not only in the transition economies where the solvency of enterprises is low and the banking offer is threatened by financial stability, but also in developed economies that are increasingly threatened by regular financial crises, as has been the case in recent years. These trends are likely to be further exacerbated in the aftermath of the COVID-19 crisis, as illustrated in box below.[53]

BOX 2.2 **Impact of recent financial crisis cycles and the post-COVID effects for the blue economy**

Assessments of the potential impact of the COVID-19 crisis and its recovery on the blue economy have multiplied in the recent weeks and months. A range of challenges have been outlined, specifically for the blue economy as a whole. Maritime shipping has seen COVID-19-associated drops in activity of up to 30% in some regions. Lockdowns and reduced demand for seafood have seen fishing activity fall by as much as 80% in China and West Africa. Entire nations dependent on ocean and beach associated tourism have seem their borders shut. Globally, COVID-19's impact on tourism may amount to a $7.4 billion loss and could put 75 million jobs at risk.[54]

The pandemic is also expected to exacerbate the offshore law enforcement gap, as coastguards and navies look inward to manage domestic crises rather than police the seas. As law enforcement on the ocean is expected to decline in the coming months, it will be worth watching data from vessel automatic identification systems and satellites to determine whether signals of illicit fishing increase. Legal industrial fishing operations are likely to decline, especially over the near term, through a combination of the risk of being at sea in a pandemic and supply chain complications caused by market closures.[55]

Coastal areas have also been severely affected by confinement measures, as production has often been reduced or stopped and their livelihood often depends on a limited set of local, marine based activities. And yet the impact amongst blue economy sectors and across oceans and coastal areas is uneven, as the level of restrictiveness and the type of measures taken varies across affected countries in terms of depth, the activities involved and the timing of measures put in place. While some blue economy sectors might be subject to closure across many global regions (e.g. coastal and maritime tourism), others may be reduced but may continue to deliver essential goods and services to at least some extent (e.g. fisheries, marine transport).[56]

Importantly, there are also opportunities that may arise from the current crisis. A reduction in shipping activity during COVID-19 provides a valuable opportunity to contribute to environmental objectives, e.g. protection of the biodiversity and reduction of gas emissions. Quiescent vessels can be fitted with upgrades to increase fuel efficiency and reduce emissions. Quieter shipyards can retool and secure political support to prepare for future demand to be met with zero-emission vessels. Furthermore, due to COVID-19, shipping activities and global demand for fish and seafood has decreased around the world. This will allow for the recovery of fish stocks and has positive impacts on the marine environment. Unlike other investments, living ocean resources grow during downturns and fisheries science could design intelligent harvest-yield protocols that maximize the long-term benefit of any possible COVID-19 gains. Another way to fast-track the reopening of the blue economy is to direct stimulus investing towards marine technologies that can help more efficiently and effectively observe and understand the oceans.[57]

The current health crisis has exposed the substantial shortcomings of our current economic model – and questioned a range of unsustainable economic activities. Investments in science and R&I will be essential to boost innovation and foster transformation – also in the blue economy, and to ensure sustainable long-term benefits to the sector while fully protecting local communities and ocean biodiversity. These are lessons to be duly reflected upon when re-thinking sustainable financing for the blue economy in the COVID-19 recovery.[58]

Source: United Nations Conference on Trade and Development (UNCTAD) (April 2020), World Economic Forum (May 2020), Center for Strategic and International Studies (CSIS) (April 2020), Seas at Risk (April 2020)

As a result, a substantial lack of access to finance in future years can be predicted in regions where the banking offer is insufficient (for instance, in some emerging markets) and in developed countries where the banking systems are threatened by the recurrence of financial crises. A solution for this lack of access to finance for certain activities within the blue economy is the creation of policy (and tax) incentives that increase the appeal of such sectors to international investors. Nevertheless, the lack of capacity of local actors to fully assess the quality and sustainability of an investment may potentially accelerate the exposure of the blue economy to unsustainable investments. This is again a risk that has emerged in some case studies – an example is provided in the box below.

BOX 2.3 **Case study extract: Challenges in ensuring sustainable investments in coastal and maritime tourism**

Coastal and maritime tourism is an essential driver for local sustainable growth in many coastal regions globally. A trend for public policies is to foster a better business environment in the sector and to attract private investment in those essential activities. Policymakers and sectoral stakeholders should nevertheless act carefully and seek to detect unsustainable investments that could result in severe pressure on natural resources and the environment. Indeed, unsustainable finance threatens the coastal and maritime tourism sector by putting at risk the very assets that attract tourists. Negative environmental impacts of unsustainable investments in coastal and maritime tourism operations include waste disposal (sewage and solid waste), marine litter and pollution, physical alteration of coastlines and landscapes, coastal erosion and the disruption in the balance of land-sea connections (such as waste water flows). As such, there is a need for better screening and control of the investments to ensure their sustainability. A specific case study is provided to illustrate the potential risks of attracting private investment through innovative public policies and sectoral regulations without clear strategies and procedures in place to scrutinise their actual sustainability. Further details are provided in the case study.

Source: Case study (Unsustainable investments threaten Montenegro and Albania's fragile ecosystems)

2.3 Specific patterns across actors engaged in unsustainable finance

Commercial banks' lending and governance practices are becoming more sustainable, with an increase in general disclosure (e.g. on climate related policy engagement). A study conducted by the World Resource Institute[59] on the world's 50 largest private sector banks shows that only half of them currently have sustainable finance targets, thereby indicating substantial room for improvement. The commitments made towards sustainability: (i) define sustainability precisely; (ii) identify financial services included; (iii) provide specific timelines; (iii) disclose accounting methodology; and (iv) include endorsement by chief executive officer or the board chair.[60] **Yet, this trend has not accelerated the rate of decarbonisation lending and investment portfolios, nor has it broadened the strategic adoption of low-carbon and green products and services.**[61] So far, less than half of the banks have publicly defined 'low-carbon' or 'green' products – although this trend may change.[62]

Insurance companies can play an important role in the enhancement of sustainability in the blue economy. As casualty risk managers and insurers, they are responsible for covering the physical damages caused by unsustainable practice – either directly or indirectly: it is widely recognised that the insurance industry is exposed to risks resulting from the increasing frequency and intensity of extreme weather events, as well as the global transition towards a low-carbon economy. The expected value of damages resulting from a 2°C warming is $64 trillion by 2100[63] (e.g. in 2017, the United States faced major natural disasters and incurred insured losses of $138 billion).[64] To reduce their claims ratios, insurers have therefore engaged on a path to integrate ESGs in their risk assessments of corporate activities. According to BlackRock's 2018 Global Insurance Survey, 59% of North American insurers have already adopted ESG investment policies.[65] Specific initiatives, such as UNEP FI's Principles for Sustainable Insurance, which has been endorsed by 65 insurers globally, show that the industry is increasingly responsive to sustainability concerns. Nevertheless, **the path of change may not be sufficient to address the volumes of sustainable finance needed** to ensure a sustainable blue economy globally.

As of late, Multilateral Development Banks (MDBs) have become active in supporting sustainable blue economy activities worldwide. This trend could potentially have a strong effect in leveraging private lenders' behaviour towards an even greater shift in sustainable financing. MDBs provide financial assistance, typically in the form of loans and grants, to developing countries to promote economic and social development. Such financing instruments are used to further the 2030 agenda for sustainable development. While some investments in the extractive industries, for example, remain questionable as to their sustainability,[66] many loans and grants undergo strict sustainability screening processes, including criteria related to the blue economy – indirectly (e.g. biodiversity conservation and sustainable management of Living Natural Resources)[67] or directly (see next table).

For example, the World Bank, European Investment Bank (EIB), Inter-American Development Bank (IDB), European Bank for Reconstruction and Development (EBRD), Asian Development Bank (ADB) and African Development Bank (AfDB) have already collectively committed almost $237 billion in climate finance in the 2010-2018 period to developing and emerging economies.[68] A great variation in the commitment of financial resources to sustainability can be noted across

MDBs, with less than 1% of overall MDBs-disbursed ODA currently related to SDGs.[69] And yet, many relevant MDBs have made important financial commitments to the blue economy in recent years – see table below.

TABLE 2.2 Examples of financial commitments by multilateral banks to a sustainable blue economy

MDBs	FINANCIAL COMMITMENT
World Bank	▶ PROBLUE programme: $150 million in 2018. ▶ Active Blue Economy portfolio is around $5 billion with a further $1.65 billion in the pipeline. PROBLUE has four pillars: (1) Improved Fisheries Governance; (2) Marine Litter and Pollution Management; (3) Blueing Oceanic Sectors; (4) Integrated Seascapes.
IDB	▶ Blue tech Challenge programme: $2 million in 2018.[70] ▶ Climate Smart Zone commitment in the region: $8 billion commitment in 2017.[71]
EIB	▶ The EIB commits to more than double its lending to sustainable ocean projects in the 2019-2024 period to €2.5 billion. This is expected to mobilise at least €5 billion in sustainable blue economy investments.[72]
EARB	▶ Is active in programmes related to climate change, but has not made blue economy financial commitments.
ADB	▶ Action Plan for Healthy Oceans and Sustainable Blue Economies: $5 billion from 2019-2024, including co-financing from partners.[73]
AfDB	▶ Does not have an identified blue economy programme, but extends lending to blue economy projects such as sustainable fisheries in Malawi ($13.2 million in 2018).[74]

Source: Finance for Impact (2019, elaborated on the basis of the various announcements made by these Multilateral Banks)

While increasing international public or semi-public lending in the blue economy should be considered as a positive step for the sustainability of the blue economy, **public subsidies may also be part of the problem: not only as they are not efficiently used to trigger further private resources into sustainable activities, but also as they may still directly fund unsustainable ones.** Fisheries/aquaculture, shipping and port activities are among the sectors of the blue economy more often subsidised through state aid. According to the OECD, governments spend an estimated $35 billion worldwide every year to support the fishing sector. This support amounts to about 20% of the total value of all marine fish caught at sea and brought to port. While this helps sustain employment in the sector, it is also conducive to overfishing and over-exploitation of fishery resources.[75] In the maritime sector, at least $3.35 billion per year is spent on just three maritime subsidies in OECD countries: tonnage taxes (average spending estimate: $1.3 billion since 2000), tax exemptions for fuels for domestic shipping (estimated $1.3 billion in 2016 for OECD countries), and fiscal measures to reduce wage costs of seafarers.[76] Subsidy conditions have become more generous and the range of activities covered has been enlarged in reaction to open shipping registries in developing countries ('flags of convenience') and subsidies in other developed countries.

Export credit agencies (ECA) are the financing arm of export finance. They typically promote domestic exports by providing insurance to foreign buyers. For example, they are mostly engaged in heavy infrastructure projects related to shipping and energy – which can negatively affect local ecosystems due to water/marine pollution.[77] While the share of OECD ECAs credit is declining (fell below $60 billion in 2017), export credit to emerging countries has been increasing, especially short-term credit. In the last decade, these agencies have turned into an instrument of foreign diplomacy, opposing countries that have been using these agencies' investments as implicit state subsidies to finance the development of their industries across the globe (e.g. China) and those that apply stringent competition rules. The regulations applicable to ECA financial services are very different in OECD member countries, where they are prevented from using implicit subsidies and have to comply with a set of minimum social and environmental standards (e.g. no loans to industries backing arm exports to repressive regimes), and in emerging countries, where there are no such requirements.

Stock exchanges are not financial actors, strictly speaking. However, they certainly have a pivotal role in framing global investments and contributing to providing companies with global exposure to a wide range of potential investors. Globally, 86 stock exchanges are already part of the Sustainable Stock Exchange Initiative, the UN peer-to-peer learning platform for exploring how exchanges can enhance corporate transparency and impact performance. Acting in collaboration with investors, regulators and companies, the initiative addresses environmental, social and corporate governance (ESG) issues to encourage global sustainable investment.[78] Stock exchanges are essential actors to be engaged with in order to allow for multiplier effects in shifting global financial partners towards sustainable investments. They can be particularly effective intermediaries for raising global interest and appetite in financing sustainable blue economy activities with high profitability potential.

WHY: MAIN REASONS BEHIND THE PERSISTENCE OF UNSUSTAINABLE FINANCING IN THE BLUE ECONOMY

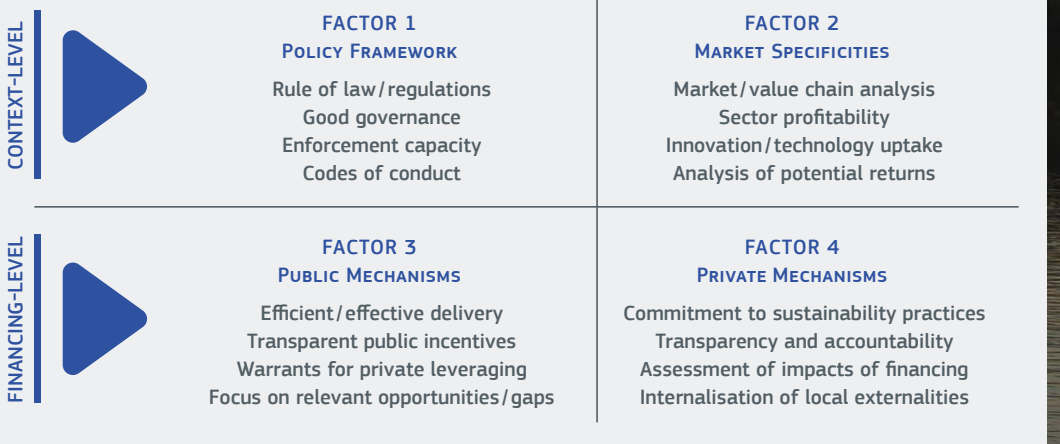
3.1 Four main factors behind unsustainable finance in the blue economy

The limited availability of financial support to address the needs of a sustainable blue economy is driven by various factors, such as those that emerged through the case studies reviewed for this study and confirmed through exchanges held with financial experts and professionals in the blue economy. Importantly, such factors can act (and be identified) at two different levels in each financing practice:

- At the **context-level**, relevant pre-conditions are essential to allow for more or less sustainable financing practices (i.e. the quality of the specific policy framework in place as well as the level of capability and profitability for the economic operators involved in the blue economy, in the specific context where financing support is needed).
- At the **financing-level**, measures should be in place to ensure the full assessment (before) and monitoring (during/after) of the results expected and actually achieved (i.e. social, economic and environmental outcome, besides financial returns, of the specific financing initiative by public and/or private financing bodies).

Four main (types of) factors – two at the context and two at the financing level – emerged, from the evidence collected for this study, as the main reasons influencing sustainable financial support to the blue economy.

FIGURE 3.1 Relevant contextual and financing factors that are essential to ensure fully sustainable investments



Source: Elaborated specifically for this study

3.2 Context level factors influencing sustainable financing decisions

Factor 1 – Policy framework: lack of regulation, sub-optimal policies, enforcements of regulations, etc.

A first and classic set of macro-level factors[79] preventing fully sustainable financing for the blue economy relates to overall suboptimal regulations on the financial and real economy sectors (e.g. in emerging and transition countries), coupled with limited policy transparency and enforcement capacity – in the regions and sectors where financial support is needed. This is a challenge that goes beyond the blue economy as such, but clearly provides a risk to investments and a potential obstacle to sustainable financing in these contexts. In the absence of good regulations/rule of law, enforcement, and policy capacity, the chances that financial support results in unsustainable practices are high.

At a more general level, these factors include, for example:

- Lack of overall/sectoral regulations (national and international), enforcement, rules of law, property rights, good governance;
- Lack of effective spatial planning and integrated policies for relevant sectors at national and international level;
- Lack of long-term policy visions and shared public-private commitments towards a sustainable blue economy;
- Lack of sufficient enforcement of relevant national and regional regulations, as well as penalties in case of non-compliance with the real economy sectoral regulations (including legally-binding standards) to ensure transparent and accountable financing;[80]
- Weak disclosure obligations leading to a loose transaction screening, as well as weak enforcement capacity;
- Limited administrative capacity/expertise for policymakers to implement sound policy frameworks; and
- Regulatory loopholes/gaps: inapplicability of regulations to certain sectors/geographies;
- Adequate monitoring and enforcement systems, effective penalties, independent impact assessments prior to authorisation of investments, incentives for good practices and mitigation/offset actions to minimise damages.

In the absence of good regulations/rule of law, enforcement, and policy capacity, the chances that financial support results in unsustainable practices are high.

BOX 3.1 Policy framework-related factors required to ensure sustainable financing in the blue economy

Examples of the possible gaps in blue economy policy frameworks:

- Sectoral policies and regulations are essential to provide a clear frame for the sustainability requirements in 'traditional' sectors with high return on investment potential (coastal tourism, shipping, aquaculture, etc.);
- Full transparency and enforcement mechanisms should be in place to avoid corruption in blue economy sectors;
- Effective maritime spatial planning and coastal zone management are key to preserving ecosystem assets and to allowing proper use of coastal and maritime space and sustainable sectoral financing / investments;
- Presence of effective inter-sectoral governance bodies that can properly oversee and regulate a number of blue economy activities managed through various sectoral Ministries, Local Authorities and other bodies;
- An effective ocean governance is key to avoid ecosystem damage by unsustainable practices;
- Specific sectoral and corporate codes of conducts in the blue economy are emerging but should be reinforced to ensure full cross-sectoral commitments from public and private actors involved in the sector;
- Systems should be fostered to monitor and enforce sea-related infringements (e.g. for marine protected areas);
- It is essential to further assess the sustainability of the foreseen impacts for blue investments prior to their authorisation;
- Incentives to stimulate private investments in critical technologies are key (e.g. diversify traditional activities, boost niches).

Factor 2 – Market specificities: poor market analysis and lack of business cases to justify investments

A second essential set of factors is related to the specificities of the blue economy[81], including its activities, related value chains, and operators (businesses, etc.), which characterise the targets of financing mechanisms. Lack of clear market data, understanding of potentials, profitability of local businesses, etc. might limit the appetite for longer-term (sustainable) private investments and prevent public financing from being fully effective and data driven.

A GENERAL REVIEW OF THESE FACTORS INCLUDES ASPECTS SUCH AS:

- The limited knowledge of the development needs and potential of targeted businesses and value chains, thus limited ability to benchmark, compare and scrutinise potential returns of local investments;
- The fragmented market, with large, small and micro enterprises acting in mature markets or emerging niches with no clear market prospects resulting in limited appeal to private investors and some public investment banks;
- The risk profile of pilots and experimentation initiatives, which tend to differ in mainstream sectors (less risky) and in other more "niche" sectors (riskier);
- Limited revenue capacity of local businesses and/or ability to access and engage with local/international investors, even in areas with high potential returns;
- Lack of market data and clear information for investors to evaluate the overall bankability and returns of proposed investments (transparency is inadequate and/or reporting requirements are weak);
- Awareness issues at the local level (e.g. hidden unsustainability factors that financial players are unable to detect).

BOX 3.2 Market-related factors required to ensure sustainable financing in the blue economy

EXAMPLES OF THE POSSIBLE GAPS IN BLUE ECONOMY MARKET DYNAMICS INCLUDE THE FOLLOWING:

- Blue economy specific data is generally lacking at a disaggregated and local level – besides more emerging analysis across the EU and some global initiatives (e.g. OECD 2019), the understanding of local activities and value chains in the blue economy remain limited and thus the ability to benchmark, compare and scrutinise potential returns of local investments is poor;
- The majority of emerging activities and sub-sectors in the blue economy are often characterised by a largely fragmented market with a variety of small and micro enterprises that are acting in emerging niches with no clear market prospects. This results in limited appeal for private investors and some public investment banks;
- Many established activities may still remain highly concentrated, with few companies accounting for the bulk of the market and benefitting from the profitability of investments being done in the past. There are limited incentives to further invest in more sustainable business models, technologies and infrastructure;
- Apart from some notable exceptions,[82] a still limited expertise and track record of business cases in blue economy potentials (technologies and value-chains) results in high-risk profiles for investments in highly innovative activities essential for the modernisation of traditional sectors (tourism, aquaculture, shipping, repairing, etc.) and/or the promotion of emerging activities (blue-biotechnologies, offshore renewable energy, etc.);
- In some cases, limited capacity of the local blue economy businesses in engaging with investors prevents proper dialogue and effective results (while some practices are emerging in the EU they are still limited globally – see Chapter 6);
- Novelty and a lack of clarity in the blue economy concept, with limited market analysis at the local level still persisting in many global coastal countries and regions, result in a lack of clear information for investors to evaluate the overall bankability and returns of proposed investments;
- Transparency is inadequate and / or reporting requirements weak, e.g. no environmental and social impact assessments (ESIA), no public consultations, etc., and in turn the prevention of the assessment of fully sustainable investment options.

Concrete examples of contextual factors as emerging in the case studies

The interplay of such contextual factors (policy and market) is shown in the practices assessed as part of the case studies provided with this study. An illustration of some concrete examples is provided in the box below to show how such factors may result in bottlenecks preventing fully sustainable financing in the blue economy.

BOX 3.3 **Case study extracts: contextual factors preventing sustainable financing in the blue economy**

The difficulty of getting it right: the story of the Carlsbad Desalination Plant in California

Investments in desalination plants may lead to unsustainable financing due to **ineffective policy frameworks**. This includes the poor regulation of the sector that fails to address and mitigate the negative ecosystem impacts of sectoral investments, and delays in administrative processes such as obtaining environmental permits. Investments are also held back by a wide range of **market conditions**. For example, there is a **lack of existing data and factual evidence** on the specificities of the sector that are essential to support sound environmental impact assessments and to review the financial viability for alternative and possibly more sustainable models.

Baku-Tbilisi-Ceyhan pipeline development risks: impacts on local communities

The geo-strategic importance for marine-energy supply can motivate investors and governments to downgrade the preliminary assessments needed to ensure the sustainable execution of a project. In countries with **poor law enforcement capacity and investment transparency**, this may contribute to the **violation of existing regulation or standards** and ultimately result in unsustainable investments being approved as shown in the "Baku-Tbilisi-Ceyhan pipeline development risks" case study. Also, mechanisms in place to support the local economies around the pipeline (i.e., processes of monetary compensation), became dysfunctional as funds were embezzled by authorities – forcing people to give up their land in order to avoid paying compensation.

Coastal degradation caused by the development of tourism infrastructure in Thailand

The models of tourism development based on massive influxes of visitors have been proven to be unsustainable globally – both for local businesses and employees as well as local ecosystems. However, as many countries (particularly in emerging and developing economies) rely heavily on tourism as a source of growth and jobs, the focus of private investors on such models to support their returns on investments is often welcomed by local governments as a tool for growth. Such practices continue in the **absence of clear policy frameworks** and requirements for sound feasibility studies or **impact assessments as a pre-condition for the approval of any investment**. The case study on tourism in Thailand provides a picture of such an issue. The government has willingly stepped in to minimise damage, with effective enforcement measures in the form of island and beach closures. The closures, however, are not a sustainable solution in the long term. This situation sheds light on the **limited administrative capacity and/or expertise of policymakers** to implement sound policies and to set up a sustainable investment strategy based on the economic resources already available (i.e. incomes from mass tourism).

Environmental and social consequences of increased fishmeal production in Senegal

Developing countries rely greatly on foreign direct investments (FDI) to finance activities in key sectors of their economies – including fisheries, aquaculture and farm-processing. However, foreign investors might not necessarily focus on sustainable, small-scale, activities and rather be interested in large business ventures that allow for higher revenue. For Instance, in Senegal, foreign investors invest in the large-scale production of fishmeal and fish-oil as a basis for global exports, which in turn may negatively affect the local market and decrease local fish stocks. Foreign investments may therefore result in unsustainable practices, in the **absence of a clear local vision, policy frameworks and transparent investment incentives and regulations**. A **lack of standard procedures to assess the social and environmental sustainability** of potential investments contributes to unsustainable financing practices.

BOX 3.3 Case study extracts: contextual factors preventing sustainable financing in the blue economy

Sustainability challenges of salmon farms in New Zealand

Governments are rightly tightening their environmental regulations globally to ensure fully sustainable economic activities (e.g. fish farming) while protecting coastal and marine areas. In the case of fish farming, **adapting to new rules** through time may lead to a considerable loss of income for local businesses already operating in those areas, making some farms no longer commercially viable. For instance, aquaculture practices predating the environmental standards recently set up by some governments allow for significant revenues at the costs of environmental damages. In New Zealand, complying with these new standards would lead to a considerable loss of income, making some farms no longer commercially viable. Furthermore, **public authorities have also been voluntarily lenient in applying the regulation**, granting new permits, and continuing old unsustainable farms. In this respect, the design of **regulation should take into consideration the investment costs** of companies to support their adaptation (in this case, through financial incentives). Moreover, it is up to companies in the blue economy to set up long-term strategies that fully acknowledge the value and fragility of local ecosystems and to put in place measures to prevent such value from being 'at risk'. Sound local policy frameworks and clear business plans by local companies are therefore essential preconditions for sustainable financing.

Unsustainable investments threaten Montenegro and Albania's fragile ecosystems

More and more often local governments are promoting **business-friendly initiatives** to attract foreign investments in strategic sectors, such as coastal and maritime tourism. As part of these policy measures, **ecosystem-based approaches** are not often fully addressed and rigorous **procedures to assess the sustainability of investments** remain unacknowledged. As a result, the increasing flows of (foreign) investments may not necessarily result in sustainable activities and could paradoxically put local communities and ecosystems at risk. For instance, in Albania, the **limited enforcement of the recent regulation** encouraging more sustainable management of resources and the **lack of explanation** in the recent strategy toward more sustainable tourism development do not allow for a proper shift towards more sustainable projects.

Source: Case studies: The difficulty of getting it right: the story of the Carlsbad Desalination Plant in California, Baku-Tbilisi-Ceyhan pipeline development risks: environmental degradation and impacts on local communities, Coastal degradation caused by the development of tourism infrastructure in Thailand, Environmental and social consequences of increased fishmeal production in Senegal, Sustainability challenges of salmon farms in New Zealand, Unsustainable investments threaten Montenegro and Albania's fragile ecosystems.

3.3 Financing level factors influencing sustainable financing decisions

Factor 3 – Public mechanisms: suboptimal features and design of public financing schemes

A first factor at the level of specific financing mechanisms[83] is related to the characteristics in the public funds, public investments and general subsidies that are put in place to support the blue economy. As shown by the reviewed case studies, ineffective public support results in unsustainable activities in the blue economy.

A general review of such factors includes the following challenges:

- Inefficient subsidies and/or perverse incentives that drive unsustainable behaviour of local/global actors;
- Limited capacity or challenges due to complexities in providing effective policy incentives and public schemes;
- Public funding/financing mechanisms might not always ensure that money is spent where and how it was initially planned (e.g. mismanagement, corruption, or simply due to delivery/spending pressure), may focus on easier ways to allocate resources rather than identifying areas with higher added-value/returns, or they may lack knowledge/competence when assessing the potential impacts of their financial contributions;
- The disconnect between public and private financing streams, which prevent smooth and efficient incentives for private leveraging, and the transition from publicly funded initiatives to venture capital (resulting in public investments which do not result in longer-term results/achievements);
- Limited ability of public financing to effectively leverage private financing towards high-impact investments (for example, through efficient blending, public-private-partnerships, warrants, pre-commercial financing, etc.);
- A focus on the visibility of public investment (or public-private agreements), to maximise political returns in terms of consensus, but without a clear focus on the actual results;
- A clear view of where public money could be invested to ensure private investment in areas of high financial risks but strong societal returns (as incentives to foster the interest of the private sector to invest in areas with high environmental, social and economic sustainability for local communities and ecosystems).

BOX 3.4 Public mechanism-related factors required to ensure sustainable financing in the blue economy

Examples of the possible gaps in public financing in the blue economy include the following:

- Ineffective subsidies persist globally in politically relevant sectors, such as fisheries, transport or oil and gas – for instance, in the fisheries sector some subsidies contribute to overfishing, overcapacity and illegal, unreported and unregulated fishing (IUU) fishing.[84] This may be due to mismanagement and corruption, but more often is a result of delivery/spending pressure, or a lack of clear understanding of the specific areas of clear added-value/returns for public financing.
- Public funding/financing mechanisms are not always based on sound evidence and as a result might not always ensure that the money is spent where and how it was initially planned;
- Focus may be given to the visibility of public investment (or public-private agreements), to maximise political returns in terms of consensus, but without a clear understanding/monitoring of the actual results achieved;
- Public resources towards the blue economy may not always be well-designed to function as a leverage for the private sector towards areas of greater sustainability for local communities and ecosystems (e.g. by targeting areas of high financial risks but strong societal returns). This may, hence, prevent smooth and efficient incentives for private leveraging and the transition from publicly funded initiatives to venture capitalists (the so called 'valley of death');
- Still insufficient information on where public money is invested globally to support a sustainable blue economy (in any sort of 'blue' budgeting/reporting, as a pre-requisite to assess the impact of those flows);
- While public funding support to the blue economy may focus on economic potentials, it still does not always include efforts to foster full capacity to sustain the quality of ecosystem services, including through maritime spatial planning, integrated coastal zone management, impact assessments and enforcement capacity.

Factor 4 – Private mechanisms: growing commitments but difficult to assure full impact assessments

A final set of factors refers to the specific features[85] of private financing practices, including direct investments, which still struggle to ensure a full understanding and assessment of the potential impacts of their practices. Notwithstanding the growing commitment of the sector towards greater transparency and impact financing practices, a clear assessment of potential impacts remains a challenge.

A general review of such factors includes the following challenges:

- Limited transparent data on private investments and flows across sectors and countries (origins/destinations);
- Absence of stringent compliance standards across entire organisations;
- Adherence to existing market or internal standards, linked to negligence or operational dysfunction;
- As an influencing factor, the organisation's size (e.g. smaller funds may make fewer efforts in establishing standards / disclosing evidence);
- Accepted risk, whereby institutions may support unsustainable activities based on other stakes which override unsustainability factors (external, e.g. project economics/ political implications outweighing unsustainability impacts; internal, e.g. client relationship stakes which take over any impact considerations);
- Inappropriate levels of granularity (e.g. Equator Principles'[86] restricted scope and high lending thresholds);
- Limited experience and the complexity of taking into account external investment costs such as (long-term) ecosystem impacts;
- Transaction structure dynamics (e.g. syndicated financing creates higher peer commercial pressure, a behaviour commonly observed amongst Asian banking pools);
- Single vs portfolio investments (e.g. a portfolio management approach may not be granular enough to identify unsustainability risks at the individual project level);
- Structure of equity markets, which are focused on shareholder returns and excessive turnover of portfolios, preventing meaningful engagement with companies; and
- Ensuring transparent assessment of the full impacts of financed activities on local communities and ecosystems.

BOX 3.5 Private mechanism-related factors required to ensure sustainable financing in the blue economy

Examples of the possible gaps in private financing in the blue economy include the following:

- Limited awareness and understanding of the blue economy as a whole, also due to its novelty, the presence of terminological confusion (blue, ocean, etc.), and the different activities it encompasses (traditional/emerging), as well as a lack of transparent and publicly available data on global financing/investment flows in the blue economy;
- Current initiatives aimed at raising commitments towards and visibility of the sector for private investors are still limited, besides recent relevant actions promoted by the EU and WWF and some recent sectoral alliances (e.g. shipping);
- Lack of specific focus on the blue economy in most initiatives aimed at setting sustainable financing standards (including due to low awareness of the sector and the impacts it can have globally);
- Absence of strong demand for sustainable blue economy services (due to relatively traditional buyers either public or private), limits the availability of sector-specific insurance solutions in the market (these are typical dilemma for more traditional activities in the blue economy and also discussed in some of the case studies related to aquaculture, fisheries, shipping tourism);[87]
- The complexity of providing full impact assessments in such a diversified sector – with strong interconnection between marine and in-land ecosystems and impacts that might spread across seas to much broader communities – makes the need to identify way forwards for incentivising (or requiring) specific assessment tools and approaches even more challenging;
- Limited monitoring of blue economy private investments and challenges to define ways for the monetisation of blue economy related data are particularly relevant aspects to be addressed in order to leverage sustainable private investments in the sector more globally.

Concrete examples of financing-level factors as emerging from the case studies

The interplay between public and private financing factors emerged from the case studies provided with this study. As for the context-level factors, an illustration is provided in the box below, suggesting how they can in practice prevent fully sustainable financing across blue economy / sectors.

BOX 3.6 Case study extracts: financing-level factors hindering sustainable financing in the blue economy

Few incentives in East Asia to promote a sustainable shipbuilding transition

Green shipping development can be hindered by unsustainable financing, as is seen in East Asia, resulting from a mix of **ineffective public finance** (e.g. due to perverse incentives which favour economic subsidies to 'traditional' practices, rather than investing in innovative technologies and renewable sources of energy), as well as the **limited appetite of private mechanisms** (e.g. a lack of incentives to invest in more efficient and innovative means of maritime transport due to high perceived risks, or the higher transaction costs of more innovative investments).

Coral reef degradation due to maritime tourism development in Belize

Public and private investments in coastal and maritime tourism aim at ensuring economic growth, but do not always explicitly address the preservation of local ecosystems and the natural capital for marine and coastal areas, which are essential resources for local communities and the main assets for the tourism sector itself. This is the case for the tourism sector in Belize, where **investments target economic growth without a clear focus on environmental sustainability**. This is also happening due to **serious constraints in the quality and availability of environmental social and economic data**, which prevents policymakers and potential investors from making more informed decisions.

Environmental and social impacts of touristic transport in the Cayman Islands

Like for the case above, in the Cayman Islands public and private **investments focus on economic returns and job support, despite the potential negative impacts on the marine environment** and the smaller businesses that are dependent on it, as put forward in local environmental impact assessments. This is often the case because **smaller businesses are not as appealing to investors** and (at times) policymakers as larger businesses that offer higher financial returns. This often happens in small countries relying heavily on foreign direct investment.

Japanese fossil fuel subsidies: negatively impacting sustainable energy transition?

In the aftermath of the Tsunami crisis, Japan supported **harmful global subsidies to ensure internal energy production** and to contribute to the continuation of internal market activities. This in turn boosted unsustainable activities in some traditional blue economy sectors worldwide (e.g. fossil fuel exploration and exploitation). This is an example of national energy policy that, coupled with **limited transparency** on the investments made and high **internal political pressure** to pursue such investments, made the pressure of the international community hardly relevant (at least in the short term). On a positive side, as the case suggests, Japanese investments recently started to turn towards renewables. Additionally, in order to reduce the country's reliance on nuclear power and foreign energy sources, in 2018 the government pledged to boost the share of renewables in its energy mix from 16% to 24% by 2030.

North Sea Region: the complex transition towards investing in marine offshore wind

When it comes to innovative technologies, such as offshore wind and ocean energy, **investment risks** due to possible changes in regulations and potentially lower returns on investment (due to limited commercial uptake) **affect the decisions of investors who may pull out of potential financing in innovative areas** – at least in the short to mid-term. Such decisions may be reinforced by a lack of confidence and expertise in sectors where investors have limited experience, therefore making it **complex for them to fully take into account external investment costs such as (long-term) ecosystem impacts**. Such a situation occurs in the North Sea, where little commercial incentives exist for investment in more costly offshore wind renewables.

Integrating mangrove forests and shrimp farms in Vietnam

Poorly designed local subsidies for aquaculture in developing countries, coupled with a far too **limited public finance capacity** to boost sectoral reforms, may result in a **lack of incentives for private investments** in innovative and sustainable aquaculture models. This could lead to missed opportunities for the sector, as a substantial lack of investments in sustainable and innovative business models makes the shift towards sustainable management and the use of more eco-friendly installations and equipment (e.g. in shrimp farms) extremely challenging, as it is the case in Vietnam.

BOX 3.6 Case study extracts: financing-level factors hindering sustainable financing in the blue economy (suite)

Ineffective investments in EU seaports

Public financing initiatives are often essential to boost sustainable and green ports. Although investments contributed to levelling the playing field and maximising ports' potential, small ports may **fail in getting necessary funds (a 'missed opportunity') because they are deemed financially unsustainable**. Additionally, investments in smaller ports may often be ineffective or unsustainable due to several factors (e.g. **a lack of coordination of public funds, duplication of projects in the same region, over-ambitious projects**). This has been the case in Europe where policy initiatives to create the European Single market have been critical for seaports and ultimately put ports' **development plans under pressure**.

Environmental and social consequences of increased fishmeal production in Senegal

Local processing and supply chains in Senegal have recently been influenced by foreign investors (mostly from the EU, China and Russia) interested in large-scale production of fishmeal and fish-oil. Consequently, there is an **absence of strong demand for local sustainable fisheries services as buyers turn towards recent and well established major actors** (i.e., fishmeal factories) and, for the local fishermen, fishmeal plants are more attractive customers than the locals, as the plants are buying in bulk and paying in cash.

Misuse of funds dedicated to the development of Mozambique Tuna Fishery

In Mozambique, private banks backed up by public authorities provided **financial support to large companies in one of the traditional sectors** (fisheries). As such, less support is allocated to small sustainable blue economy services. In this specific case, the **lack of sufficient monitoring and prevention measures**, both by the banks and at the governmental level, against the misuse of both public and private funds, led to immense **fraud and bribery** that defrauded the project's investors and adversely impacted the economy of Mozambique.

Source: ase studies: Few incentives in East Asia to promote a sustainable shipbuilding transition, Coral reef degradation due to maritime tourism development in Belize, Environmental and social impacts of touristic transport in the Cayman Islands, Japanese fossil fuel subsidies: negatively impacting the sustainable energy transition?, North Sea Region: the complex transition towards investing in marine offshore wind, Integrating mangrove forests and shrimp farms in Vietnam, Ineffective investments in EU seaports, Environmental and social consequences of increased fishmeal production in Senegal, Misuse of funds dedicated to the development of Mozambique Tuna Fishery.

3.4 Addressing unsustainable financing practices: getting the sequencing of factors right

Unsustainable finance practices do not merely result from single factors, but rather their interplay.

The balance of positive/negative of factors at play affects the chances for un/sustainable blue economy activities (or missed opportunities) being financed. Unsound policy frameworks and unappealing blue economy market conditions result in potentially high financial risk and limit the appeal for investors to further assess specific companies, value-chains or sectors. The ability to set-up effective public and private financing mechanisms with proper targets, aims and monitoring systems affects the extent to which sustainable results are achieved. In further assessing these factors, and using the inspiration from the case studies carried out for this study, as well as the accompanying study on sustainability criteria,[88] we therefore consider it valuable to present the right sequencing in which such factors should be assessed – to better understand unsustainable finance practices and how to properly address their root causes.

A sound and transparent blue economy market (factor 2) is the key element to ensure sustainable investments.

Financial sustainability therefore begins with a quality analysis of local investment prospects, as well as trends of growth and expected returns for investments in different economic activities in the sector. Greater sectoral visibility should be a priority for local blue economy actors and relevant institutions, as a way to attract interested global financial players. Sound business models are essential to take full account of economic, social, environmental impacts as well as a range of local considerations. To ensure a strong understanding of the challenges and opportunities ahead for the sector in a specific context, preliminary (public) investments are pivotal – e.g. studies, research, market analysis and/or demonstrations, all tailored to a specific context as a prerequisite for the full sustainability of any blue economy investment projects. Focus of such analysis should be both the need for reconversion of large and traditional activities losing their competitiveness and the potential emerging niches and their need for financial support in order to prosper, as well as the overall status of current and future development of the sector, vis-a-vis the sustainability of the impact foreseen for local communities and ecosystems.

Sustainable financing requires that the regulatory framework is predictable, stable and transparent (factor 1).

To foster a strong and sustainable blue economy, a sound framework needs to be put in place at national, regional and local level alike. In the case of the blue economy, (building) permits, licenses and concessions are key – and these tend to be issued often by

local governments. Having such predictability, stability and transparency allows investors to properly assess the feasibility and viability of their projects – in both short term and longer term. Such a regulatory framework needs to be enforced too, so that a level playing field is created amongst economic actors, whether local or foreign. Put in other words, these are the framework conditions in which the financing mechanism operates. The bigger the challenges/gaps identified in the regulatory framework, the higher the risks for private investment and the chances of maximisation of short-term investment returns (rather than longer-term support to strategic activities). Moreover, poor framework conditions raise the chances of costly (mitigation) measures being needed to ensure the successful financing of a project, which in turn raises investment costs.

Indeed, a sound policy framework is a crucial factor in actual financing practices becoming sustainable. This is also an aspect which reduces transaction costs in foreign and local financing practices in the blue economy. Put bluntly, global regions with a stronger institutional and policy frameworks and overall rule of law (e.g. OECD countries) are expected to be less exposed to overall corruption, financial malpractices and unsustainable financing than emerging and developing economies. This makes certain oceans and seas more at risk of unsustainable financing, due to a lack of countervailing powers – i.e. no administrative procedures in place to assess financing and (overall) administrative mismanagement, poor balancing of powers through democratic and transparent scrutiny of public and private activities by independent parties (e.g. agencies) and the civil society at large. It is clear that the risk of irregular practices including corruption is higher in the absence of strong oversight and commitment of all actors involved in financing practices in the blue economy.[89] This is also a concern for areas beyond national jurisdiction and areas which are not covered by national regulations and hence exposed to international disputes, etc.[90]

Only if public finance mechanisms (factor 3) are aligned with the regulatory context (factor 1), 'carrots and sticks' can effectively add-up.

Public finance mechanisms (including subsidies, loans, guarantees, etc.) as well as public investments can help to make private investments financially affordable/profitable in areas with high potential returns for local communities and ecosystems, but where investments risks are high and financial returns relatively uncertain for private actors. While private investment strategies aim to maximise their financial returns, hence often privileging 'easy industries' (i.e. large-scale industries that have potentially high returns on investment), public sector incentives (as well as public investments) are essential to attract greater sustainable private investments. Certain public investments or support schemes may attract a very specific type of entrepreneurs, opportunistic and principally concerned with obtaining short term advantages from public sources. From the very beginning, these investments may entrust projects that are not necessarily aimed to become fully profitable but keep relying on public funds. Therefore, the detailed designs of public finance mechanisms and sound public investments are essential to attract the right 'sustainable' types of investors and investments. Furthermore, such investments can only be expected once these public finance mechanisms and public investments are fully aligned with the above incentives provided by the broader regulatory framework. As stated above, carrots and sticks need to add up – and pull or push investors in the right direction.

Implementing sustainable investments certainly requires sustainable private finance mechanisms (factor 4) to be in place and working.

It is vital for private investors to 'live up to expectations' and to measure the performance of their investments, for themselves but also for the stakeholders they rely on. Long-term feasibility and viability require real value to be created, allowing for longer term economic development, satisfying investor returns, and creating a basis for satisfying workers and clients alike. But a broader set of sustainability criteria needs to be adhered to as well: therefore it is important to measure not only economic but also environmental and social performance on the ground – so that all stakeholders can be assured that progress is made on the ground in driving forward a sustainable blue economy. In its turn, this information can be used to reinforce reliability vis-à-vis governments, citizens, clients, employees and other stakeholders; they provide a basis to promote sustainable practices; adjust and correct business practices where needed; and provide more data, know-how and practice for deriving future sustainable business models and plans – thus benefiting local businesses, communities and ecosystems simultaneously.

But an effective public-private cooperation in the field of the blue economy is also pivotal for public (factor 3) and private (factor 4) financing to reinforce each-other.

Public incentives and private leveraging are therefore essential to ensure fully sustainable investments in the blue economy globally. This can take place through formal or informal public-private partnerships, but also through structured dialogues. Our own experience in economic development shows that there is a level of 'orchestration' between public and private actors as well as civil society in 'places that work'. Sustainable financing is unlikely to materialise if public and private mechanisms are not integrated and well-designed, and there is no shared vision of the expected results to be monitored through a shared set of targets and performance indicators (in terms of financial but also economic, social and environmental results).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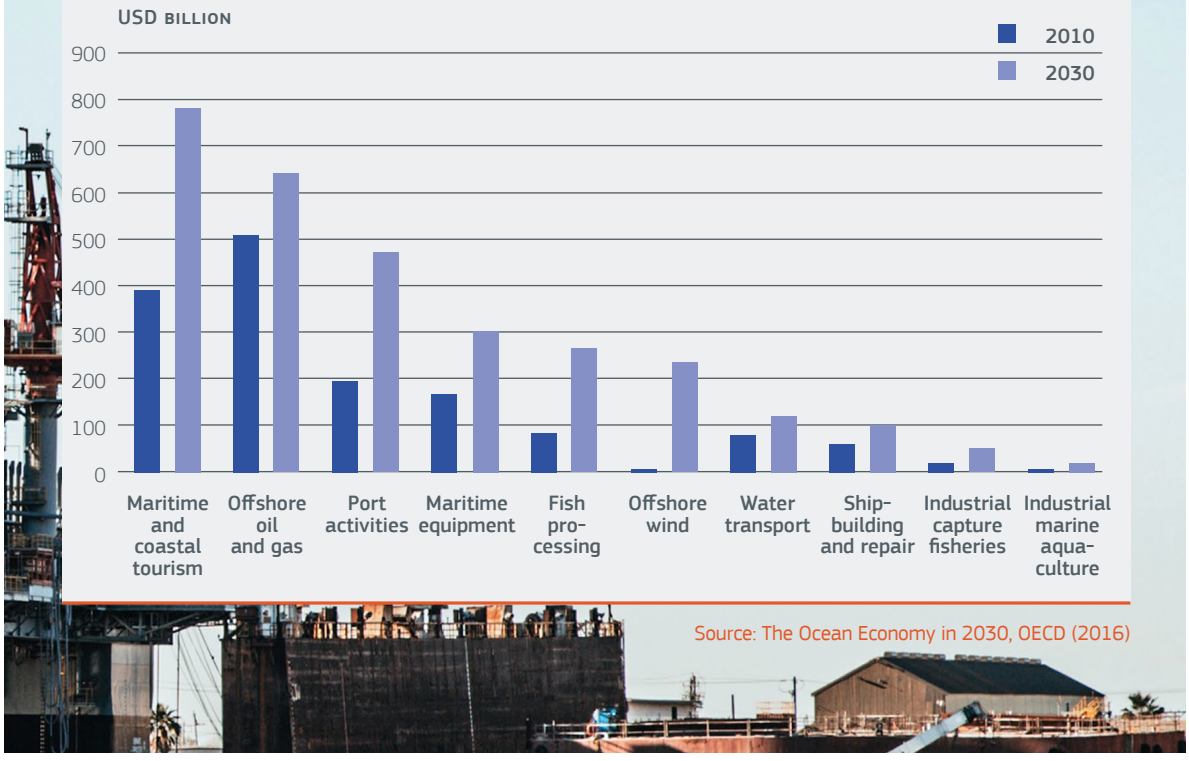
PART 4

HOW MUCH AND WHERE: UNSUSTAINABLE FINANCING PRACTICES ACROSS OCEANS AND GLOBAL REGIONS

4.1 A SIMULATION ON POTENTIAL UNSUSTAINABLE INVESTMENTS IN THE BLUE ECONOMY

If virtuous versus vicious dynamics are key to (un-)sustainable finance in the blue economy, then a thorough analysis of such dynamics is required. Unfortunately, such an analysis is hindered by a **substantial lack of consistent, coherent and specific data on global financial flows and the actors involved** – i.e. across oceans and value chains. Nevertheless, some initial proxies can be used to attempt to estimate of the overall volume of (un) sustainable financing flows in the sector.[91] Aggregated trends on the performance of the blue economy globally have existed since the publication of the OECD Ocean Report (2019),[92] notably assessed prior to the COVID-19 pandemic, with a **suggested scenario that included the doubling of gross value added (GVA) for the blue economy between 2010 (about 1.5 trillion) and 2030 (about 3 trillion)**. A breakdown is also provided based on the most relevant current activities in the blue economy (figure below), but without regional patterns.

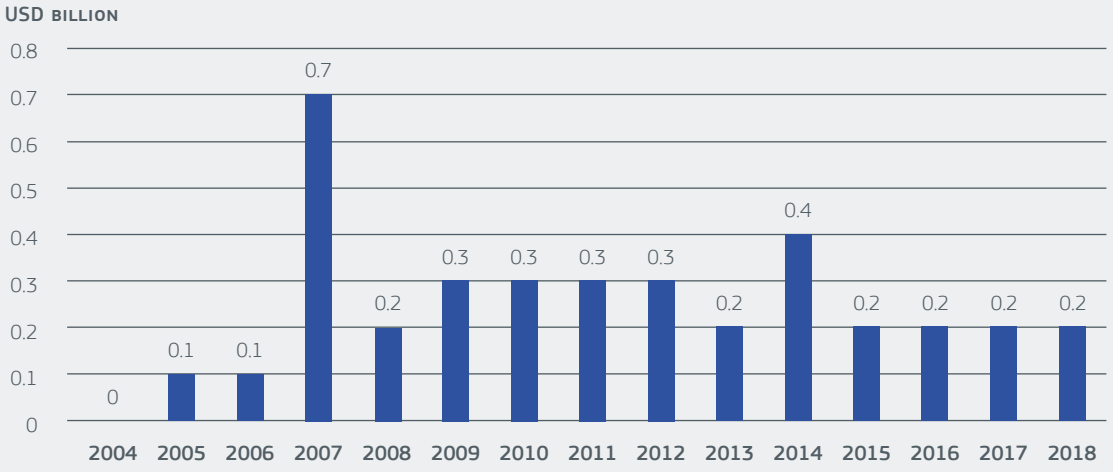
FIGURE 4.1 Overview of industry-specific value added (2010-2030, billions $)



Source: The Ocean Economy in 2030, OECD (2016)

Investments in the blue economy are expected to increase – more so than overall investments shown in previous graphs – which makes the ocean economy relatively more important over time. Additional sources reinforce this expectation, while suggesting that the global marine biotechnology market is also expected to double between 2017 (3,1 billion) and 2024 (5.75 billion).[93] This is due to the rising usage of marine biotechnology in various industries, advances in drug discovery and growing expenditure in R&D activities.[94] It is not possible to back such bold expectations with an actual analysis of recent trends, as the broader range of investments for the different activities in the blue economy are not available. However, if we look at some fragmented evidence – including the review of investments in marine energy, illustrated below – we note that **actual investment patterns in the blue economy reflect the overall patterns** discussed earlier in this section.

FIGURE 4.2 **Investment trends in ocean energy technology worldwide (2014-2018, billions $)**



Source: STATISTA (2020)[95]

Based on the only available source of reliable evidence on the potential growth of the blue economy in the future decade (OECD, 2019), we attempt to provide an indication of the amount of investments required to sustain the foreseen growth rates of GVA and the potential amount of unsustainable financing involved. The estimate is built on the following proxies: investment on GVA ratio (EU Blue Economy Report, 2019)[96] and the unsustainable share of investments (Global Alliance for Sustainable Investment Report, 2018)[97] – see box below.

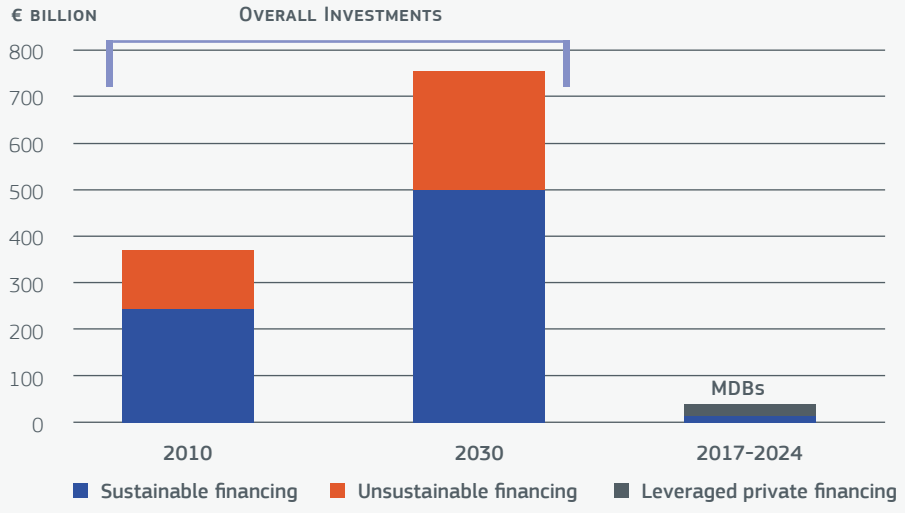
BOX 4.1 Estimates of the share of unsustainable financing invested in the blue economy

In the absence of reliable and structured sectoral data, we can provide a **proxy for the possible investments mobilised to sustain the blue economy growth of about 370 billion in 2010 to 750 billion in 2030** – based on OECD data and the blue economy investment/GVA ratio.[98] This amount may represent 12% of the about 6.5 trillion of global investment needed each year to address global development goals by 2030 – as estimated by recent OECD studies.[99]

If we apply an average global unsustainability ratio[100] – and assuming no change in the current rates of unsustainable financing in the absence of active policy action – we **estimate total unsustainable financing to the blue economy of about 125 billion in 2010 and about 250 billion in 2030**. This estimate assumes the average growth of the blue economy as a whole, based on the average growth of its various economic activities or a balance between some activities growing faster and others that are not. The estimate also does not factor in the possible scenarios in the post COVID-19 recovery, as at this stage they are unclear and may possibly require a dedicated study.

As a result, such an estimate is proposed as a reference for the possible magnitude of the problem, rather than an accurate prediction of the uncertain future ahead of us. With such caveats in mind, if compared with the volumes of unsustainable financing estimates for 2010 and 2030.[101] the **public finance currently mobilised and the additional private flow leveraged through development banks appear extremely limited. They remain anyhow essential in providing financial support to pivotal initiatives in areas of high financial risks but strong overall societal (and ecosystem) returns.**

FIGURE 4.3 Estimates for sustainable and unsustainable finance in the blue economy (2010-2030, € billion)[102]



Source: Calculations based on proxies (as declared in this box and in the footnotes)

METHODOLIGICAL DISCLAIMER: The assumptions behind the figure above are based on: A. GVA (OECD estimates for GVA in 2010 and 2030); B. Investments/GVA (EU estimates for the ratio of investments on GVA in the blue economy); C. Unsustainable/Sustainable Financing (ratio of the amount of unsustainable financing as part of the global private financing across sectors by the Global Alliance for Sustainable Investment). Unsustainable financing in the blue economy is therefore estimated based on a formula (A * B * C). The ratio proposed by EIB for leveraging private financing in the blue economy (D) is also factored in, so to estimate the amount of private finance leveraged by (E) Development Agencies finance (ΣE * D).

4.2 Patterns in unsustainable financing for the blue economy in regions across the world

The lack of secondary data becomes even more severe when looking at the specificities of the blue economy.

A limitation of the analysis is the lack of harmonised and substantial secondary sources to assess unsustainable practices (and unsustainable financing) in the blue economy worldwide. Also, a **general reluctance to share bad practices and unawareness of regional patterns emerged in the interviews**, with limited response from the industry. A range of global voluntary frameworks exists of course – including the Principles for Responsible Investment, the Principles for Responsible Banking and Principles for Sustainable Insurance, the Network for Greening the Financial System and Sustainable Insurance Forum. These are further assessed in Chapter 6 (and detailed in Annex), while some regional patterns are now illustrated.

The Atlantic Ocean is mainly dependent on investments from the EU, US, Latin America and the Caribbean:

- EU investments certainly pave the way towards a (sustainable) diversification of marine and maritime economic activities at the global level by putting in place a range of strategic initiatives to finance sustainable blue growth.[103] It has strong support for a diversified sustainable blue economy (traditional and emerging sectors) in its Blue Growth Strategy,[104] including through the support of a 'Platform for sustainable finance' resulting from the EU Taxonomy Regulation.[105] EU support shows a strong focus on integrated maritime policy, marine protected areas and maritime spatial planning, as well as a tailored approach across various sea basins.[106] European investments have been increasingly supportive of overall framework conditions and the sustainability of impacts from the supported activities. They are increasingly looking at the blue economy as an area for soft diplomacy. However, different dynamics emerge with respect to the **different EU sea basins**, which are also influenced by the decisions of autonomous countries within and outside the EU. In the North Sea, for example, the UK ambiguity in fostering renewable energy investments (e.g. offshore wind)[107] while still retaining oil & gas as relevant sources of energy[108] – a pattern that may influence unsustainable energy investments in the region (and more globally).[109] Similarly, investments in unsustainable practices persist in the Mediterranean and Black Sea (with recent promising commitments),[110] including overfishing, amongst others.

- **United States investments** in the blue economy are traditionally strongly focused on market-driven ocean business activities. However, more recently, the US Government has tailored its support towards a sustainable blue economy.[111] Its extensive network of ocean, coastal, and inland waterways, harbours, and seaports supports $4.6 trillion of economic activity each year. The US is also the largest producer of captured fish,[112] yet it maintains a $14 billion seafood trade deficit. The federal administration is planning on reducing the deficit through the 2019-2022 National Oceanic and Atmospheric Administration (NOAA) Fisheries Strategic Plan, also taking into account sustainability aspects.[113] In other sectors such as renewable energy the US is well positioned, while specific investment in the blue energy itself are still limited – but with a positive prospect ahead.[114] Although the US Government is currently neglecting environmental sustainability measures, the interest of companies and private investors in responsible investment grows.[115]

- In **Latin America**, fishing and aquaculture contribute around $ 15 billion to the regions gross domestic product (GDP) and employs around 275 million people.[116] The region also invests heavily into tourism, particularly in the Caribbean. However, unsustainable fishing, increased eutrophication, poor wastewater treatment, farmland runoff and population growth, led to 3-5 times the deforestation rate of the mangroves in comparison to terrestrial forests.[117] To date, eight Latin American countries have issued green bonds.[118] In terms of financing the blue economy, the Caribbean is leading the way,

with the Organisation of Eastern Caribbean States having implemented A Caribbean Regional Ocean policy in conjunction with the World Bank to facilitate cooperation for the transition to a blue economy.[119] A number of interesting public-private partnerships to co-manage marine Caribbean areas are also underway and the region participates actively in several global blue finance initiatives.[120]

THE **PACIFIC OCEAN** IS DEPENDING ON INVESTMENTS ORIGINATING IN THE US AND LATIN AMERICA BUT ALSO RECEIVES INVESTMENTS FROM EAST ASIAN AND PACIFIC COUNTRIES:

- **Japanese and Korean investments** are heavily supporting the blue economy, especially in shipping[121] and marine biotechnologies.[122] Japan and South Korea are considered as progressive countries when it comes to sustainability matters with impacts on ocean health. Japan has also launched the 'Marine Initiative' to support developing countries' efforts, including their capacity building and infrastructure development in waste management and the development of a marine litter technology in cooperation with other Asian countries.[123]

- **Australian investments** are paving the way in terms of sustainable blue economy support in the Pacific, although it faces challenges coming from the shipping sector in which investments are needed.[124] A $700 million investment programme targets clean energy projects in the Great Barrier Reef catchment area.[125] Australia also has the world's third largest exclusive economic zone (EEZ) with access to the largest seafood and energy markets. The Cooperative Research Centre, a collaboration between 45 national and international partners from industry, research and federal government, is tasked with developing new offshore aquaculture and renewable energies.[126]

THE **INDIAN OCEAN** IS MAINLY DEPENDENT ON INVESTMENT PRIORITIES OF INDIA AND EAST AFRICAN COUNTRIES:

- **Indian investments** in the blue economy are following an interesting 'cluster strategy' in regard to ports with a clear focus on sustainability, by creating synergies between sustainable research, infrastructure development, renewable energy, coastal tourism and the preservation of local communities, etc.[127] India has invested $ 15.8 million to develop 23 port-led communities integrating all types of infrastructure (soft and hard) for the promotion of fisheries and coastal tourism.[128]

- With respect to **African investments**, weak fiscal structures and legislative vacuums have resulted in illicit financial flows that allow for the perpetuation of criminal activities, such as IUU, piracy, illicit trafficking of goods and people and environmental crimes.[129] A number of blue economy activities are becoming increasingly promising sources of development for the continent[130] – if not well managed, these activities may increase the pressure on ecosystems and negatively impact local communities, rather than supporting sustainable growth and social inclusion. Investments are needed to improve capacity, particularly in port infrastructure and the tourism sector.[131] There is also a need to increase awareness of the blue economy – in the context of development policy and that of the green economy.[132]

Unbalanced **relations between developed and growing/emerging economies** also importantly shape the blue economy financing patterns globally. Patterns of (un)sustainable growth in the blue economy for oceans where developing countries are located (Indian Ocean, Pacific Ocean, etc.) are still largely dependent on the financing decisions taken in foreign countries: imports of plastics (legal and illegal), overfishing, energy policies and related global investments, etc. – with some examples provided in the case studies. Ocean governance and international policy coherence are essential for sustainable financing in the blue economy.

THE GROWING **GLOBAL INVESTMENTS** OF RUSSIA AND CHINA SHOULD ALSO BE CONSIDERED KEY DRIVERS FOR THE BLUE ECONOMY:

- **Chinese investments** have been characterised by an aggressive approach which aimed at maximising opportunities for Chinese companies, including through national subsidies, often without a clear focus on the quality and overall sustainability of investments.[133] Chinese investments in the green economy (i.e. green credits policy)[134] and in the blue economy are growing, especially in the shipping sector, with a growing but still limited commitment to ensure sustainable financing.[135] However, more recently, sustainability concerns have started penetrating the general Chinese investment sphere, as exemplified by take over plans by major Chinese enterprises active in the field of renewable energy.[136] An increasingly global leader when it comes to investment, China is developing an ambitious investment agenda towards the Arctic, Europe (Silk Road),[137] Africa (although mainly inland so far) and in Latin and Central America (e.g. by investing in trade and shipping).[138]

- **Russian investments** in the blue economy are growing in relation to the food industry and in relation to the exploitation of resources in the Arctic, but with little progress so far on the sustainable investment front.[139] The Arctic interest is also driving Russia to impose administrative barriers with the intent of giving Russian ships the exclusive right to transport oil and gas along the Northern Sea Route.[140] Russia is also planning to invest in port facilities to accommodate rising sea freight levels, with several major infrastructure projects planned.[141] Recent agreements also position Russia as a key player in Africa.

Sustainable financing in **transitioning and emerging economies** is essential for a fully sustainable blue economy:

- **African investments** are still limited, but recent commitments have shown the high potential in attracting streams of financing (internal and foreign) to boost blue economy development – for example, during a recent blue economy side event held at the 7th Tokyo International Conference on African Development, African governments agreed to reap maximum benefits from utilising seas, oceans, lakes, rivers and other water resources for sustainable socio-economic development.[142]

- Other **transition economies** are also challenged by still limited (sustainable) financial support in the area, but with an increasingly diversified range of actors potentially interested. These include multilateral development agencies such as the World Bank,[143] market solutions like the Bond Markets or blue bonds of Seychelles,[144] local private sector in the hospitality industry (such as in the Caribbean and other areas of water sports),[145] as well as other domestic resources as in ports and rivers (e.g. Tanga in Tanzania[146] or the Caribbean).[147] These are often sectors with a history of foreign and local investments mobilised traditionally, but with an emergence of sustainable financing aimed at maximising local impacts and sustainable returns.

- **Fragile coastal countries including Small Islands Developing States (SIDS)** will also be particularly exposed to pressure due to the local effects of climate change; to adapt to and mitigate such effects they will also increasingly need tailored financial support – both public and private[148].

PART 5

WRAP-UP: SUPPORTING A SHIFT AWAY FROM UNSUSTAINABLE FINANCE FOR THE BLUE ECONOMY

5.1 Actions to support a transition towards a sustainable financing in the blue economy

A number of actions should be put forwards to influence the transition towards sustainable financing in the blue economy. These aspects should be reflected upon when identifying effective recommendations for policymakers and financing actors.

Address the factors behind the persistence of unsustainable financing in the blue economy

As stated in Chapter 3, the limited availability of financial support to address the needs of a sustainable blue economy is driven by four (main) types of factors that can act (and be identified) at two different levels in each financing practice. Notably, the interplay of all those factors results in either positive/virtuous or negative/vicious cycles of (un-)sustainable finance practices.

Properly engage with those mechanisms and actors involved in unsustainable finance in the blue economy

A great diversity of financial mechanisms (and possible interplays of financial products and actors, both public and private) is in place globally – including those more specifically targeted to sustainable results and more specifically to the blue economy.

Financial actors in the private sector (Commercial Banks, Insurance companies, ECA, etc.) play an important role in supporting investments in certain markets, although the current trend is to cut investment costs and risks to allow for greater returns on their investments. Public funding also plays a pivotal role (Governments, MDBs, etc.), particularly for large infrastructure investments, the intangible support provided to early stages of research and innovation, including support to skills, and capacity and knowledge transfer. Private investors and direct governmental subsidies account for a larger part of global financing flows, and as such are extremely relevant in supporting the current and future growth of the blue economy. Also, insurance companies are essential actors to address issues of financial risks and for strengthening the overall sustainability of private investments in the blue economy.

Although a clear picture is not available due to substantial lack of secondary data, anecdotal evidence suggests that private financing mechanisms and public subsidies may constitute the bulk of unsustainable financing for the blue economy. In this context, MDBs play an important role in triggering global investments for a sustainable blue economy (as discussed in Chapter 2 and Chapter 4). This trend could potentially have strong effects in leveraging private lenders behaviour towards an even greater shift in sustainable financing.

Private investors and direct governmental subsidies account for a larger part of global financing flows, and as such are extremely relevant in supporting the current and future growth of the blue economy.

Recognise the specificities of financing needs and practices across global oceans and sea-basins

Oceans are exposed to different challenges depending on the specifies of continents and countries relying and exploiting their resources and the extent these oceans are subject to national or international regulatory framework (deep-seas vs sea-basins). With respect to the blue economy specificities of each ocean, some traditional sectors might be exposed to vested economic interests, with higher pressures to get economic returns compared to social and environmental externalities. Other emerging/embryonic sectors (or emerging sustainable/circular technologies/models) are less visible to investors and hence less able to attract needed financial support. An overview is provided in Chapter 4.

Promote consistent and coherent terminology, data and financial analysis for the global blue economy

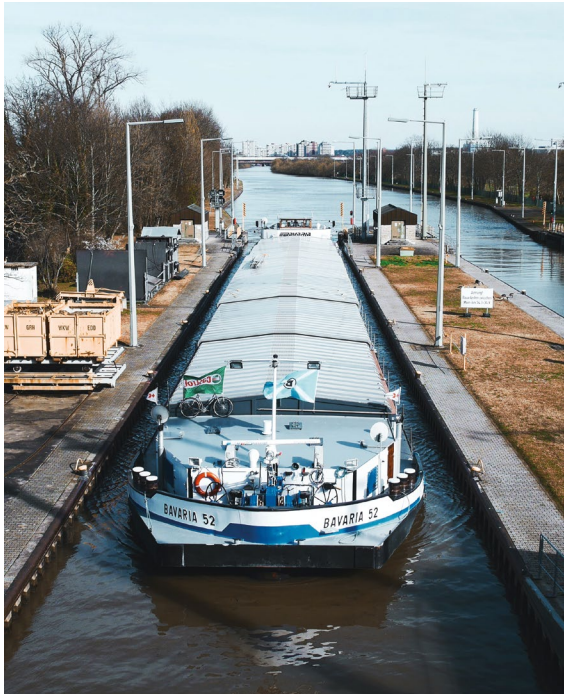
Differences emerge in the patterns and risks of unsustainable financing across sectors and global regions/oceans. Also, any coherent analysis for the sector is hampered by a persisting lack of private investments' data, clarity and harmonisation across an existing definition of blue economy (EU), ocean economy (OECD, World Bank), a focus on blue economy as mainly fisheries and aquaculture (UN-FAO) or rather a broader range of activities (EU, World Bank). This lack of harmonised approaches and concepts does not favour a proper understanding either – ultimately, it contributes to the general unawareness and misunderstanding of the sector by the financing sector.

5.2 Approaches to support financial institutions financing a sustainable blue economy

A few relevant areas for support to financial institutions have emerged – as illustrated in the following paragraphs.

Addressing gaps in the level of disclosure, standardisation and independence

With over 2,000 investors signed up to the Principle for Responsible Investments (PRI)[149] who disclose on the implementation of the principles annually, disclosure levels of financing are improving globally – including in relation to climate change reporting. Banks and large enterprises also made some commitments following the release of Task Force on Climate-related Financial Disclosures (TCFD) guidelines in 2017,[150] but this effort is concentrated on a narrow segment of sustainability and is far from representing the range of disclosure needed, particularly with respect to sustainable practices in financing blue economy activities.[151] Even though disclosure is intensifying, the mere fact that it remains essentially based on voluntary reporting makes standardisation a necessity.



According to the survey of the World Resource Institute,[152] the terms and definitions of sustainable finance commitments vary considerably across banks. While Principles for Responsible Banking[153] signatories are expected to report, their first year of disclosure will be late 2020/2021. A minority of the S&P 500 banking index[154] recognises an integrated reporting framework. The Global Reporting Initiative has developed integrated reporting standards that could provide a good basis for a standardised approach to reporting.[155] Another concern when it comes to reporting is the potential lack of objectivity.[156] Indeed, most reports lack external verification (included in only 36% of sustainability reports). These aspects and limitations pose relevant doubts and questions with respect to the role of audit and 'lines of defence' of institutions, in the evolution of sustainable financial practices in relation to the blue economy. Action should be taken to improve global commitments of the financing sector.

Current efforts in fostering transparency might also consider ways to better **promote the role of demand and consumption of sustainable products and services related to the blue economy**, as a leverage to foster sustainable practices and sustainable financing in the sector. In this respect, there is room for further support towards the adoption of ESG standards as quality labels for companies to appeal to their clients (retails, consumers) as part of business-to-business (B2B) and business-to-consumer (B2C) transactions. This is an area where policy actions (regulations, soft incentives) can be further investigated.

Addressing gaps in the quality of assessments of sustainable impacts of investments

While sustainability reporting is becoming the norm for many investors at the global level, greater efforts should be put towards the **establishment of rigorous and thorough practices in impact financing in the blue economy**. Despite some relevant global efforts – including tools/approaches, such as those under the Impact Management Project,[157] Positive Impact Finance Initiative[158] and Global Impact Investing Network,[159] etc. – sustainability impact assessments conducted by financial institutions are extremely complex and difficult. While they entail putting the correct value on complex assets (e.g. what is the value of coral reef when assessing the impact of a shipping finance operation), they are **essential tools to ensure the positive impacts of financing practices**. Interviewees explained that any miscalculation – including through the negligence of valuable social and economic externalities – could have important distortive implications and create perverse incentives. Here, again, the impact assessments that are carried out by financial institutions are rarely disclosed. More importantly, they vary from one institution to the other in terms of methodology, thereby making it difficult to rely on existing assessments and to come to a conclusion on their relevance.

Poorly conducted impact assessments have implications for financial institutions exposed to financing positive and negative activities in the blue economy. At the same time, the complexity of a full assessment of the social and environmental impacts – direct and indirect – might go well beyond the financial interest of investors and might imply their reluctance to invest in the sector. The **role of public incentives, for example as part of public-private partnerships and blending initiatives by Development Agencies, could be significant in fostering this practice** – for example by providing additional resources or supporting the higher investment costs for private bodies through additional resources in areas of high public value. In this context, greater focus may be put on achieving net positive outcomes rather than absolute positive impacts – to maximise trade-offs and gradually move private investments towards optimal allocation. Impact assessments could, for example, be made mandatory for private investments when leveraging public money – as an essential incentive to reduce the risk of such investments.

Impact assessments are technically challenging, and few banking institutions have the capacity to carry out net positive impact assessments.[160] Whilst negative impacts are typically captured through environmental and social screening processes using risk-based approaches, positive impact measurement is much more complex. Indeed, the latter requires an understanding of how much positive social and environmental change (or climate change adaptation/mitigation) has occurred. Another difficulty, characterising impact assessments in the blue economy, is the limited information available on the risks incurred in sectors impacting the blue economy. Assessing the risks of an investment is particularly tricky when it comes to the unintended or indirect consequences of the project it finances. To boost such essential actions, **a common understanding of how to value the natural capital this economy relies on and the risks linked with a loss of value still needs to be developed**.

In this area, it is certainly important to emphasise the role of environmental sustainability, as an element to reduce the risk of long-term investments and to ensure those externalities are considered within the decision making processes of financial bodies – a pioneering activity is being promoted by the WWF[161] and United Nations Environment Programme Finance Initiative (UNEP FI)[162] to factor environmental unsustainability as 'value at a risk' as part of financial investment models. At the same time, **while stressing the environmental and social impacts assessment, it is also important to retain the relevance of local economic/financial sustainability** (i.e. the transformational elements in our definition) – as sustainable financing also means creating local financing streams to support local innovation (and to avoid total external dependencies). All of these aspects should be duly considered.

Considering **net positive outcomes of impact assessments** is better than focusing on impact targets which leave only a small margin of improvement. A net impact approach is a way to identify, measure, value, compare and set targets in relation to environmental, social and/or economic impacts, both positive and negative, that a project has had over a period of time. The net impact assessment concept has become increasingly established within the extractive industry, especially with regard to biodiversity.[163] Both positive and negative impacts of an activity are considered so as to avoid or reduce negative impacts and increase positive impacts (on biodiversity). The result should be positive in order to make the decision to invest.

Aside from integrating the indirect and potentially unsustainable consequences of an investment in the blue economy by acting on interest rates, the pricing of an asset or the rate of an insurance premium, the financial sector needs to share the taxpayers' burden by **taking all measures necessary to mitigate any indirect risks**, in collaboration with governments, if possible. The establishment of funds dedicated to mitigating the indirect, unsustainable effects of investments could be a solution. For instance, investors' interest in coastal tourism should consider the indirect risk of overpopulation within the concerned regions, including the risk of destroying ecosystems.

A pioneering activity is being promoted by the WWF and United Nations Environment Programme Finance Initiative (UNEP FI) to factor environmental unsustainability as 'value at a risk' as part of financial investment models.

5.3 Finance-related policy measures/incentives for sustainable blue economy activities

A number of relevant areas for policy support have also emerged – as illustrated in this section.

Addressing gaps in knowledge, market analysis and overall policy framework (ocean governance)

A key role could be played by public financing towards a **better analysis and understanding of local challenges, potentials and returns on sustainable investments in the blue economy**. This is essential to move away from bad practices and to better address emerging opportunities for local businesses and other organisations active across the specific value chains of the blue economy. **Greater consistency in reference to the blue economy concept should be fostered at the global level.** Financial resources and technical assistance should be ensured to support greater capability across various regions and oceans to **foster accessible data and knowledge on the blue economy** in each specific context (e.g. different oceans, sub-regions and even at country levels) – including through addressing substantial gaps of business cases for pivotal technologies and new business models at the local levels – as an input to assess investments risks and potentials.

In this respect, a whole stream of support from **public finance should allow the assessment of natural capital embedded in the blue economy** as an input into the assessment of 'value at risk' as part of public and private financial investments.[164] Such information, if available, would allow a bank or an investor to determine whether the business/activity to be financed is sustainable in regard to the natural capital on which it relies. This information seems essential for the financial sector to be in a position to develop investment strategies that take the sustainability of the blue economy into account. While sectoral and geographical analysis tools[165] are slowly emerging in the financial sector, most businesses and investors – active or potentially interested in the blue economy – are ill-equipped to fully understand the impact of their investment decisions on the value chain of the sectors in which they are working. This is a stream of action that clearly requires greater support to local actors in showcasing their opportunities, but also in providing robust socio-economic and environmental analysis of the concrete practices, dynamics, risks and opportunities at the specific ocean and basin levels.

Furthermore, **regional intermediation platforms (e.g. accelerators) and regional sustainable financing mechanisms are needed** to allow for the intermediation of large amounts of financing in the blue economy (to ensure upstream returns on investments) and small-scale local investments (to ensure downstream feasible experimentation and access to finance through time for local SMEs and other local actors involved in the blue economy at the local level). Some pioneering initiatives are emerging, including the EU Blue Invest Platform[166] and blue economy related accelerators,[167] but these should be further supported across global regions and oceans to be fully effective worldwide. This could result in regional accelerators, incubators and innovation platforms which could reflect and address the concrete specificities of the blue economy in each ocean and even at the lower level (e.g. South-East Asia, West Africa, the Mediterranean). In this respect, an opportunity is certainly provided by the existing bodies (regional clusters, etc.) which could be supported with new skills and missions, to avoid a duplication of existing organisations. Such 'intermediary' organisations can manage sustainable funds, for example in partnership with Regional Development Banks, but also

engage with businesses and actors in local/regional value-chains to identify their specific needs and to ensure the financial and technical support needed to address them – e.g. small financing voucher attached to counselling.

In an effort to **improve the quality of sustainability impact assessments conducted by the financial sector**, the taxonomy developed by the EU in 2020 is helpful because it provides indicators to assess the level of harm done to the environment, sufficient to exclude financial assets from what is deemed sustainable. This taxonomy is not yet targeting the blue economy, as it currently focuses on factors directly impacting climate change (like CO^2 emissions). Nevertheless, this is just the first stage of the taxonomy development, which will be expanded to wider issues (e.g. biodiversity to support the transition to a circular economy). The methodologies developed could therefore be adapted to various sectors of the blue economy. When setting the standards of sustainability impact assessments, policy makers should ultimately take a stand in favour of the environment.

Support to sustainable financing for the blue economy also implies **fostering a more ambitious global vision on sustainable blue economy**, and addressing the challenges related to the broader policy dialogue on ocean governance – including for deep-sea, where a lack of national regulations and international agreements may expose local ecosystems to higher risks of unsustainable financing practices. In this context, broader international support should be provided towards policy tools encouraging a diversified sustainable blue economy, including soft regulation and other non-regulatory measures such as the promotion of integrated maritime policy, marine protected areas and maritime spatial planning at the local levels. In this respect, technical assistance can certainly be furthered, building on existing activities (e.g. World bank PROBLUE)[168] and **mobilising blue economy specific global capacity building programmes** (e.g. DG DEVCO/International Partnerships) **targeted to support capacity building and policymaking of local actors more globally**. Ongoing policy dialogue initiatives at global and bilateral/regional levels should be strengthened to **achieve a common global approach, ambition and understanding/definition**.

Rethinking the 'sequence of capital' and the pivotal role for public investments and local authorities

As a result of the various streams of actions described so far, an essential function of policymakers is to support the rethinking of the sequence of capital required to foster sustainable investment in the blue economy. In this respect, the **relation between different actors and streams of financing (as discussed in Chapter 3.4) should be rethought**, so as to assess the specific added value of each actor. For example, if private investors remain essential for providing the volumes of financing required to achieve the ambitious scenarios put forward by the OECD for 2030 (Chapter 5.1), the insurance industry (depending on their ability to identify actual liabilities) has a crucial role in defining the value of natural capital and estimating the environmental risks caused by climate change and unsustainable practices in the blue economy.[169] And yet, their active role would depend on their ability to identify actual liabilities. Moreover, smart use of public finance is pivotal as an incentive or warrant to reduce the risk of private financing activities in areas with higher long-term societal returns (jobs, environmental quality, climate change adaptation/mitigation). It essential that public finance is used to reduce the risk of investments that are effectively in line with sustainability, to maximise the appeal for private investments in strategic areas and to mobilise additional private finance towards sustainable blue economy development worldwide.[170]

As discussed, it is difficult for private financing bodies alone to decide in regard to blue economy investments because these standards are still in the process of being defined and blue economy sustainability concerns are not yet clearly identified in this process. Common corporate disclosure procedures would allow investors to integrate strategic and operational information on the sustainability of business impacts into decision-making. However, corporate disclosure is not fully standardised at present. Therefore, while it provides useful information, it does not enable the establishment of standard processes for investment decisions. In areas with poor evidence of successful business cases and for which limited financial returns are foreseen in the short-term, and high risks are identified, it will be very challenging for investors to make final positive decisions. For commercial banks, there is typically less leeway than for investment banks in their choice of projects to finance, because they must face the competition from other banks willing to finance any bankable projects regardless of sustainability aspects. But **ensuring public incentives to certain projects** may raise their interest and decrease their financial risks, and hence may ultimately provide a valuable asset.

Besides a pivotal role in the sequence of capital required for triggering sustainable (private) financing in the blue economy, there is a lot of work to be done on **awareness raising, information sharing and on developing tools to assist financial players in identifying unsustainability risks** and sustainable alternatives. A number of actors have a leading role to play in supporting the proper assessment of local risks and potentials for the sustainable development of the blue economy globally – and as a basis for reducing the risk of investment and maximising areas with higher longer-term potentials for sustainable investments. However, advancements are slow and the role of local actors and public finance can make a significant difference.

At present, the value of natural capital in the blue economy is far from being established and such information may take a long time before it reaches the desk of the banking industry. As a result, given the urgency of environmental concerns in the blue economy, there is a need to be pragmatic about what can be achieved in the most efficient way and to prioritise policy actions. According to interviewees, the elaboration of tools enabling the recognition by financial actors of sustainability issues characterising each blue economy sector, as well as alternatives to financing unsustainable businesses/activities, currently seems to be the most direct way to achieve sustainability goals. Such **informative tools should then be integrated into the screening, proofing and other selection mechanisms/processes** – including importantly ESG integration in passive equity investments, environmental and social (E&S) risk assessments in corporate lending, net positive impact analysis, etc. – leading to fully informed investment decisions. When elaborating such tools, the specificities and market environment of each financial industry should be considered, as insurers, bankers and investors react to different incentives (e.g. portfolio approach vs. direct client relations) when making financial decisions. Further insights are provided in Chapter 6 (recommendations).

Finally, the **role and capacity of local institutions (e.g. local authorities) and quasi-governmental bodies** (e.g. concessionary for investment permissions) can play an essential role in improving local regulations, spatial planning agreements, overall analysis, understanding and publication of reliable market data. These are all essential components which would require strong institutional leadership at the local/regional level across the globe.

PART 6

WAY FORWARD: GAPS IN CURRENT INITIATIVES AND RECOMMENDATIONS FOR AN EFFECTIVE GLOBAL ACTION

6.1 Gaps in current measures based on the main needs discussed in this study

Based on the emerging areas of support discussed so far, this study has reviewed and assessed a sample of the most relevant regulatory and non-regulatory measures, as well as the broader existing policy frameworks influencing investment decisions in the blue economy (full definition and further details in the analysis are provided in Annex I). The resulting analysis has allowed the identification of possible gaps and areas for improvements – as well as further actions – in order to address the main factors for the persistence of unsustainable financing in the blue economy (as discussed in Chapter 4).

TABLE 6.3

Overview of selected initiatives to address the most relevant factors – initiatives can support more factors

FACTOR 1

(CONTEXT LEVEL): LACK OF RULE OF LAW, SUB-OPTIMAL POLICIES / REGULATIONS AND POOR CODES OF CONDUCTS

- Sustainable Blue Economy Finance Principles (European Commission, WWF, Prince of Wales's International Sustainability Unit, EIB, UNEP FI)
- Sustainable Ocean for All (OECD)
- Blended Finance Principles (OECD)
- EU taxonomy for sustainable activities (EC)
- Guidelines for Establishing the Green Financial System (China)
- Sustainable Shipping Finance: the Poseidon Principles (Banks)
- Principles for Sustainable Insurance (UNEP FI)
- Equator Principles (International finance corporation – World Bank Group)
- Science Based Targets (CDP, UN Global Compact, World Resources Institute (WRI), and the WWF, We Mean Business Coalition)
- Climate Bonds (Standard and Certification Scheme Climate Bonds)
- Sustainable Shipping Initiative (companies, WWF, NGOs Forum for the Future)
- Sustainable Ocean Business Action Platform (UN Global Compact)
- Coastal Governance Index (CEA, David and Lucile Packard Foundation)
- EU Ocean Governance Initiative (EC)
- Non-Financial Reporting Directive (Directive 2014/95/EU) (EU)
- Global Reporting Initiative (GRI (Global Strategic Alliances: OECD, UNEP, UN Global Compact, ISO)
- Sustainability Accounting Standards Board Standards (SABS)
- EU Taxonomy Regulation (2020/852/EU)

FACTOR 2

(CONTEXT LEVEL): POOR MARKET ANALYSIS AND LACK OF BUSINESS CASES TO JUSTIFY INVESTMENTS

- PROBLUE (World Bank)
- Blue Sustainable Ocean Strategy (EIB)
- Clean Oceans Initiative (EIB)
- Sustainable Shipping Finance: the Poseidon Principles (Banks)
- Responsible Ship Recycling Standards (Banks)
- Caribbean Climate-Smart Accelerator (CARICOM, IDB, GFDRR, Virgin Unite, ECS)
- Action Plan for Healthy Oceans and Sustainable Blue Economies (ADB)
- Oceans Financing initiative (ADB)
- Blue Natural Capital Financing Facility (IUCN, Government of the Grand Duchy of Luxembourg, Government Offices of Sweden, Ministry of the Environment and Energy, Total)
- Blue Natural Capital Positive Impacts Framework (IUCN, Five Oceans Environmental Services LLC)
- The Partnership Assurance Model (Monterey Bay Aquarium and co)
- 8F Asset Management Pte. Ltd
- Sustainable Shipping Initiative (companies, WWF, NGOs Forum for the Future)
- Ocean Investment Platform (World Ocean Council)
- Blue Carbon Initiative (CI, IUCN, IOC-UNESCO)
- Investing for Sustainable Global Fisheries (Encourage Capital, Bloomberg Philanthropies, The Rockefeller Foundation)
- EU Ocean Governance Initiative (EC)
- World Ocean Initiative (The Economist)
- BlueInvest (EC)
- WestMED Initiative (EC)
- Facility for Blue Growth in the Black Sea (EC)
- AquaInvest (FAO)
- European Technology and Innovation Platform for Ocean Energy (ETIP Ocean)

TABLE 6.3 Overview of selected initiatives to address the most relevant factors – initiatives can support more factors

FACTOR 3

(FINANCING LEVEL): SUB-OPTIMAL FEATURES AND DESIGN OF PUBLIC FINANCING SCHEMES

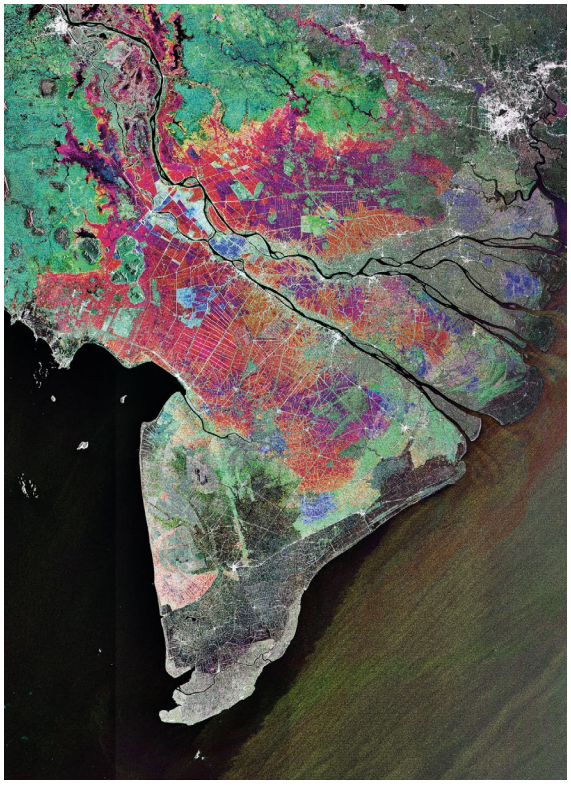
- PROBLUE (World Bank)
- Blue Sustainable Ocean Strategy (EIB)
- Clean Oceans Initiative (EIB)
- Sustainable Ocean for All (OECD)
- Sustainable Blue Economy Finance Principles (European Commission, WWF, Prince of Wales's International Sustainability Unit, EIB, UNEP FI)
- Blended Finance Principles (OECD)
- The Global Green Finance Index (MAVA Foundation, Finance Watch and Long Finance)
- Sustainable Stock Exchange Initiative (UNCTAD, UN Global Compact, UNEP FI, PRI)
- Caribbean Climate-Smart Accelerator (CARICOM, IDB, GFDRR, Virgin Unite, ECS)
- Action Plan for Healthy Oceans and Sustainable Blue Economies (ADB)
- EU Ocean Governance Initiative (EC)
- WestMED Initiative (EC)
- Facility for Blue Growth in the Black Sea (EC)
- AquaInvest (FAO)

FACTOR 4

(FINANCING LEVEL): LIMITED TRANSPARENCY AND COMMITMENTS FOR THE ASSESSMENT OF FINANCIAL RETURNS

- Sustainable Blue Economy Finance Principles (European Commission, WWF, Prince of Wales's International Sustainability Unit, EIB, UNEP FI)
- Sustainable Stock Exchange Initiative (UNCTAD, UN Global Compact, UNEP FI, PRI
- Task Force on Climate-related Financial Disclosures (Financial Stability Board)
- Sustainable Shipping Finance: the Poseidon Principles (Banks)
- Responsible Ship Recycling Standards (Banks)
- Principles for Sustainable Insurance (UNEP FI)
- Oceans Financing initiative (ADB)
- Global Trade Finance Programme (International finance corporation – World Bank Group)
- Equator Principles (International finance corporation – World Bank Group)
- Blue Natural Capital Financing Facility (IUCN, Government of the Grand Duchy of Luxembourg, Government Offices of Sweden, Ministry of the Environment and Energy, Total)
- Blue Natural Capital Positive Impacts Framework (IUCN, Five Oceans Environmental Services LLC)
- The Partnership Assurance Model (Monterey Bay Aquarium and co)
- 8F Asset Management Pte. Ltd
- Climate Bonds (Standard and Certification Scheme Climate Bonds)
- Blue Invest (EC)
- Global Reporting Initiative (GRI (Global Strategic Alliances: OECD, UNEP, UN Global Compact, ISO)
- Sustainability Accounting Standards Board Standards (SABS)

Our mapping and review of initiatives suggests that **a number of relevant gaps still exist (both in the geographical scope and sectoral coverage), including a fragmentation of leading actors involved**, although cross-references exist between various initiatives. All blue economy sectors are covered by at least one initiative. However, the mapping reveals that **some sectors are supported more than others**. More traditional activities such as fisheries, aquaculture and shipping are, for example, often the focus of most global initiatives currently in place, as they provide the bulk of current economic returns and jobs in the blue economy. And yet, other emerging activates such as off-shore wind and renewable energy, as well as blue-biotechnologies, would require further support to accelerate their growth potential globally. Initiatives in those areas vary globally and may have different purposes or scope (see details in the Annex), but the definitions at the specific activities level generally coincide.



The **protection of the marine environment appears to be a common driver across all initiatives**, which are somehow linked to regulation or governmental strategies. Principles and guidelines are often used to back up regulations or political strategies. These aim at promoting the sustainable use of oceans, while involving private actors (when they are not the authors of the documents). Nevertheless, **only a few mapped initiatives refer to regulatory measures, which are legally binding, while the majority are non-regulatory measures and actions promoted by private sector and financing bodies**. This leaves open the possibility that some actors might refer to an initiative for the sake of 'blue-washing' their names – i.e. making misleading claims about the environmental benefits of their ocean ventures.

It also remains **challenging to monitor and assess the success of current measures**, without the support of a clear framework and shared set of monitoring indicators which would allow for a robust and comparable monitoring and auditing system. Private sectors are often reluctant to share information due to confidentiality matters. As a general reflection, greater coordination and synergies could be fostered across existing initiatives – including but not limited to the creation of consistent databases of similar actions. This aspect, together with the **persisting structural lack of comparable data on financial flows in the blue economy** and potentials for financial returns of such investments, makes it **difficult for financing actors to get a clear view of the sector**.

As a result, although a (growing) number of global measures exist to address various specific issues for sustainable financing in the blue economy, such initiatives would require some further actions to be fully effective.

6.2 General recommendations for regulators and investors (and joint actions)

As discussed throughout this report, and considering the current situation with respect to financing of blue economy activities globally, fostering more sustainable investments in the blue economy requires complex actions. On the one hand, 'carrots and sticks' are to be driven forward by public regulators, including the appropriate enforcement measures – pushing investors towards more sustainable finance patterns. On the other hand, a stronger commitment and concrete actions are needed by investors who have an eye for the longer term and appreciate that short term gains sometimes need to be lower because it is important to first create positive and virtuous cycles, respecting the environment, social impacts and local communities. Moreover, greater cooperation and exchanges are needed to favour joint actions amongst these two groups of actors (i.e. regulators and investors) – and to help create positive dynamics.

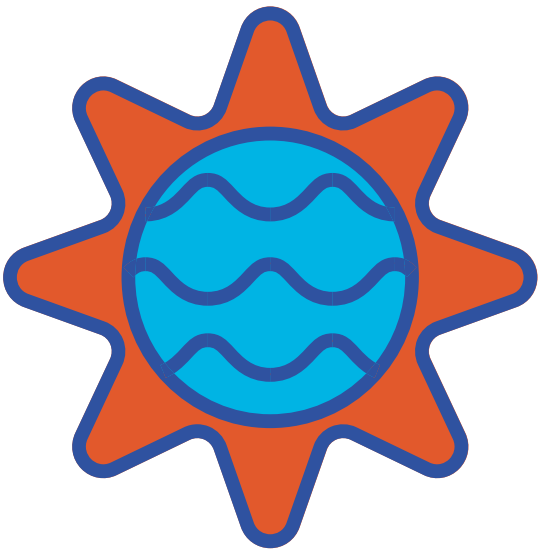
In this exchange between public and private actors, positive dynamics promoting sustainability must be created. Investors need to: i) prove the long-term potential and profitability of investing in a sustainable blue economy; ii) increase awareness and demonstrate evidence of this potential; iii) demonstrate that commercial risk is real and can benefit all stakeholders. If the market does not generate such sustainable investment opportunities (and instead favours unsustainable practices), then there is a major role for public actors to play. They then need to review the regulatory framework, revise the vision and the accompanying support schemes (carrots and sticks), and make it more favourable for investors that are committed to promoting a sustainable blue economy.

Building on the analysis developed so far, we therefore provide some overall recommendations:

- **For regulators:** including policy, strategic planning and legal measures that can provide a more effective and transparent framework for sustainable finance in the blue economy, while redirecting financial flows to support the sustainable development of the blue economy (either directly through efficient public funds/subsidies, or indirectly by ensuring incentives and warrants which could leverage additional sustainable private finance).
- **For investors:** encouraging the recognition of the profitability of investing in fully sustainable blue economy activities, acknowledging the commercial risk of investing in activities which are unsustainable (i.e. with negative social, environmental and economic local impact) and supporting the broader development of Corporate Social Responsibility policies that increase investment in sustainable blue economy activities.
- **For joint actions:** encouraging further steps towards better measurements of impacts of financing practices.

The set of recommendations has considered the current regulatory frameworks discussed in this chapter. The full set of recommendation is now presented as a basis for comments. The recommendations are also aligned with the current European Commission Action Plan on Sustainable Financing[171] and where possible it could be useful to incorporate such recommendations into the work currently on-going under the Action Plan.[172] On this basis, practical actions to be implemented in the shorter-term – i.e. 'low hanging fruits' – are then suggested (Ch. 6.3).

Recommendations for regulators



Generate and disseminate knowledge and business cases for investors (short to medium-term action)

Support sectoral knowledge and capacity (including business cases) as a way of raising the awareness of private investors on the blue economy, so that they can make well informed decisions to invest in sustainable practices.

Issues and gaps identified in our analysis

- **Lack of awareness and shared definitions.** A limited awareness of the blue economy as a whole emerged amongst the global financial community. This is due to its novelty and is reinforced by some terminological confusion (blue/ocean, etc.).
- **Lack of sector-specific investments needs, risks and return potential.** Sector-specific information on risks to support informed investment, lending and insurance underwriting decisions, as well as to improve the understanding and analysis of ocean-related risks and opportunities for investments in specific sectors and oceans, are still limited.
- **Limited access to reliable data on investment potential for emerging niches (technologies and value-chains).** Limited bankability profiles for pilots and experimentation initiatives (e.g. business cases of emerging practices, piloting of new business models, adoption/adaptation of new technologies to boost emerging value chains).
- **Lack of adequate capacity and resources within administrations to manage available databases.** A low level of funding is made to collect data in a systematic manner and to make it fully available to potential global investors.

Evidence that emerged from case studies and interviews

Lack of clear understanding of the sector has emerged as one of the main factors for unsustainable financing practices assessed in the case studies. For example, the lack of reliable profits forecast for the off-shore wind industry, coupled with limited experience in the sector by relevant private investors, is one of the challenges for persisting investments in Oil and Gas in the North Sea Region. However, most of the assessed practices showed poor sectoral knowledge as a main obstacle to sustainable investments, with a lack of awareness of possible alternative investments also preventing fully sustainable practices for local communities and investors (e.g. due to unsustainability factors that financial players are unable to detect, but would result in higher local pressures and possibly unexpected investment costs for financial actors). For instance, in Belize, the lack of sectoral data and longer-term investment potentials contributed to fostering short-term investments with limited sustainability for local communities and ecosystems.

Potential actors to be involved

Partnership amongst international financial institution (IFIs) and International Organisations (e.g. building on Sustainable Blue Economy Finance Principles).

Recommended actions for regulators and policymakers

- **Need for leadership in creating and managing best practices in the blue economy:** Global institutions need to lead to foster global consensus towards a knowledge management framework for the blue economy and to provide guidance on data collection and dissemination – European Marine Observation and Data Network (EMODnet), the long-term marine data initiative, could serve as a model to emulate.
- **Knowledge management cycle strengthening:** A conceptual knowledge management framework would need to cover the following issues: knowledge needs, identification, generation, sharing, and use. In particular, it would be important to strengthen the identification of knowledge needs by expanding successful approaches undertaken by some organisations working on the blue economy and by preparing sector specific knowledge plans (sharing best practices in terms of the benefits of knowledge sharing, leading to successful investments in the blue economy).
- **Develop systematic market intelligence for the blue economy:** The presence of sound blue economy market analysis, including investment prospects as well as trends of growth and expected returns for investments in different economic activities, is essential to ensure that investors are incentivised to embark on sustainable financing of the blue economy. For blue economy business ideas to be 'bankable' and to attract large investors, enterprises would need to work on their potential market size and capacity to engage with investors.
- **Improve enabling technologies, particularly for knowledge storage, retrieval and sharing:** Although some institutions (EU, OECD, etc.) have invested substantially in IT infrastructure, there are a number of IT gaps that impede the smooth generation, sharing and use of knowledge and best practices on the blue economy.

Improve quality and accessibility of global data on financing flows in the sector (mid-term action)

Collect data and organise existing datasets on investment flows across the blue economy activities and the global oceans. For instance, provide reliable data to inform on investment gaps in the blue economy and to highlight the need for specific investments in sectors presenting a high potential for development in the future.

Issues and gaps identified in our analysis

- **Fragmented and largely unavailable sectoral financing and investment data:** several sources exist with data on financial flows worldwide, but they tend to be highly aggregated (by sector and/or region) without a clear specification of relevant activities related to the blue economy. When data on blue economy finance exists, it largely fragmented and uncoordinated. Datasets may not be updated or lack clarity on how data was collected.
- **Poor access of available information for non-expert users:** notwithstanding the large number of blue economy data sources, there is a general lack of awareness about available information for non-expert users and the need to improve the way in which available information is communicated to a range of sectoral actors (not necessarily experts in finance).
- **Limited commitment in sharing private financing flows in the sector:** initiatives aimed at raising commitments towards and visibility of the sector for private investors are still limited, besides relevant actions jointly promoted by the EU[173] and the WWF, as well as alliances in certain sectors of the blue economy (e.g. shipping[174]).

Evidence that emerged from case studies and interviews

Several case studies demonstrated the inability or unwillingness of investors to sufficiently disclose clear information, which should be a pre-condition to assess the overall sustainability of the proposed investments (transparency is inadequate or reporting requirements are weak – e.g. no ESIA, no public consultations, etc.). In extreme cases, irregular practices may even lead to fraud, with the financial information provided being ultimately unreliable, such as in the case of state fisheries in Mozambique. This is also a consequence of the limited capacity of local authorities to request clear investment prospects and information. For instance, the case study on unsustainable investments in Albania and Montenegro highlights that the poor level of enforcement capacity of local authorities may prevent competent scrutiny of investment information and resulting impacts. But more transparent information on global investment flows may also improve the work of enforcing agencies (e.g. Europol).

Potential actors to be involved

Partnerships amongst IFIs and International Organisations
(e.g. building on Sustainable Blue Economy Finance Principles).

Recommended actions for regulators and policymakers

- **Harmonise global data and information on investments in the blue economy:** extract reliable and up-to-date information related to blue economy finance and investments from global datasets, so that informed decisions are made.
- **Collect, analyse and share blue economy finance/investment data more systematically:** regional organisations can create and maintain a gateway to a range of data archives managed by local, national and regional organisations. Through these gateways, users could have access to standardised observations, data quality indicators and processed data on the status of finance and investment flows across the blue economy sectors.
- **Involve intermediaries such as global stock exchanges:** data is collected if information is used and sharing such information as a basis to assess trends in investments in the blue economy worldwide and across oceans could raise interest in the sector while also ensuring that more accurate and reliable data are tracked and publicly shared.
- **Incentivise investment in online and mobile real-time applications:** investments in data collection should be made at the global level (by multilateral institutions), but also at the regional and local levels. This would imply the access to dedicated web pages or mobile applications with frequently updated information on all sectors of the blue economy (aquaculture, offshore energy potential, tourism resources, emerging innovations in biotechnology, etc.), with a view of supporting blue economy private investments and sustainable ocean development.

Ensure quality of policy frameworks and enforceability of policy compliance (mid-term action)

Support regulators and policy authorities in their ability to foster consistent visions and regulatory frameworks for the blue economy, including strong monitoring and compliance mechanism and cooperation amongst sub-sectors.

Issues and gaps identified in our analysis

- **Poor policy frameworks are often at the core of unsustainable finance practices.** Persisting policy incoherence, lack of clear visions for a sustainable blue economy, and legislative gaps all contribute to unsustainable finance in the sector.
- **Enforcement capacity, for local and regional authorities to ensure sustainable finance, remains limited.** Even in presence of sound policy and regulatory frameworks (on paper), the limited ability of local authority to implement and enforce the respect of such frameworks (in practice) hinders the potential for greater sustainable finance in the sector.
- **Global ocean governance is still too fragmented to ensure a sound sectoral framework.** The absence of an adequate global institutional mechanism or an overall coordinating body to facilitate regulatory compliance, e.g. an international institution such as the UN with a mandate to ensure compliance, makes it difficult for local and regional institutions to work beyond their immediate mandates.

Evidence that emerged from case studies and interviews

The relevance of sound policy, regulatory and enforcement frameworks, as a factor to steer (un)sustainable finance practices in the blue economy, has emerged in many case studies. As shown in the fishmeal production case study in Senegal, a fragile legislative and regulatory framework, in which enforcement is not systematic, facilitates the attraction of investments in unsustainable industrial-scale production of processed fish. As shown in the case study related to mangrove forests and shrimp farms in Vietnam, an improved national regulatory framework can, through time, foster the sustainable performance of certain farming models. But such policy frameworks depend on a multi-level adoption of rules and policies, making good global ocean governance essential.

Potential actors to be involved

IFIs like international finance corporation (IFC), World Bank, EIB and regional development banks, UNEP FI and institutions such as the EU, the OECD, etc.

Recommended actions for regulators and policymakers

- **Design wide-encompassing policy and enforcement frameworks for the blue economy,** with actions to sanction unsustainable activities either through fines or criminal convictions, or through non-financial ratings from independent research institutes or agencies (sponsored by public authorities).
- **Ensure that progress is made to negotiate a new International Legally Binding Instrument** under the United Nations Convention on the Law of the Sea (UNCLOS) on conservation and sustainable use of marine biological diversity in areas beyond national jurisdiction (ABNJ) – the instrument will need to regulate four areas: i) marine genetic resources (including issues of access and benefit sharing); ii) area-based management tools (including marine protected areas); iii) environmental impact assessments; and iv) capacity building and transfer of marine technology. We also understand that there are also negotiations for the ABNJ Deep Sea Mining Code and the Regional Environmental Management Plans for seabed minerals in the ABNJ (both under the aegis of ISA). Such negotiations will be important to find agreements on these issues.
- **Engage the investing community in the training and capacity building** of those involved in relevant blue economy sectors about applicable international law and legislation, as well as regional and sub-regional instruments and policies.

Recommendations for investors

Increase sustainable investment capabilities and scale-up overall financing capacity (mid-term action)

International financial institutions and/or specialised funds should act to increase investment capabilities and expertise in the blue economy – including through the development of a 'blue economy' fixed income market[175] to scale-up long-term financing opportunities in the sector.

Issues and gaps identified in our analysis

- **Investments in sustainable and niche/emerging blue economy activities are still limited.** Although some traditional blue economy sectors are high in global financing priorities (oil and gas, shipping, tourism, etc.), more innovative and sustainable niches (marine renewables, blue-biotechnologies, sustainable tourism, etc.) remain under-financed.
- **Ambitious sustainable blue economy projects and large-scale investments remain a challenge.** In order to attract private investors for ocean health-related projects, returns on investment are essential. However, these are currently unclear due to the limited economy of scale of sustainable investments or because emerging/sustainable technologies are not yet mature.
- **Lack of innovative private investment instruments targeting the blue economy.** Some instruments, such as the blue bonds or funds, have a strong potential if structured by governments or development institutions, as they provide credit enhancement to projects, thus allowing market participants to raise competitive long-term capital from the markets.

Evidence that emerged from case studies and interviews

Our analysis provided evidence that interest from institutional investors in the sustainable blue economy is high, but industry capacity and expertise are low. Despite growing investor interest in blue economy opportunities, the ocean is today one of the least invested in of all the UN Sustainable Development Goals, particularly from a private capital point of view. Only 21% of impact investors surveyed say they target SDG 14 – Life Below Water through their investments.[176] Increased capacity is needed to address the current investment gaps and to meet demand in future years. For example, a lack of incentives to promote investments for a sustainable shipbuilding transition emerged in Asian countries. In this respect, the Seychelles Blue Bond[177] represents a clear illustration of ways to increase investment capacity and to allow for a reduction in the price of the bond by partially de-risking the investment for impact investors. The blue bond demonstrates the potential for capital markets to scale sustainable oceans solutions that align marine conservation and economic opportunities.[178]

Potential actors to be involved

Large institutional investors, multilateral development banks. In particular, multilateral development banks can help to create such 'blue funds' and blue bonds mobilising concessional finance and generating bankable project pipelines.

Recommended actions for investors and financial actors

- **Develop new instruments for the sustainable blue economy** to further integrate the sustainable blue economy into mainstream finance – e.g. through the acceleration of 'blue economy bonds' globally. As the Seychelles blue bond[179] demonstrates, debt financing offers an appealing tool for investors to engage in the sustainable blue economy.
- **Widening access to market-led finance for the blue economy to both large and small investors.** Large issuers access most capital markets globally, due to long-standing harmonised laws and rules covering various capital market funding sources (listed bonds and equity as well as other combined financial instruments). However, it is also important to open access to the blue economy to regional players across oceans and particularly to ensure wide access to finance for small companies, start-ups and mid-size companies – including through the contribution of potential individual investors.
- **Develop a set of best practices for financial returns from investments in the sustainable blue economy,** as it is important to showcase that the transition towards financing a more climate-secure and sustainable blue economy also provides a sound investment opportunity. Specific actions should be made to attract investors towards a sustainable blue economy.
- **Assessing the existing blue economy finance portfolio is** an impactful step that investors can already take that reduces financial risk and improves the impacts on the marine environment, beneficiary business and local communities. A recent survey[180] showed that three out of four investors have not yet assessed their portfolios for their impact on the ocean, while about a fifth is completely unaware of their ocean exposure and resulting risks in an investment context.

Leverage investment-grade finance in areas with high sustainability potential (medium-term action)

The sustainable blue economy could be advanced significantly by scaling up public finance as incentives and leverage to support the uptake of private investments in areas with high potential for sustainable development.

Issues and gaps identified in our analysis

- **Large-scale investments in capital-intensive sectors require an effective mix of public and private finance.** The role of private investors is essential to speed up the uptake of innovative technologies and business models in critical areas (marine energy, port infrastructure, green shipping). However, this requires well designed public finance incentives.
- **Investments in emerging and innovative activities are often perceived as too risky by private investors.** A wide range of disruptive technologies and business models should be fostered through private investments to ensure a fully sustainable blue economy.[181] However, these are often too risky to be considered as investment priorities by private financing actors.
- **Small and micro companies struggle to get the essential financial support needed to innovate.** SMEs in the sector often struggle to raise private investments to achieve the 'next stage' of business growth (i.e. once they have reached a certain size following the injection of 'seed' money and are looking for 'developing' money).
- **Grassroots local funding should be further exploited.** Small scale artisanal businesses need local, community-based, financing options as an initial first step in moving towards more sustainable practices. This is particularly important for remote and/or poor people who are looking to develop sustainable businesses, improve production line practices and/or supply lines, including sustainable use of natural resources.

Evidence that emerged from case studies and interviews

The relevant role of public finance to leverage private impact investments have clearly emerged from our analysis. Sustainable and investment-grade projects are needed, for example to boost green and innovative seaport infrastructure globally. Massive external investments will be required in the coming years, with private sector resources being badly needed and efficient public subsidies playing an essential role in leveraging private investment. The case study describing the EU support in this area reviews the results of the European Court of Auditors (2016) finding that a third of EU spending on facilities, including quays, docks and breakwaters, at EU seaports between 2000 and 2013 was ineffective and unsustainable. The case study on tourism in Thailand (i.e. nearly 10% of the Country's GDP) offers another illustration of the need to develop investment-grade projects to attract long term investors. While the country's government is striving in its effort to allocate adequate resources to infrastructure, skills and services to transform the tourism industry, greater efforts are needed to attract private investments.

Potential actors to be involved

Regional Development Banks and large institutional investors.

Recommended actions for investors and financial actors

- **Foster public-private arrangements to increase capacity and share risks.** Cooperation between public and private-sector bodies attracts private investors by transferring certain financial risks in exchange of public warrants, and by specifying performance on outputs and broader outcomes rather than on inputs and pure financial returns.
- **Develop market incentives to foster the uptake of sustainable practices.** Creation of a reputational incentive system supported by institutional structures allowing the certification of good practices across sectors of the blue economy. E.g., by creating 'blue labels' delivered by public institutions or independent agencies with a state mandate, it will be possible for investors to identify companies and sectors with more sustainability potential than others.
- **Put in place efficient financial incentive mixes to leverage private investments in strategic areas.** Economic instruments such as taxes, subsidies and fees should be aimed at internalising environmental and social benefits, costs and risks to society. However, it should also aim at creating incentives for investors and businesses to engage in new emerging sectors.
- **Reduce the risk of liabilities for long-term investors (e.g. through guarantees).** The asset allocation and investment strategy of institutional investors, in terms of maturity and risk, are structurally determined by their liability structure. The prudential frameworks applicable to those institutional investors are designed to ensure an appropriate adequacy between their assets and their liabilities. Public resources can be used to provide guarantees to such investors in exchange for investing towards sustainability – and including through Payment for Ecosystem Services (PES) schemes.[182]
- **Develop a tailored public support mechanism,** e.g. Blue Economy Investment Platforms (BEIP) to be created for each ocean or sea-basin, with an ability to take into account the varying blue economy sectoral needs and to support less mature/younger businesses contributing to sustainable economic sectors.

Promote the use of a coherent taxonomy for the blue economy to engage with investors (short-term action)

Build on the ongoing process to define a coherent taxonomy for sustainable finance, and promote a consistent and coherent terminology to be used to engage with financial actors when discussing investments in the blue economy.

Issues and gaps identified in our analysis

Our analysis confirmed a proliferation of concepts and approaches that make up the blue economy landscape. Any coherent understanding of the sector for investors is therefore hampered by a persisting lack of clarity and harmonisation across the existing definitions of the blue economy (EU) or ocean economy (OECD, World Bank), or even the use of the term to indicate more specifically fisheries and aquaculture (FAO) or rather a broader range of maritime economic activities (EU, World Bank).

Evidence emerged from case studies and interviews

The proliferation of terms and differences in the understanding of the blue economy concept is not necessarily an issue on its own. No case studies, for example, addressed or highlighted this as a specific challenge. Nevertheless, the lack of understanding and clarity on the very concept of the blue economy has clearly emerged as an immediate obstacle for its comprehension. Greater clarity in the use and understanding of the concept by global financing institutions may therefore be required as part of the broader effort to raise the awareness, appeal and understanding of the sector for private investors worldwide.

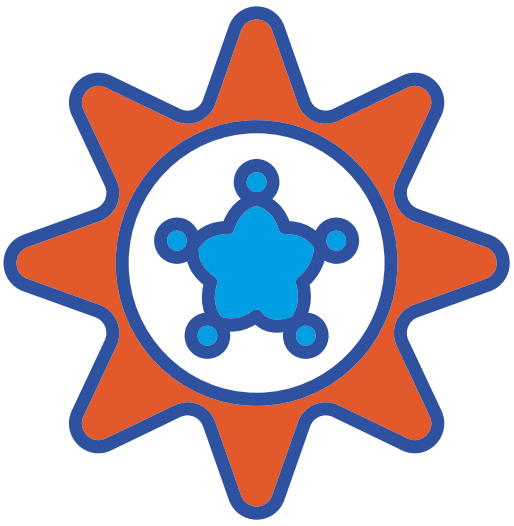
Potential actors to be involved

OECD, EU, FAO, UNEP FI[183], Regional Development Banks (building on Sustainable Blue Economy Finance Principles).

Recommended actions for investors and financial actors

- **Promote the development of a consistent and common understanding about the blue economy** starting from the definition of terminology, to be followed by advocacy in support of the global adoption of a standard definition. Such a definition will also recognise the need to balance economic benefits with the long-term capacity of the ocean, with a view of protecting the health and longevity of marine resources and ecosystems.
- Achieve a common understanding of market **structures and value chains across blue economy activities**. The diverse and fragmented nature of the sub-sectors of the blue economy and related value-chains require some form of clarification to make the sector as a whole appealing to investors.
- **Adoption of standardised (or at least harmonised) terminology** – and the corresponding benefits which such adoption would bring – rest on the advocacy of policymakers and regulators. We believe that such efforts should begin with an official adoption of the terminology and a campaign to recommend these standard market definitions for adoption.

Recommendation for joint action by investors and regulators



Introduce a measurement approach for expected impacts – impact assessment (medium-term action)

Develop a standardised approach for the measurement of negative and positive impacts in the blue economy, and provide detailed technical guidance and support to investors to perform such assessments and to authorities to enforce it.

Issues and gaps identified in our analysis

- **Complexity and reluctance for financial actors to assess the impacts of their investments** on the targeted ecosystems, communities and economies. A recent survey (Credit Suisse, 2019) shows that three in four investor respondents have not assessed their portfolios for their impact on the ocean. Furthermore, 21% are completely unaware of the risk they are exposed to as a result of investments in unsustainable activities in the blue economy. Almost a third of asset owners do not address the potential for sustainable blue economy support at all in their current investments – it is therefore pivotal to better inform investors of the importance of securing a healthy and resilient ocean and of the risks associated with business-as-usual to both business and society.
- **Limited capacity and capabilities of local authorities** to require and scrutinise the expected impacts of proposed investments as a condition for their authorisation. The assessment of expected and unintended impacts on local ecosystems, communities and economies should be a mandatory requirement prior to any investment approval. A mix of limited capacity, lack of skills and urgency in attracting valuable financial resources makes it challenging for local authorities to enforce their role in this respect.
- **There is a lack of a standard and adequate methodology to be practically implemented** to assess the impacts of investment and financial streams in the blue economy. If it is already difficult to assess financial returns of investments in complex environments, it is even more challenging to assess the broader impacts on local ecosystems and communities and almost impossible to duly assess all unintended effects in the short and mid-terms. And yet, to ensure sustainable financing in the blue economy, it is imperative to identify and adopt a simple-enough approach to assess such impacts – at least to some extent, depending on the available data for the market, targeted activities and context in which they operate.

Evidence emerged from case studies and interviews

As illustrated by the case study on Coral Reef in Belize, investments are too often prioritised around economic growth stakes, possibly over a short-term outlook, with regulations acting to limit damages on natural capital rather than supporting fully beneficial and win-win investments – for both financial actors and local communities. This approach is commonly found in many emerging countries, but are also possibly emerging in many developed economies as well, where the regulatory approach is rather aimed at mitigating damages, rather than fostering fully virtuous practices – for example by boosting innovation and adaptation of current practices into win-win solution for investors, local economics, as well as local communities and ecosystems.

A similar pattern can be observed in the Cayman Island cruise sector case, where the project appears to be oriented mainly towards the interests of private cruise operators, without a full screening of the potential unintended effects on the local environment and local communities. Such an approach is certainly easier to implement that a 'holistic' environmental, financial and socio-economic outlook – which aims to undertake a wide impact assessment before entering into a project, including a comprehensive analysis of all up-and-downhill issues (e.g. source-to-sea), also gathering the local population engagement. And yet greater efforts in this direction should certainly be made by all actors (public and private) if a substantial change is to be achieved

The case study on unsustainable fishmeal plants in Senegal shows that environmental and social impacts of large foreign investments into the country would have demonstrated the negative impacts on local communities and the role of small businesses for improving the livelihoods of vulnerable populations. Similarly, the assessment of Salmons farms in New Zealand suggests that a wider assessment of economic and environmental impacts on the Marlborough Sounds region would have even benefited investors. The analysis of investments in the Carlsbad desalination plant in California highlights the impact of precedent and an adequate legal framework for some emerging sectors. It also points out the need for adequate coordination and communication between private and public investors to better understand the specific features of projects in emerging blue economy sectors.

Still, some good market practices exist that could possibly be used as a reference. For instance, Mirova's Althelia Sustainable Ocean Fund[184] aims at delivering sustainable economic returns in fisheries, aquaculture, associated seafood supply chains, ocean waste & recycling and marine conservation. The fund seeks to invest in activities with the objective of providing net-positive impacts for communities and ecosystems. The fund managers argue that positive environmental outcomes and attractive market-based returns are not mutually exclusive. To do so, the fund measures impacts across seven impact themes that cover environmental, social and economic benefits.

Potential actors to be involved

Multilateral development banks, particularly those who have developed robust impact measurement methodologies, and actors such as IFC or IEB – UNEP FI, EU, OECD, etc. (building on Sustainable Blue Economy Finance Principles).

Recommended actions for investors and financial actors

- **Define an evidence-based approach for determining if an investment project is sustainable – i.e. building on the study on 'Sustainability criteria for the Blue Economy'.**[185] A risk categorisation process should be provided, with all projects categorised based on their potential negative environmental impact, according to a framework agreed at the international level.
- **Determine specific screening and proofing standards and requirements – i.e. building on the study on 'Sustainability criteria for the Blue Economy',**[186] to assess the various dimensions of the impact (economic, social, environmental, etc.) of financing in the blue economy.
- **Develop an evaluation methodology** that seeks to capture the extent to which investment assets contribute to the SDGs in the blue economy. This would address both materiality (how the current transitions are likely to affect the economic models of the assets financed, whether positively or negatively) and impact (how investors can play a role in the emergence of a more sustainable economy).
- **Introduce the concept of transition into the measurement of impacts.** For instance, a well-functioning and sustainable blue economy could be characterised by key transition qualities, i.e. an economy that is Competitive, Well-governed, Green, Inclusive, Resilient and Integrated. For each blue economy investment, it would be important to be able to assess how an investment project would contributes to the blue economy and promote a sustainable transition.
- **Set a minimum of information requirements – i.e. building on the study on 'Sustainability criteria for the Blue Economy',**[187] in terms of information criteria, metrics and indicators ("what information has to be collected and shared"), so that monitoring systems would be: accurate and credible; balanced and objective; clear and accessible; comparable and consistent; and complete and timely.
- **Make investors aware about the 'value at risk' in case of non-compliance.** As the laws in the blue economy get tighter on a global scale, the costs of non-compliance (including increasing reputation costs), as information becomes more accessible, but also as substantial costs resulting from the deterioration of valuable ecosystem capital – essential for sustainable exploitation of the seas through time – will be high for unsustainable blue economy financing practices;
- **Engage the investing community in the training and capacity building** so to be able to apply effective measurements (ex-ante, during, ex-post) of investments results, as well as regional and sub-regional instruments and policies.
- **Improve existing and mobilise new technical assistance funding** for project identification, preparation and implementation support (note: link to the first recommendation for regulators and policymakers).

6.3 Specific recommendations: 'game changers' to boost sustainable blue economy finance

To accelerate the uptake of the general recommendations provided in the previous chapter, we propose a number of specific but ambitious short-term actions. These actions allow an immediate response to address the challenges identified in this report, with the aim of accelerating the uptake of sustainable investments in the blue economy across global oceans. Such specific recommendations are intended as **'game changers', or quick-wins to shift global streams of financing towards a sustainable blue economy**. To be effective, such 'game changers' should be promoted by a number of actors, which are also suggested following each action in the list below – note that we did not indicate specific civil society stakeholders, but certainly their role should be considered as well.

1. Set-up a **global forum for sustainable finance (public / private) and innovation in the blue economy**, to discuss and address bottlenecks to sustainable investments – and where entrepreneurs, private sector, scientists and financiers can discuss and pitch new sustainable technologies, products, and energy prototypes in need of funding for development. Building on a common taxonomy and understanding of the blue economy and its potentials for the financial community, this can be a platform for yearly exchanges between global blue economy practitioners and impact investors (MDBs, Credit Agencies, Incubators/Accelerators, private funds, etc.). Such platform would also be used by global regulators to discuss further opportunities and regulatory/policy processes to accelerate the uptake of sustainable-investment streams in the global blue economy.

   This initiative should build and further expand the current Sustainable Blue Economy Finance Initiative by involving global actors such as the OECD, the Economist's World Ocean Summit, Davos' Friends of the Ocean Action,[188] etc., as well as major investors, multilateral banks, investment networks and relevant international organisations.

2. Support **globally coordinated capacity building programmes** to strengthen the creation of knowledge, market intelligence, and best practices. In particular for local authorities in transition economies so that they can set-up effective blue economy policies and transparent socio-economic analysis on the current status, challenges and sustainable investment opportunities (as well as innovation bodies such as clusters, incubators, accelerators, etc.). The programmes should also allow for the promotion of coordinated scientific data and monitoring hubs – for example at the Ocean/Sea-basin levels – to collect and share new findings on the performance of the blue economy, its areas of technological /innovation needs, as well as the actual/potential impacts (socio-economic, ecosystems, biodiversity, climactic changes adaptation/mitigation). In this respect, the capacity for the **adoption of a common and shared (long) list of key indicators** should be promoted for a consistent global monitoring of the sector's performance – as discussed in parallel study being produced on Sustainability criteria for the Blue Economy[189].

Actors to be potentially mobilised include the current World Bank ProBlue Programme (trust fund involving EU contributions) and possible actions for DG DEVCO/DG NEAR, EIB, EBRD, as well as regional Development Banks.

3. Promote a **stable cooperation platform between investment promotion agencies (IPAs), development banks, international institutions and specialised law enforcement agencies** (Europol, Interpol, etc.), to set-up consistent global cooperation in monitoring irregular/unsustainable investment practices and to seek to develop enforcement solutions globally. The platform should allow for the uptake of a common 'sustainability scorecard for blue economy investment' (by also building on the parallel study being produced on Sustainability criteria for the Blue Economy),[190] which would provide an overview of a potential investee's social and environmental performance – e.g. by visually highlighting strengths and weaknesses of an investment project and generating a social investment score.[191] The platform should also coordinate the global efforts in the set-up of a 'Global Sustainable Blue Economy' Investment Index (for a shared monitoring and assessment of global streams of investments and the creation of a dataset of flows, origins, quality, targeted regions/sectors, etc.) and a yearly award possibly linked to a specific label/certification.

Actors to be potentially mobilised include UNEP FI, United Nations Industrial Development Organization (UNIDO), World Bank, EIB, EBRD, Law Enforcement Agencies, Regional Development Banks, Regional IPAs Networks and Multilateral Agencies charged with support programmes and/or funds to global IPAs[192].

4. **Further to support innovative practices** by the financing sector, to boost sustainable investments in the blue economy. Develop a measurement approach for the **offsetting mechanism in the blue economy (including PES schemes)**. These schemes can be used to mitigate the risks of large-scale investments while ensuring that a valuable proportion of the investments is specifically tailored to the preservation and management of local ecosystem. The method should be consistent with approaches used in many different regulatory and voluntary offset systems worldwide. The practice of **national credit agencies (NCAs) allowing for reduced interest rates** to lending to sustainable investments in the blue economy should be promoted (see the example of Credit Agricole). This would also include the **development of Blue Bond Principles (BBP)** that will build on established best practice and guidelines and by the investment bank industry (e.g. green bonds). Develop a **standardised process of E&S risk categorisation** to reflect the magnitude of risks and impacts in large investment projects in the blue economy. Provide support and capacity building to help project promoters in developing their own monitoring practices and enhancing their effectiveness in E&S reporting. Build on the existing internationally validated sustainable financing criteria/labels, to be used for certifying sustainable investments, to **foster a commercial premium for sustainable investments in B2B transactions** in the blue economy (e.g. through labelling of B2B sustainable products/services).

Actors to be potentially mobilised include UNEP FI, OECD, Global Stock Exchanges, Rating Agencies, (regional) Investment Networks, pioneering private banks applying sustainable principle in their lending practices to identify the most valuable approaches available.

5. Launch **regional investments platforms to aggregate and accelerate access to finance** in the most needed and critical areas for sustainable blue growth across different oceans. The platforms should intermediate several streams of investments and manage large, medium and even micro streams of financing based on the real needs of the regions. Ideally, private investment in digital-tech infrastructure (e.g. crowdfunding) might also provide individuals with intermediation services to invest in sustainable blue economy projects and encourage entrepreneurs/businesses to support their local area or community. Building on the common agreements to establish an international platform for sustainable investments in the blue economy, **global network of support services should be set up to provide technical assistance to blue economy investors** (and Investment Promotion Agencies). It should be willing to develop a full-scale assessment of the sustainability of the expected impacts.

Actors to be potentially mobilised include the World Bank and (regional) Development Banks, (regional) Investment Networks, Regional Clusters/Accelerators, as well as relevant regional (blue) financing projects/initiatives.

6. Start a **global targeted media campaign towards financial institutions**, to raise the visibility of the sustainable blue economy and its return potential for private investors. The aim of the campaign should be to the raise awareness and appetite of impact investors on the relevance of the sustainable blue economy as an area with potentially high returns for private investments. The targets/messages should be carefully identified to address the main bottlenecks to the full involvement of private investment in the blue economy. The campaign could be differentiated across various oceans, sea-basins and relevant countries and actors of financing source/destination – so as to maximise the appeal and interest across various investment actors and models.

This is an action which could build on the current Sustainable Blue Economy Finance Initiative, with additional actors to be potentially mobilised including the OECD, UNEP FI, Global Stock Exchanges, Rating Agencies, (regional) Investment Networks, Financing Intermediators, specialised media including The Economist, etc.

European Commission

BLUE ECONOMY

RECOMMENDATIONS REPORT

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