The GEF and the Blue Economy

A STAP Advisory Document

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The GEF and the Blue Economy: a STAP advisory document

Contents

Executive summary

The GEF-8 programming directions include four new Integrated Programs (IPs) relevant to the blue economy agenda. These IPs address land-based sources of marine pollution; policy coherence in Small Island Developing States (SIDS); reduction of plastic waste flows that pollute marine environments; and food systems, including sustainable intensification of aquaculture as a priority alongside terrestrial food production.

As well, several focal areas of the GEF are germane to the blue economy. International Waters retains an emphasis on sustainable fisheries, along with international cooperation to manage large marine ecosystems. Biodiversity maintains a focus on biodiversity mainstreaming, including support for natural capital accounting in both terrestrial and marine ecosystems. Climate Change prioritizes nature-based solutions with high mitigation potential, including coastal habitats such as mangroves, seagrass, and marshes.

International attention to opportunities in the blue economy is growing. But this increased attention is marked by diverse underlying assumptions and by inadequate attention to the important trade-offs and risks these investments often entail. The purpose of this paper is: (i) to offer a *coherent framing* to ensure that investments pursued under the blue economy banner are consistent with the GEF's mandate and targeted to contribute to system transformation in GEF-8 and beyond; and (ii) to suggest *possible priorities* for investment.

The GEF's unique role

The GEF has been active in the blue economy for over two decades and has developed a comparative advantage based on its breadth and depth of experience in freshwater and marine systems, its relationship with developing country governments and multilateral agencies, and its investment in transboundary diagnostic assessments and strategic action programs.

STAP's screening of projects for GEF investment has noted a range of promising trends in projects addressing blue economy themes. These trends include a focus on innovative finance mechanisms, deep analysis of governance barriers and opportunities, increased transparency and accountability among private sector actors, and the use of new sources of data to enhance conservation effectiveness. The challenge ahead is to consolidate and amplify these points of progress with consistent criteria that apply across the GEF investment portfolio.

Criteria for GEF investment

The GEF could:

- Focus on its comparative advantage, asking whether the proposed investment addresses global environmental benefits within the GEF's mandate. Does the investment cover an area where the GEF has a plausible opportunity to influence change at scale?
- Pursue investments with explicit criteria that apply across the GEF's whole portfolio because of the impacts that terrestrial activities have on the oceans and the need to consider both synergistic and antagonistic links between the land and ocean economies.

- Ensure that public and private investments in the blue economy are integrated, transformative, and durable, rather than adding incrementally to investment.

Possible priorities for GEF investment

The High Level Panel for a Sustainable Ocean Economy identified five building blocks for investment.[1] The first three-figure centrally in the GEF-8 programming directions:

- Promoting "goal-oriented ocean planning" using processes that are "science-based, inclusive, participatory and adapted to the local context"
- "De-risking finance and using innovation to mobilise investment" (e.g. in sustainable fisheries, mariculture, ecotourism linked to marine protected areas, and offshore wind energy)
- Stopping land-based sources of marine pollution, including reduction and treatment of waste flows from agriculture, industry, and municipal sources and reduction of plastic waste

The GEF could also play a contributing role in the other two building blocks:

- "Using data to drive decision-making" by supporting the adoption of standardized data and monitoring systems and by encouraging national regulations to strengthen their use
- "Changing ocean accounting so that it reflects the true value of the oceans" (e.g. within frameworks for national development planning and progress reporting)

To pursue these priorities – and strengthen coherence in GEF investments in the blue economy – the GEF could structure investments with reference to the four transformation levers in the GEF-8 theory of change:

- **Governance and policies**

– Encourage national governance frameworks that integrate the best scientific evidence and promote *policy coherence* to ensure that conservation and sustainable use priorities are not undermined by policies and investments in other sectors.

– Support *institutional structures* for cooperation across subnational jurisdictions, among sectoral agencies at the national level, and across international borders to address both waste prevention and treatment, including *voluntary approaches* (e.g. codes of conduct, standards).

– Support integrated national planning that *de-risks private investment* in resource conservation, sustainable production, and renewable energy, such as improving long-term regulatory certainty, insurance, and demand guarantees.

- **Financial leverage**

– Attract public and private finance for multisectoral blue economy plans through non-grant instruments, piloting of *loan covenants* tied to sustainability requirements, and *debt restructuring* to support "blue conditionality" in reforming fisheries management, marine conservation, and coastal development.

– Attract *public investment* for projects that engage and benefit traditionally marginalized groups, where conventional financial returns may be lacking. This may include accessing corporate grant funds through corporate social responsibility or environmental, social, and governance commitments, as well as philanthropic impact investing.

- Support a strong policy and regulatory environment for land-based sources of marine pollution. Experiment with blended finance and *new financial mechanisms* to target the restoration of polluted estuaries and coastal zones, and incentivize private investment that demonstrates the viability of *disruptive technologies* to reduce marine pollution and waste through circular economy principles.

- **Innovation and learning**

- Connect regional analyses and planning on large marine ecosystems with more detailed national and subnational investments to address, for example, *participatory marine planning and zoning* processes, and pilot *new business models* for sustainable mariculture.

- Promote learning on approaches to catalyse policy and regulatory reforms to *reduce harmful subsidies* and *shift tax incentives* in ways that incentivize investment in sustainable blue economy initiatives.

- Address land-based sources of marine pollution through *nature-based solutions* for wastewater treatment; *regenerative agriculture* technologies to reduce the need for chemical inputs; and *municipal regulatory and financing instruments* for the construction and maintenance of treatment facilities.

- **Multi-stakeholder dialogue**

The breadth of the GEF mandate and the diversity of its member agencies means that it has a critical role to play as a supporter, connector, and convenor of multi-stakeholder dialogue processes. It is therefore important to distinguish the following:

- In which key existing initiatives can the GEF play a *supportive or contributory role*, and what would this entail?

- Where are the opportunities to *connect existing multi-stakeholder platforms* or initiatives to deliver new potential for impact?

- Is there a gap and demand for any *new platform or initiative* to focus policy attention, explore financing solutions, or nurture the development and exchange of innovation and learning?

Within individual projects, and even more so at the program level, the key point is to deploy a suitable *combination* of these levers that together map a plausible pathway to system transformation.

Introduction

The ocean is central to human well-being, providing vital services such as climate regulation, food, energy, and mineral and genetic resources, as well as cultural and recreational services.[2] Yet the health of the ocean continues to deteriorate, with many marine ecosystems at risk of collapse due to numerous interconnected anthropogenic stressors.[3] Climate change is accelerating the ocean's decline – in particular, coastal ecosystems are greatly affected by ocean warming, including intensified marine heat waves, acidification, loss of oxygen, salinity intrusion, and sea level rise – combined with adverse effects from human activities in the ocean and on the land.[4] In 2021, the world ocean was the hottest ever recorded by humans.[5]

At the same time, economic reliance on the ocean is rising, with more people living, working, and playing along the coastal ocean than ever before. The ocean economy was projected to double between 2010 and 2030, with many ocean-based industries having the potential to outperform the growth of the global economy as a whole, both in terms of value-added and employment.[6] While the COVID-19 pandemic has curtailed economic activity in areas such as maritime coastal tourism, marine equipment, and offshore wind power generation, it has also underscored the critical importance of maritime trade to the broader global economy. The global megatrends in food, climate, and decarbonization that are driving the ocean economy are still present.[7] With 40% of the world's population living within 150 kilometres of the coast,[8] these inhabitants have a large influence on the coastal ocean, with the most vulnerable among them disproportionately affected by ocean degradation and the adverse impacts of climate change.[9]

The term "blue economy" first gained prominence during the Rio+20 Conference in 2012, with particular advocacy by SIDS.[10] In the decade since, this concept has become widely used by governments, international organizations, non-governmental organizations, civic society, the private sector, and academia. Sustainable use of ocean resources features in Sustainable Development Goal 14, and the blue economy is also strongly correlated with Sustainable Development Goals 15–17, among others.[11] While there is no universally agreed definition of the blue economy, it is generally understood as a concept that seeks to promote economic growth, social inclusion, and the preservation or improvement of livelihoods while ensuring environmental sustainability of the oceans and coastal areas.[12] More recent articulations have emphasized the links to global challenges: deriving equitable benefits from the ocean for current and future generations[13] in ways that simultaneously mitigate climate change, preserve biodiversity, regenerate ocean health, and leave no one behind.[14]

While the term "blue economy" is often used in GEF programming, the GEF has not yet articulated what its distinctive contribution will be. This positioning has become more urgent with the current surge in interest in a "blue–green recovery" from the COVID-19 pandemic and in light of anticipated reforms in ocean governance addressing marine biodiversity. This document focuses on criteria and priorities for investment by the GEF based on its unique niche and comparative advantage. After reviewing the science on challenges and opportunities, a framework is presented that supports the targeting of GEF investments to be *integrated*, *transformative*, and *durable*.

Challenges and opportunities for blue economy investment

Trade-offs and risks

The benefits of investing in sustainable ocean opportunities are estimated to be at least five times the costs.[15] In recognition of this potential, and motivated by the emerging evidence of ocean decline, a surge in national commitments to ocean conservation has been seen in recent years. Participants at the annual Our Ocean Conference, for example, have announced more than a thousand pledges worth more than US$ 100 billion, with commitments to protect at least 13 million square kilometres of ocean.[16] There are growing calls to protect 30% of the ocean by 2030 as part of the Convention on Biological Diversity post-2020 framework.[17] The international community formally recognized the important role of the ocean vis-à-vis climate change and agreed to strengthen ocean-based action as part of the Glasgow Climate Pact, negotiated during COP26. And negotiations are underway to conclude a major treaty in 2022 on biodiversity in areas beyond national jurisdiction (commonly known as BBNJ).

Yet underneath these ambitions to conserve and sustainably use ocean resources lies a great *diversity of assumptions* concerning the relative importance of different goals and their meaning in practice.[18] With regard to sustainable use, the blue economy agenda is often portrayed as win–win; however, there are often unrealized or ignored trade-offs. For example, offshore renewable energy reduces carbon emissions but may also negatively affect ocean habitats to the detriment of biodiversity if sited without proper planning and mitigation action.

More broadly, many approaches to reaping economic benefits from marine resources risk depleting marine species and ecosystems, which then compromises long-term economic benefits and local livelihoods.[19] Indeed, there are *significant risks* that a rapid increase in public and private investment in ocean industries may accelerate trends that are environmentally destructive, increase social inequity, and undermine human well-being.[20]

There are also *trade-offs* between different groups of ocean users.[21] For example, there is evidence that small-scale fisher groups are increasingly being squeezed out by industrial fishing fleets and large-scale aquaculture servicing global seafood buyers, by coastal development and industrialization of seascapes, and by the pursuit of mineral wealth.[22] And there remains a divergence of opinion over the legitimacy of individual sectors as components of the blue economy, such as carbon-intensive industries like oil and gas and the emerging industry of deep seabed mining,[23] creating tension between various industry sectors advocating blue economy development and their respective constituencies.

Additionally, there is scope for significant shortfalls in realizing investment objectives because of *blind spots* based on flawed or tenuous assumptions. For example, there is growing attention to the potential of mariculture to reduce pressure on both capture fisheries and land-based food production systems, to lower the carbon intensity of food production, and to address global food and nutrition security. Yet not all investments in marine food production necessarily increase nutrition security, nor do they necessarily substitute for capture fisheries.[24] Indeed, they may displace production systems traditionally more accessible to the poor. More broadly, socioeconomic and governance factors are often lacking to fulfil the enabling conditions for successful investment.[25] For example, there is evidence that factors such as

national stability, absence of corruption, and appropriate infrastructure are as – or even more – important in some cases than natural resource availability for realizing a sustainable blue economy.[26]

Finally, there are significant risks related to the *concentration of economic power* and the consequent barriers to affected peoples and nations achieving an equitable voice in decision-making. The eight core ocean industries (offshore oil and gas, marine equipment and construction, seafood, container shipping, shipbuilding and repair, cruise tourism, port activities, and offshore wind power generation) generated US$ 1.9 trillion in revenues in 2018.[27] Across all eight ocean industries, the 100 largest transnational corporations accounted for 60% of total revenues. Of those 100 transnational corporations, the highest share of total revenues was concentrated in just 11 countries.[28] While this means that shifts in practices by a few large commercial players can have outsized impact, this concentration of wealth and power also poses risks to achieving sustainability goals since it contributes to unequal access to goods and services and presents significant barriers for small and medium-sized enterprises in entering global markets.[29]

The *economic and social consequences* of unsustainable use are severe. The ongoing degradation of ocean health will not only diminish the abundance, location, and quality of natural resources and ecosystem services that support sustainable livelihoods. It will also reduce the economic contribution of ocean industries to national GDP, with disproportionate negative consequences for Indigenous peoples and fishery-dependent communities.[30] If inadequately regulated, the rapid growth of ocean industries will continue to affect ecological decline and have major social and economic impacts, including negatively impacting food security and local livelihoods.[31] An IPCC study estimated that mishandling of the ocean economy would cost more than US$ 400 billion per year by 2050 and US$ 2 trillion per year by 2100.[32] A more recent analysis found that two-thirds of globally listed companies have some exposure to the ocean economy and identified up to US$ 8.5 trillion in value at risk over the next 15 years in the absence of action to secure a sustainable blue economy.[33] If ocean degradation continues, moreover, some ocean-dependent countries are likely to see a reversal of recent advances in poverty reduction.[34]

The risks to global food and nutrition security are particularly acute.[35] Projected reductions in the yield of capture fisheries, resulting from habitat disruption and unsustainable fishing practices, are predicted to contribute directly to micronutrient and fatty acid deficiencies for 845 million people and 1.39 billion people, respectively (11% and 19% of the current global population) by 2050, mostly concentrated in low-latitude developing nations.[36] Some of the same vulnerable populations are also at risk from losses to natural coastal protection, a decline in ecosystem function anticipated to affect some 100–300 million people living within coastal flood zones.[37]

Pathways for change

Trends in ocean health signal the need for transformative change.[38] Achieving a sustainable blue economy that works for everyone will require *strengthened governance* across sectors and scales, with effective and inclusive participation by multiple actors.[39] Significant changes in decision-making processes, structures, rules, and norms are all required elements in a meaningful ocean governance transformation.[40] At the global scale, there are slow but meaningful signs of progress. In 2017, under the United Nations Convention on the Law of the Sea, the United Nations General Assembly agreed to

establish a legally binding instrument focused on the conservation and sustainable use of marine biological diversity in areas beyond national jurisdiction (commonly known as BBNJ). If such an agreement is concluded as anticipated in 2022, it will have major implications for area-based management planning, data-sharing, enforcement mechanisms, and financing needs.[41] (See box 1.)

Other key signs of progress in governance at the global level include a resolution in early 2022 by the United Nations Environment Assembly to launch negotiations towards a binding agreement to end plastic pollution, a major source of marine degradation, and the anticipated World Trade Organization agreement, more than 20 years in the making, to ban harmful fishery subsidies.[42] Such agreements are important for providing the overall framework for action and for securing high-level commitments. Yet analysts warn about the power differentials and tensions between member states, especially regarding issues such as levels of biodiversity protection and incurred costs,[43] enforcement mechanisms, and financial and institutional support to help low-income countries make the needed transitions.[44] Lack of attention to these factors has contributed to a poor track record of implementation for many existing international instruments in the marine sector.[45]

Approaches that focus on increasing the *transparency and accountability* of ocean firms are another key component of ocean governance, given the sensitivity of many such firms to market-based incentives in combination with regulatory enforcement.[46] Recent advances in monitoring, control, and surveillance systems show great promise in combating illegal, unreported, and unregulated (IUU) fishing by allowing people to visually access and analyse distant and previously inaccessible areas of the ocean.[47] Organizations such as Global Fishing Watch highlight examples of how their data products have been used to support enforcement activities aimed at curbing IUU fishing.[48] While these initiatives are helping to democratize ocean space through increased access to information, there is concern regarding the legitimacy and accountability of monitoring, control, and surveillance practices in ocean governance as these transition from state to non-state or private forms of control.[49]

Box 1. Implications of a BBNJ treaty on GEF financing priorities

Following delays caused by the COVID-19 pandemic, negotiations resumed in 2022 to conclude a legally binding international instrument on marine biodiversity in areas beyond national jurisdiction – commonly known as BBNJ. The four main elements of the instrument are marine genetic resources, including benefit-sharing; area-based management tools, including MPAs; environmental impact assessments; and capacity-building and marine technology transfer.

The GEF could draw on its experience under the International Waters and Biodiversity focal areas to support the instrument's overarching objective to conserve and sustainably use marine biological diversity in areas beyond national jurisdiction (ABNJ). Priorities the GEF would be well-positioned to support include:

- **Science and data.** Timely and robust scientific evidence will be critical to supporting a cross-sectoral, integrated approach to ocean management.[50] Accurate data are necessary for ABNJ marine spatial planning and effective management of resources (e.g. migratory fish) and threats (e.g. pollution, climate change). With 184 member countries, the GEF could help foster a systematic approach for the creation and exchange of relevant data and methods.
- **Coordination and capacity-building.** Multi-stakeholder deliberations will be critical to the successful implementation of BBNJ obligations. The GEF could support national institutions to coordinate and consolidate relevant activities and investments and help build the capacity of a designated lead institution to overcome challenges such as limited substantive and geographic mandates; difficulty integrating science across sectors; lack of specific coordinating mechanisms, policies, or incentives; and limited resources.[51] The GEF could also support efforts to strengthen South–South cooperation aimed at sharing lessons learned and fostering science, policy, and governance research.[52]
- **Policy coherence.** The BBNJ instrument can act as a catalyst for integrated planning and management at the regional scale in ABNJ, promoting coherence with national policies addressing exclusive economic zones. GEF experience with transboundary water cooperation and biodiversity conservation through LMEs could be tapped to help integrate ecosystem-based management into ABNJs, enabling more effective management of highly migratory fish stocks, for example. Doing so would require mainstreaming biodiversity conservation considerations into relevant national policies and decision-making bodies, as well as new and existing regional authorities.[53]
- **Enforcement.** Currently, there are many highly fragmented governance regimes, which often overlap or leave gaps (geographically, by sector, by location in the water column, etc.), making ocean management very complex and rendering monitoring and enforcement difficult.[54] The GEF could support upstream activities to incorporate effective compliance and enforcement mechanisms within management plans from the beginning[55] and potentially support sustained global ocean observations to monitor illegal fishing, among other things.[56] Doing so could help increase overall transparency and potentially influence the behaviour of large private corporations whose economic activities are intricately linked to the open seas.

Working towards *policy coherence* is essential to remedying the widespread inconsistencies between international commitments and national action, and among the policy agendas at the national level which sometimes compete. Achieving policy coherence also means addressing the adverse impacts that policy decisions in wealthy nations can have on distant, poorer nations in areas such as resource extraction, pollution, and waste. It means addressing market distortions such as subsidies for harmful activities and unequal distribution of costs and benefits.[57] It also means working to contextualize and situate blue economy policies within existing legislation and policy networks and to strengthen intersectoral collaborations.[58] These efforts can be assisted by using tools such as marine spatial planning to identify tensions and trade-offs and to enable decisions that ensure the overall sustainability of the blue economy. In SIDS and least developed countries, where efforts to attract foreign investment may directly compete with local livelihood priorities,[59] it is particularly critical to address equitable benefit-sharing as a precondition for community engagement.[60]

Acknowledging that transformational change inherently entails political choices with unequal distribution of costs and benefits, it is crucial that policy reconfigurations adequately take into account the *social equity* dimensions of policy and investment decisions.[61] Too often, large-scale blue economy investments prioritize aggregate economic gains at the cost of environmental degradation and the exclusion of local communities.[62] Integrating community-based approaches into regional and national policies in support of the blue economy is proving effective at tackling the dual challenge of protecting the ocean and its resources and securing human economic welfare.[63] For example, in southwestern India, effective and socially accepted marine fisheries governance agreements only emerged when state, non-state, and community institutions from different levels interacted and jointly agreed on governance solutions.[64] With the appropriate considerations, integrating traditional ecological knowledge alongside data from ocean observation systems into national and regional planning has proven to be a successful means of improving equity.[65] Culturally compatible, multi-scalar, and multisectoral policies – including increased formal recognition and support to indigenous governance systems – are becoming more prevalent in regions such as Latin America and the South Pacific.[66]

Leveraging *science and technology* is essential not only to driving sustainable practices such as offshore wind and low-carbon shipping but also to guiding investments in the most effective conservation approaches. Currently, only 2.7% of the ocean is highly protected,[67] and marine protected areas (MPAs) are often located in already low-use locations, limiting their capacity to manage key drivers of biodiversity loss.[68] And evidence suggests that MPAs are often not effectively managed once created.[69] Synoptic marine environmental observation, state-of-the-ocean reporting, and more detailed exploration of ocean space can provide a more robust information base for implementing conservation action, ensuring safety and security for the growing number of marine operators, and improving fisheries management practices.[70] Yet it is also essential to recognize that better data and advanced technology can just as well enable more destructive resource exploitation and inadvertently contribute to unsustainable and inequitable development with disproportionately negative outcomes for some ocean-dependent people.[71]

Implementing *nature-based solutions* for coastal areas such as tidal marshes, beaches and barrier islands, biogenic reefs, and mangroves leverage the ability of coastal and marine ecosystems to store carbon, for example, contributing to climate change mitigation and adaptation, and biodiversity benefits.[72] Other land-based solutions, such as restoration and restorative agricultural practices, have similarly been found to be cost-effective, long-term solutions that can achieve multiple benefits.[73] While many of these

interventions still lag behind the use of traditional grey infrastructure, and though challenges remain in their financing and implementation,[74] their multiple environmental and social benefits make them increasingly attractive.[75] Nature-based solutions also figure prominently among priorities for post-COVID recovery investment (see box 2).

Currently, both public and private investments in sustainability of the ocean economy are insufficient, highlighting the importance of coordinated action to address the large *financing* gaps. Closing these gaps to support a sustainable ocean economy will require a multi-pronged approach that includes effective and stable regulatory and policy environments to attract investment, and high-quality, investable projects.[76] Barriers to sustainable ocean financing include gaps in understanding and scale (e.g. ocean contributions are not reflected in market prices or GDP); a weak financial pipeline with projects of the appropriate deal size and risk–return ratios to match capital; and the higher risks involved in ocean investment, which may be mitigated by an enabling regulatory framework.[77]

Despite these challenges, several innovative financing mechanisms have emerged over recent years. For example, trust funds such as the Mesoamerican Reef Fund, PACÍFICO, and the endowment fund in Kiribati have been set up to capture and consolidate resources to support targeted technical assistance and improved management of key conservation sites.[78] "Blue bonds," which earmark proceeds for sustainable ocean uses, have also gained prominence in recent years.[79] The Sustainable Blue Economy Finance Principles, hosted by the UNEP Finance Initiative, have attracted the backing of some 75 multilateral agencies, private investment firms, and other ocean finance stakeholders.[80] The United Nations Global Compact has developed a framework based on five tipping points for a healthy and productive ocean, covering sustainable seafood, decarbonized shipping, ocean energy, ocean mapping and data, and waste management.[81] These activities can provide a starting point for developing performance indicators for blue bonds and other innovative financing mechanisms.[82]

Box 2. Blue–green recovery in the wake of COVID

The ongoing global COVID-19 pandemic, which began in 2020, was a stark reminder of how human pressure on nature and natural systems is exposing humans to grave health risks, with wide-ranging and lasting consequences for society and for economic stability at national and global levels.[83] It has also laid bare the importance of equity and justice related to resource access and use.

The pandemic has significantly disrupted ocean sectors and global supply chains, and because ocean industries are so heavily integrated, this has led to cascading and interrelated impacts across the ocean economy, marine ecosystems, and society.[84] Given the importance of the ocean as a source of income, livelihoods, and nutrition for billions of people worldwide, as the COVID-19 crisis recedes it is critical to ensure that the ocean economy is positioned on a sustainable and just path to reduce vulnerability to future shocks, restore resilience in natural systems, and redress existing inequalities.[85]

Prior to the COVID-19 pandemic, the links between human health and the ocean were becoming more widely recognized (figure B2.1). Nevertheless, ocean pollution – such as toxic metals, plastics, manufactured chemicals, petroleum, urban and industrial waste, pesticides, fertilizers, pharmaceutical chemicals, agricultural run-off, and sewage – has too often been overlooked in international development planning and in the global health agenda.[86] It is significant, therefore, that experts from the High Level Panel for a Sustainable Ocean Economy recommend investment in sewage and wastewater treatment for coastal communities among the top five priorities for blue–green recovery (figure B2.2).[87] Other priorities in coastal restoration, sustainable mariculture, energy, and transport likewise reflect a focus on short-term job creation and equity outcomes, as well as on contributions to long-term resilience to future shocks and ability to catalyse progress towards the broader blue economy transition, in accordance with international commitments including the Sustainable Development Goals and the Paris Agreement.

Box 2. Blue–green recovery in the wake of COVID (cont.)

Figure B2.1. Interconnections between human health and the ocean

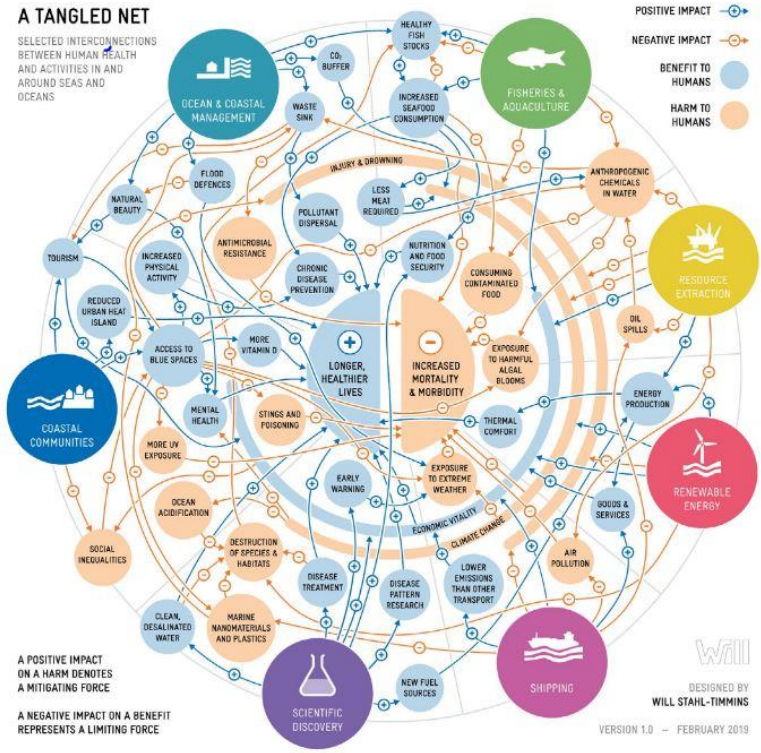
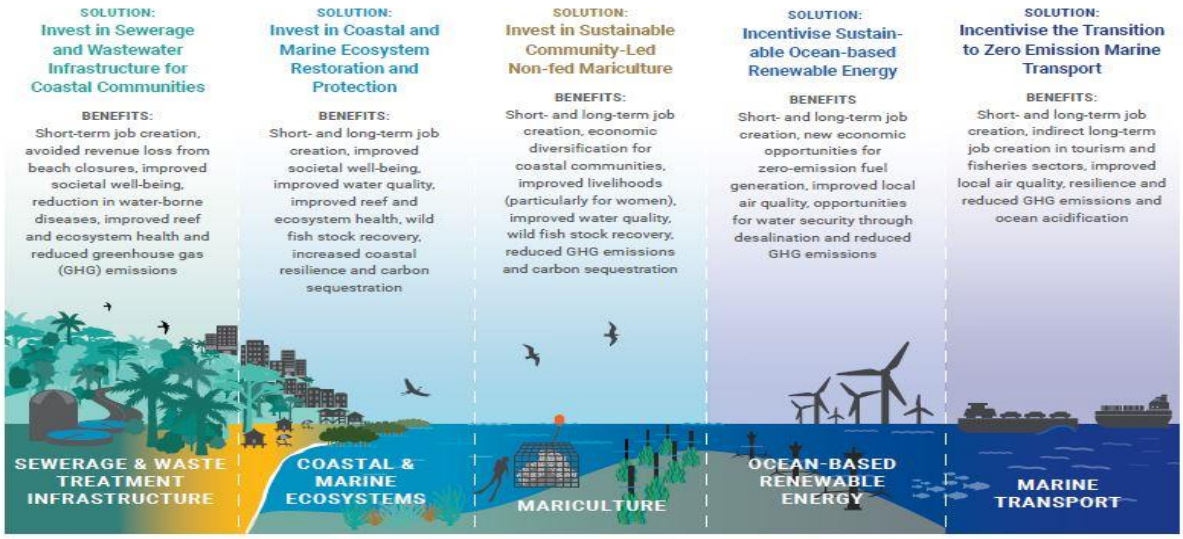


FIGURE 1 A tangled net – selected interconnections between human health and activities in and around the seas and oceans (designed by Will Stahl-Timmins)

Source: Fleming, L.E., Maycock, B. White, M.P. and Depledge, M.H. (2019). Fostering human health through ocean sustainability in the 21st century. *People and Nature* 1 :276 – 283.



The GEF and the blue economy agenda

The GEF adopted the concept of the blue economy in GEF-6 (2014–2018). Without explicit recognition of the term itself, the International Waters focal area included several of its components (rebuilding marine fisheries, preventing loss and degradation of coastal habitats, and reducing ocean hypoxia) in addition to long-standing support for large marine ecosystems (LMEs) and MPAs. In contrast, the term "blue economy" features prominently in the GEF-7 (2018–2022) programming document under the International Waters focal area. The objective "strengthening blue economy opportunities" includes references to tourism, extractive industries, renewable energy production, fisheries and aquaculture, coastal development, and marine transport. However, targeted investments are similar to those in GEF-6 (sustaining healthy coastal and marine ecosystems, catalysing sustainable fisheries management, and reducing pollution in marine environments).

Blue economy themes expand in GEF-8 (2022–2026) and include a proposed IP "Clean and Healthy Oceans" that addresses land-based sources of marine pollution, with a focus on wastewater from industrial, agricultural, and municipal sources. Other proposed integrated programs address policy coherence in SIDS, with particular focus on investment in fisheries and agriculture and on tourism and urban development ("Blue and Green Islands"); the circular economy, with a strong emphasis on the reduction of plastic waste flows that pollute marine environments ("Circular Solutions to Plastic Pollution"); and sustainable intensification of aquaculture, potentially including seaweed, algae, and shellfish production, appearing for the first time as a priority alongside terrestrial food production systems and global value chains ("Food Systems").

The International Waters focal area in GEF-8 retains a focus on sustainable fisheries, alongside international cooperation to manage LMEs. The Biodiversity focal area retains a focus on biodiversity mainstreaming, which includes support for natural capital accounting in both terrestrial and marine ecosystems. The Climate Change focal area includes a priority for nature-based solutions with high mitigation potential, including coastal habitats such as mangroves, seagrass, and marshes.

While many recent GEF projects reference the blue economy, preliminary consultations with GEF agencies make it clear that agencies (and by extension countries) hold a range of views on what types of activity are encompassed by the term or might be suitable for GEF investment. For these reasons, it would be useful for the GEF to adopt a *coherent framing* to ensure that the investments it pursues under the blue economy banner are consistent with its mandate and best targeted to contribute to system transformation in GEF-8 and beyond.

In this task, there are useful precedents to build on. The High-Level Panel for a Sustainable Ocean Economy, for example, advocates nine framing principles that address *alignment* with climate, biodiversity, and other environmental commitments, as well as *legal compliance* with (UNCLOS) and other ocean commitments; *inclusiveness* in decision-making and integration of scientific and local *knowledge*; *precaution* and *protection* of ocean resources; *resilience* of the ocean and ocean economy and *sustainability* of production systems; and *solidarity* with developing countries, especially SIDS and least developed countries, in access to finance, technology, and capacity.[88]

Previously, the World Wildlife Fund advanced a set of principles that focus on *goals* (including equitable distribution of benefits, ecosystem resilience, and circularity), *governance processes* (including inclusivity, accountability, and transparency), and *partnership norms* (including performance measurement, shared standards, and lesson-sharing),[89] which have since been incorporated into the Sustainable Blue Economy Finance Principles.[90]

The GEF's unique role

The GEF is the largest funding mechanism for multi-country collaboration on water and oceans, with 156 GEF recipient countries and 24 non-recipient countries working together to manage their transboundary water resources.[91] The GEF has been active in this arena for over two decades and has a comparative advantage in supporting sustainable blue economy actions globally based on:

- The opportunity to be integrative across a range of environmental dimensions relevant to the blue economy agenda (toxic pollution, biodiversity conservation, climate mitigation and adaptation, freshwater management, transboundary governance of marine and coastal resources, etc.)
- A sustained relationship with multiple developing country governments, through the GEF agencies
- A long record of investment in transboundary diagnostic assessments (TDAs) and strategic action programs (SAPs) linking national action to regional commitments and institutional frameworks, including investments in LMEs.

A key niche for the GEF is helping translate high-level blue economy and marine conservation commitments into practical policy and implementation measures. In many SIDS, for example, the sustainable blue economy agenda is essentially the whole national development agenda. Only a small percentage of National Action Plans have been implemented, so the economic argument needs to be made stronger: how is leveraging blue economy opportunities pivotal to national prosperity?

At the same time, many have justified concern about the equity and livelihood implications of blue economy investments. GEF support can help countries integrate future scenarios, recognize trade-offs, and make these development choices explicit. Such support could build on the TDA–SAP legacy, as regional initiatives can be important influencers of national action, but it needs to draw much more broadly on GEF resources and expertise across focal areas. While supporting country-level deliberation over these development choices, there need to be sharp lines about what is off limits on environmental grounds where the science is clear, for example, seabed mining, offshore oil and gas, mangrove conversion, industrial bottom trawling, seabed dredging, and – of course – IUU fishing. UNEP's Finance Initiative has developed a list of recommended exclusions for sustainable blue economy investment based on their negative environmental impacts and risks.[92]

STAP's screening of projects for GEF investment noted a range of promising trends in projects addressing blue economy themes (see box 3). The challenge ahead is to consolidate and amplify these points of progress with consistent criteria that apply across the GEF investment portfolio.

Box 3. Promising trends in GEF investment

The following examples illustrate ways in which project design in GEF-7 is targeting innovations with compelling opportunities for impact at scale, often explicitly framed within a blue economy agenda.

Several recent projects have focused on *innovative finance mechanisms* for the sustainable use of ocean resources. For example, one of the major components of the Caribbean Blue Economy Financing Project (GEF ID 10782) is to design and implement regional finance mechanisms, including marine payments for ecosystem services and shipping industry carbon offsets. Responding to priorities identified under a prior regional strategic action plan developed with GEF support, the project shows signs of sustained commitment to *multi-stakeholder dialogue* to connect and reinforce recent national commitments and relevant regional initiatives.

Ocean Health for Ocean Wealth – The Voyage to a Blue Economy for the Blue Pacific Continent (GEF ID 10783) similarly builds on past successes to present a highly innovative project with a suitable degree of *programmatic risk*-taking, along with strong risk mitigation measures. This project includes engaging all relevant stakeholders to assess natural capital services and values, and mapping and quantifying ocean economy sectors. Strong recognition of *governance barriers and opportunities* should produce good prospects for linking institutional change at regional and national scales.

Other projects focus on one component of the blue economy, such as the fisheries sector. For example, the Blue Bonds for Fisheries Management project (GEF ID 9563) is partnering with the Government of Seychelles to use the non-grant instrument window to support the issuance of blue bonds to *attract private investment* aimed at improving fisheries management and coastal conservation. Fisheries and Ecosystem Based Management for the Blue Economy of the Mediterranean (GEF ID 10560) makes strong links to climate change, biodiversity, and pollution within a land-to-sea perspective. A project on fisheries governance in the Gulf of Thailand (GEF ID 10703) aims to develop tailored *incentives to influence commercial actors*, directly engaging large commercial fishing operators, processors, and buyers.

This emphasis on market-driven solutions is also apparent in the Blue Horizon project (GEF ID 10573). The project includes investments to support *innovative technology* (offshore seaweed aquaculture production) and financing (carbon credit markets) and offers an excellent opportunity for scaling market-driven solutions, with notable opportunities to advance *gender equality* through employment and entrepreneurship at multiple stages of input provision, production, processing, and trade. A focus on *integration* delineates links to climate change and biodiversity, in addition to economic and food security benefits. Similarly, Towards Sustainable and Conversion-Free Aquaculture in Indonesian Seas Large Marine Ecosystem (GEF ID 10867) focuses on building *transparency and accountability* in the shrimp and seaweed production sectors.

The Coral Reef Rescue project (GEF ID 10575) is an example of *leveraging data* from real-time monitoring to target actions by national governments and the private sector, in this case addressing threats specific to coral reefs located in six LMEs. This cross-regional project uses *climate projections* as the basis for geographic targeting and soundly integrates aspects of exposure to climate threats, protection of livelihoods and food security, capacity to adapt, and local stressors on coral reef health. Well-elaborated thinking regarding institutional, financial, and social sustainability increases the likelihood of long-term *durability* of the targeted outcomes.

Criteria for GEF investment in the blue economy

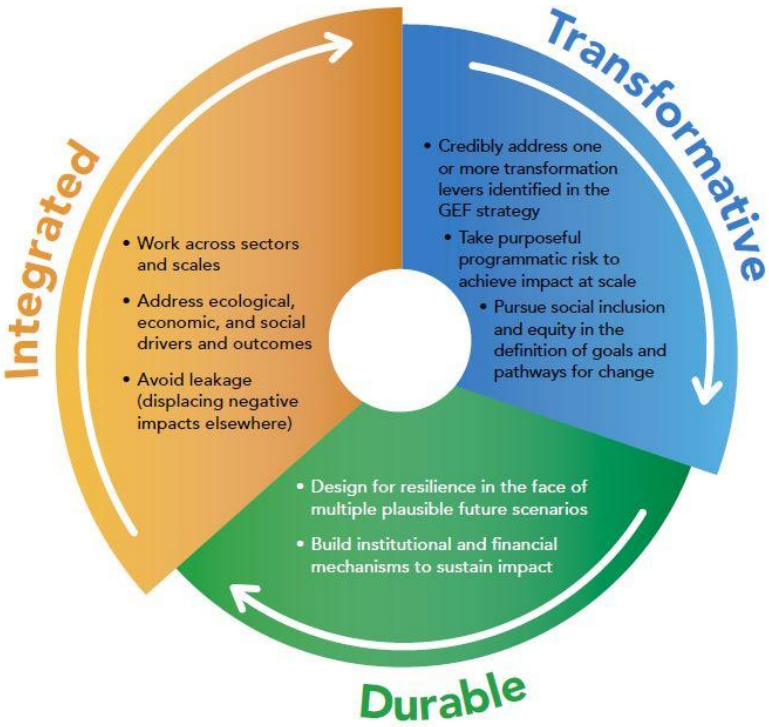
The GEF has a critical role to play in supporting investments that bolster sustainable blue economy efforts globally. To maximize its role, STAP recommends two foundational considerations should guide GEF investment:

1. **Focus on the GEF's comparative advantage.** This includes the threshold question: *Does the proposed investment address, as a central aim, global environmental benefits within the GEF's mandate?* How well does it engage with the many problems relating to the dire state of the ocean from pollution, habitat loss, resource extraction, climate change, etc.? Does the GEF have a plausible opportunity to influence change at scale?

2. **Invest in ways that leverage this advantage, pursuing investments that conform to explicit criteria that apply across the GEF portfolio.** This portfolio-wide commitment is particularly significant in terms of the impacts of terrestrial activities on the oceans and the intersectionality of projects that consider both synergistic and antagonistic links between the land and ocean economies.[93]

Eight overarching criteria, grouped into three categories, have been developed with input from GEF agencies and expert consultation (figure 1). These criteria build on earlier STAP guidance to the GEF addressing integration,[94] transformational change,[95] and durability.[96]

Figure 1: Summary of criteria for GEF investment in the blue economy



Integrated

- **Work across sectors and scales.** This criterion includes the links between biodiversity conservation, habitat protection and restoration, food systems, transportation, energy production, and supply chains. For example, how well does marine spatial planning integrate wastewater treatment and green energy within plans for port development, or link upstream payment for ecosystem services with coastal restoration efforts? How well are blue carbon benefits considered in MPAs?

- **Address ecological, economic, and social drivers and outcomes.** This criterion includes consideration of factors such as cultural norms, consumption patterns, economic demand, and incentives, as well as the distribution of costs and benefits from investment activities. To what extent do planned investments respond to local priorities? For example, how well do investments in fisheries management also address associated livelihood improvements or the incentives driving illegal fishing?

- **Avoid leakage (displacing negative impacts elsewhere).** This criterion includes displacement of destructive production practices as well as flows of toxins and waste. For example, are efforts to clean up coastlines in middle-income countries merely diverting polluting industries to least developed countries? Are aquaculture investments increasing pressure on capture fisheries as a source of food?

Transformative

- **Credibly address one or more transformation levers identified in the GEF strategy.** For GEF-8, these levers are identified as governance and policy, financial leverage, innovation and learning, and multi-stakeholder dialogue. The next section illustrates this approach when considering initiatives relating to ocean planning, innovative finance, and land-based sources of marine pollution.

- **Take purposeful programmatic risk to achieve impact at scale.** This criterion recognizes that transformational change requires novel approaches in policy and finance, technology and management practices, and institutions and cultural norms. For example, in addition to testing technological innovations in sustainable mariculture, are there complementary efforts to shift policy and consumer demand?

- **Pursue social inclusion and equity in the definition of goals and pathways for change.** The most environmentally damaging economic uses of marine resources are often the most inequitable as well; by contrast, building broad-based commitment to transformational change in the ocean economy requires a central focus on the priorities of populations typically marginalized in decision-making and the benefits (in terms of food, livelihood, and health) that accrue to them.

Durable

- **Design for resilience in the face of multiple plausible future scenarios.** This criterion includes explicit consideration of climate risk along with other dimensions of environmental change. For example, how well do proposed TDAs address future scenarios when taking into account the latest projections of climate impacts on marine biodiversity and fisheries productivity?

- **Build institutional and financial mechanisms to sustain impact.** This criterion recognizes that the greatest opportunities to scale impact typically come after the period of GEF investment. For example, what kinds of twinning arrangements or other capacity-strengthening measures will enable the effectiveness of transboundary governance institutions for LMEs? And how can those institutions leverage the expansion of marine economic activity to finance their management efforts in the future?

Possible priorities for GEF investment in the blue economy

To pursue investments that are integrated, transformative, and durable, what should be considered as potential priorities for GEF investment?

Consider, as a starting point, the five high-priority building blocks for investment identified by the High-Level Panel for a Sustainable Ocean Economy.[97] In two of these, the GEF may play a contributing role. "Using data to drive decision-making," is a priority that the GEF can certainly encourage as a component of its investments, for example by supporting the adoption of standardized data and monitoring systems in areas such as fisheries management, shipping, and pollution reduction; by progressing towards international agreements regarding data-sharing; and by building capacity in national systems to access and analyse remote sensing data. This priority can also encourage national regulations that make use of technology-driven, real-time monitoring in areas such as fisheries management, transport emissions, coastal development, and marine pollution as contributions to integrated ocean planning.

Likewise, there is much that the GEF can contribute in its support to national systems to advance the priority of "changing ocean accounting so that it reflects the true value of the oceans." The GEF's contributions may include promoting the integration of ocean health accounting within frameworks for national development planning and progress reporting; and also facilitating dialogue and exchange at the international level to consolidate best practices and agree on practical standards for ocean accounting. And, critically, the GEF can support effective national dialogue on priorities to make explicit the trade-offs and synergies in policy and investment choices.

The remaining three priorities identified by the High-Level Panel may be considered core areas of GEF investment in the blue economy, as reflected in its programming directions. These priorities are:

- Promoting "goal-oriented ocean planning," with a particular focus on areas under national jurisdiction, using processes that are "science-based, inclusive, participatory and adapted to the local context";

- "De-risking finance and using innovation to mobilise investment," for example in sustainable fisheries, mariculture, ecotourism linked to marine protected areas, and offshore wind energy production; and
- Stopping land-based sources of marine pollution, including the reduction and treatment of waste flows from agriculture, industry, and municipal sources, as well as introducing circular economy principles to avoid the generation of plastic waste.

To pursue these priorities – and strengthen coherence in GEF investments in the blue economy – the GEF could structure proposed interventions with reference to the four transformation levers identified in the overarching GEF-8 theory of change, which provides the architecture for its programming strategy. The following subsections illustrate the application of the first point under the "transformative" criterion: *credibly address one or more transformation levers identified in the GEF strategy*.

Governance and policies

On ocean planning, the GEF can encourage national governance frameworks that both integrate the best scientific evidence and promote *policy coherence* to ensure that conservation and sustainable use priorities are not undermined by policies and investments in other sectors. For example, where there is potential for expanded cultivation of carbon-positive, low-trophic-value blue food value chains to meet domestic food and nutrition security as well as international demand, policy innovation may work concurrently to clarify tenure rights, incentivize business models for sustainable production without habitat conversion, and implement accountability systems, while also cultivating new market entry points.

Gaps and inadequacies in the policy and legal framework addressing land-based sources of marine pollution exemplify intersectoral disjunctions. GEF investments can be used to support policy initiatives focusing on *prevention* of land-based marine pollution using (i) a circular economy approach, by averting the production of waste in industrial processes and overuse of synthetic inputs in agriculture, as well as (ii) *mechanisms of accountability* to ensure that producers are held responsible for downstream impacts and therefore incentivized to eliminate waste flows, including implementation of the "polluter pays" principle for commercial and industrial wastewater management.

There is also a need to continue to support *institutional structures* that enable cooperation across subnational jurisdictions, among sectoral agencies at the national level, and across international borders to address both waste prevention and treatment, as well as *voluntary approaches* such as codes of conduct, standards, or voluntary agreements, including public-private partnerships.[98]

Finally, the GEF can advance policy and regulatory measures that *de-risk private investment* in resource conservation, sustainable production, and renewable energy, such as improving long-term regulatory certainty, insurance, and demand guarantees.

Financial leverage

A central obstacle to implementing integrated ocean planning concerns the ability to attract adequate finance. The GEF could adopt a more active role in attracting finance – both public and private – for the multisectoral blue economy plans that recipient countries have developed. Through its non-grant

instrument window, there is scope for piloting *loan covenants* tied to sustainability requirements, as well as *debt restructuring* to support "blue conditionality" and to help reform fisheries management, marine conservation, and coastal development. In addition to blue bonds, the GEF can work to grow the portfolio of innovative financial products such as coastal and marine *infrastructure investment trusts* and index products to attract mainstream institutional investors.[99]

Given its major focus on low-income countries, there is also scope for the GEF to help attract *public investment* towards projects that specifically engage and benefit traditionally marginalized groups, with significant social and ecological returns, where conventional financial returns may be lacking. Supporting capacity within national and subnational agencies to better identify the potential sources of finance to fit the characteristics of particular projects is key.[100] This may include accessing corporate grant funds through corporate social responsibility or environmental, social, and governance commitments, as well as philanthropic impact investing.

Trends in marine pollution from land-based sources point to a massive market failure, which needs to be addressed alongside policy measures focused on cooperation and enforcement. Supporting a strong policy and regulatory environment is foundational to influencing the trends in private as well as public sector investment. GEF investments could additionally experiment with blended finance and *new financial mechanisms* that target restoration of polluted estuaries and coastal zones and help capture the resulting increase in economic potential. There is also scope for incentivizing private investment in solutions that demonstrate the market viability of *disruptive technologies* that reduce and prevent marine pollution and waste through circular economy principles.

Innovation and learning

Investing in platforms that cultivate innovation and knowledge exchange is a significant pathway of influence for the GEF. Much of that innovation concerns governance arrangements, policies, and finance, as outlined in the previous two subsections. Other types of innovation entail technology, business models, and institutional change, including shifts in cultural norms and consumer behaviours that drive market demand.[101]

On integrated ocean planning, there is significant scope for connecting regional analyses and planning on LMEs through the TDA–SAP process with more detailed national and subnational investments. Such efforts could address, for example, *participatory marine planning and zoning* processes, pilots of *new business models* for sustainable mariculture, and locally-driven initiatives for coastal and marine ecosystem restoration and protection.

On de-risking finance, in addition to the priorities outlined above, there is a need for increased knowledge about catalyzing policy and regulatory reforms to *reduce harmful subsidies* and *shift tax incentives* in ways that incentivize investment in sustainable blue economy initiatives. For example, sufficient clarity in the long-term regulatory context regarding carbon emissions could increase incentives for private investment in the research and development of technologies for zero-emission marine transport, cold storage capacity, and alternative marine fuels.

With regard to halting land-based sources of marine pollution, priorities could include *nature-based solutions* for wastewater treatment, including technological, financial, and policy aspects;[102]

regenerative agriculture technologies that reduce or eliminate the need for chemical inputs; and *municipal regulatory and financing instruments* that enable equitable cost-sharing to finance construction and long-term maintenance of treatment facilities in low-income countries.

Multi-stakeholder dialogue

The breadth of the GEF mandate and the diversity of its agencies means that it has a critical role to play as supporter, connector, and convenor of multi-stakeholder dialogue processes. In accordance with recent STAP guidance,[103] when assessing potential GEF contributions to multi-stakeholder dialogue and collaborative action, it helps to distinguish these three approaches:

- In which key existing initiatives can the GEF play a *supportive or contributory role*, and what would this entail? For example, the 30 by 30 Initiative to expand marine conservation has gained considerable international momentum; the GEF's most important role may be a contributing one focused on effective implementation of national conservation commitments within the context of integrated ocean planning. Similarly, the Coalition for Aquatic/Blue Foods, an outcome of the 2021 United Nations Food Systems Summit, can be supported to promote developing country commitments to sustainable aquatic food production and to connect national policy initiatives with the multiple pre-competitive seafood industry associations active in the sector.
- Where are the opportunities to *connect existing multi-stakeholder platforms* or initiatives to deliver new potential for impact? With progress in establishing international norms and principles for sustainable financing in the blue economy under the auspices of initiatives such as the UNEP Finance Initiative and the United Nations Global Compact's Sustainable Ocean Principles, the GEF may best play a connecting role, helping to mobilize engagement of established industry associations in sectors such as seafood, transport, and energy and to build regional and national commitment to adopt the sustainable financing principles and measure the results.
- Is there a gap and demand for any *new platform or initiative* to focus policy attention, explore financing solutions, or nurture the development and exchange of innovation and learning? For example, while recent years have seen rapid progress in the mobilization of awareness and investment to address the problem of marine plastics,[104] comparable action on other sources of land-based pollution lags far behind. Here, there may be scope for connecting successful local initiatives focused on municipal, agricultural, and industrial sources of pollution and for engaging municipalities, civic associations, and agricultural as well as industrial operators.

Conclusion

International attention on opportunities in the blue economy is growing. But this attention is marked by diverse underlying assumptions as well as inadequate attention to the important trade-offs and risks these investments often entail. Particular focus is needed on integrating efforts to improve governance across sectors and scales; building the transparency and accountability of private sector actors; strengthening policy coherence, especially at the national level; assessing and prioritizing the social equity dimensions of policy and investment decisions; leveraging science and technology to better target investments, including in nature-based solutions; and building an enabling regulatory framework to attract financing for the highest priorities.

While the GEF has a history of engagement and is demonstrating important signs of progress, it is still articulating its distinctive contribution. Some ways forward include the following:

- The GEF's unique role could focus on ensuring that the growing volume of public and private investments in blue economy development are *integrated*, *transformative,* and *durable*. Rather than adding incrementally to international investment on blue economy priorities, the GEF can apply the eight criteria outlined in this advisory document to articulate a coherent agenda and influence broader trends among public and private investors.

- For the GEF's own investment choices, an initial focus could be on its comparative advantage and plausible opportunity to influence change at scale. Secondly, these advantages can be leveraged and *explicit criteria* adopted that apply across the GEF portfolio. Because its blue economy investments are dispersed among a range of integrated programs and priorities within multiple focal area strategies, consistent criteria would help achieve synergies.

- Among these eight criteria is a focus on multiple transformation levers. This advisory document has summarized potential investment priorities associated with each lever articulated in GEF-8 (governance and policies, financial leverage, innovation and learning, and multi-stakeholder dialogue). Within individual projects, and even more so at the program level, the key point is to articulate a design and response logic to deploy a suitable *combination* of levers that together map a plausible pathway to achieve system transformation.

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