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# Scaling Up the Blue Economy

A Domestic and International Roadmap

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SUMMARY REPORT FROM  
GLOBE Advance 2020



**GLOBE**  
SERIES



**DELPHI**  
GROUP







NOTE | To ensure this report is as relevant and meaningful as possible, we have included information and pertinent examples that have come to light following the GLOBE Advance session in February 2020.

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# Introduction

As part of the inaugural GLOBE Advance, which took place on the last day of GLOBE 2020, The Delphi Group hosted the *Scaling Up the Blue Economy: A Domestic and International Roadmap* discussion. The session was the latest dialogue in the Ocean Partnership Summit Series, sponsored by GLOBE Series and Underwater 360. Underwater 360 hosts the Asia Dive Expo (ADEX), the largest and longest-running dive expo in Asia. Previous events include the ADEX conference in Singapore in 2019, and GLOBE Series also hosted the G7 Ocean Partnership Summit in Halifax in 2018.

*The Scaling Up the Blue Economy: A Domestic and International Roadmap* discussion brought together representatives from government, international organizations (e.g., the World Bank), private investment firms, non-governmental organizations, ocean innovators, and others working in the Blue Economy. They explored how to protect one of our most critical natural resources — our ocean — while also generating local, regional and global economic benefits.

To date, there have been a number of investments in the Blue Economy, particularly relating to plastics innovation and solutions. However, given the ocean covers more than 70 percent of the surface of our planet, the potential for the Blue Economy remains largely untapped. For example, while over a trillion dollars in green bonds has been generated for land applications, very few blue bonds with a focus on the ocean economy have been released.

For the Blue Economy to succeed and for innovation to thrive, a diverse and varied financing approach is needed. This report summarizes the challenges and opportunities identified by experts during the Advance discussion and identifies a roadmap for financing the global Blue Economy. We look forward to continuing this critical conversation with governments, industry and investors around the world.

# The Blue Economy:

## An Opportunity to Preserve our Ocean and Deliver Economic Benefits

The ocean faces a number of severe threats: climate change, overfishing, biodiversity loss and pollution — including the ubiquitous issue of ocean plastics, which are dumped in the ocean at an average rate of about 8 million tonnes a year. These threats have led to an acidifying and warming ocean; destruction of coastal reefs; deteriorating seagrass, kelp and mangrove ecosystems; and billions of dollars in damage attributable to marine debris. According to APEC's most recent report, the damage to industries in the Asia-Pacific region's marine economy alone could be US\$216 billion by 2050.

Creating a Blue Economy is a transformational opportunity to build back better — and bluer — in the face of COVID-19. It will preserve our ocean for future generations while also protecting our environment, accelerating economic growth, creating jobs, and fighting poverty and food scarcity. New analysis commissioned by the High Level Panel for a Sustainable Ocean Economy (Ocean Panel) shows that **every \$1 invested in sustainable ocean solutions yields at least \$5 in return.**



## FAST FACTS



### Human life on earth

The ocean is the basis for more than half the breaths we take — sea plants produce 70% of the oxygen we breathe.



### Environment

The ocean has absorbed 50% of the greenhouse gases (GHGs) emitted by humans, helping us mitigate climate change.



### Economy

Ocean-based industries are worth at least 3.5% of global GDP, which could double by 2030.

More than 3 billion people rely on the ocean for their livelihoods and more than 350 million jobs are linked to the ocean worldwide.

Globally, aquaculture is the fastest growing food sector and now supplies nearly half of the world's consumed fish protein.





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## WHAT IS THE BLUE ECONOMY”?

The definition of the “Blue Economy” is still emerging, but it refers broadly to economic activities that are both based in, and which are actively good for, the ocean.

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At GLOBE 2020, it was suggested that the definition should include inland lakes and waterways change since freshwater systems are important pathways of plastic pollution. The definition could be expanded even further to include all sources, uses, technologies, impacts, education, and conservation. These could be captured under the term “Blue Economy” even if they are also seen as part of the “green economy.”

### Two key considerations to explore in this expanded definition are:

- **Stewardship**, i.e., protecting water bodies and using water resources in a way that balances needs with availability, and
- **Economic activities**, i.e., identifying and supporting/promoting the sustainable development of business sectors that depend on water, such as fisheries, tourism, beverage, mining, etc.

By adopting a more open definition, we can look at the economics of all aspects of water, not just our ocean.

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# Global Progress on the Blue Economy

## Public-private sector collaboration

The below is an indicative list of global initiatives and action on the Blue Economy.

- Under Canada's leadership, on June 9, 2018, France, Germany, Italy, the United Kingdom, and the European Union adopted the [Ocean Plastics Charter](#) to demonstrate their commitment to take concrete and ambitious action to eradicate plastic pollution. The charter has since been endorsed by 26 governments and 69 businesses and organizations.
- [Alliance to End Plastic Waste](#) was founded as an NGO in 2019. It has a commitment of US\$1.5 billion over the next five years, which it intends to use to unlock up to US\$8 billion worth of investments that will further accelerate other actions to end plastic waste in the environment.



- Swiss Re and the Nature Conservancy, with regional governments in Mexico, developed a pioneering insurance policy protecting the coral reef off the coast of Cancún. The premiums are funded by government and local organizations dependent on tourism, ensuring money is available to support the repair and restoration of the reef after a storm strikes. The importance of this policy was underlined when Hurricane Delta hit in October 2020. The resulting payout enabled (1) the stabilization of 1,200 uprooted coral colonies, and (2) the collection and replanting of 6,205 broken coral fragments — within eight days of the storm.

### Multi-lateral institutions

- The United Nations has proclaimed a Decade of Ocean Science for Sustainable Development (2021-2030) to support efforts to reverse the cycle of decline in ocean health. In addition, COP25, which took place in Madrid in November 2019, was the first Blue COP — elevating the protection and restoration of our oceans as vital to climate progress.
- UNDP's Ocean Governance Programme is supporting local efforts through the Global Environmental Facility (GEF) Small Grants Programme, regional efforts such as UNDP's Large Marine Ecosystems programme, and global efforts on sustainable shipping in cooperation with the International Maritime Organization (IMO) and GEF.
- With support from GEF and UNDP, the IMO and the global shipping sector are taking proactive steps to minimize the sector's contribution to climate change through improved energy efficiency.
- The World Bank launched a new Umbrella Multi-Donor Trust Fund (MDTF) to support healthy and productive oceans as part of their Blue Economy program, which takes a multi-pronged, coordinated approach to ensuring the protection and sustainable use of marine and coastal resources.

### National and multi-national level

- The Commonwealth has initiated work on the Blue Economy, focusing around the Commonwealth Blue Charter — an agreement by all 54 Commonwealth countries, adopted at the Commonwealth Heads of Government Meeting in London, April 2018. In the Blue Charter, Commonwealth countries agree to actively cooperate to solve ocean-related problems and meet commitments for sustainable ocean development, with particular emphasis on the UN Sustainable Development Goals (SDGs), especially SDG 14 (Life Below Water).
  - The Seychelles launched the world's first Sovereign Blue Bond, demonstrating the potential for countries to harness capital to obtain finance for the sustainable use of marine resources.
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There have also been a number of international initiatives and commitments regarding resource efficiency (e.g., G7 Bologna Roadmap and Toyama Framework on Resource Efficiency, and G20 resource efficiency dialogue) and sustainable consumption and production (e.g., UNEA-4 resolution on sustainable consumption and production, UN Sustainable Development Goal 12) that are complementary to the Blue Economy.





# Key Opportunities in the Global Blue Economy

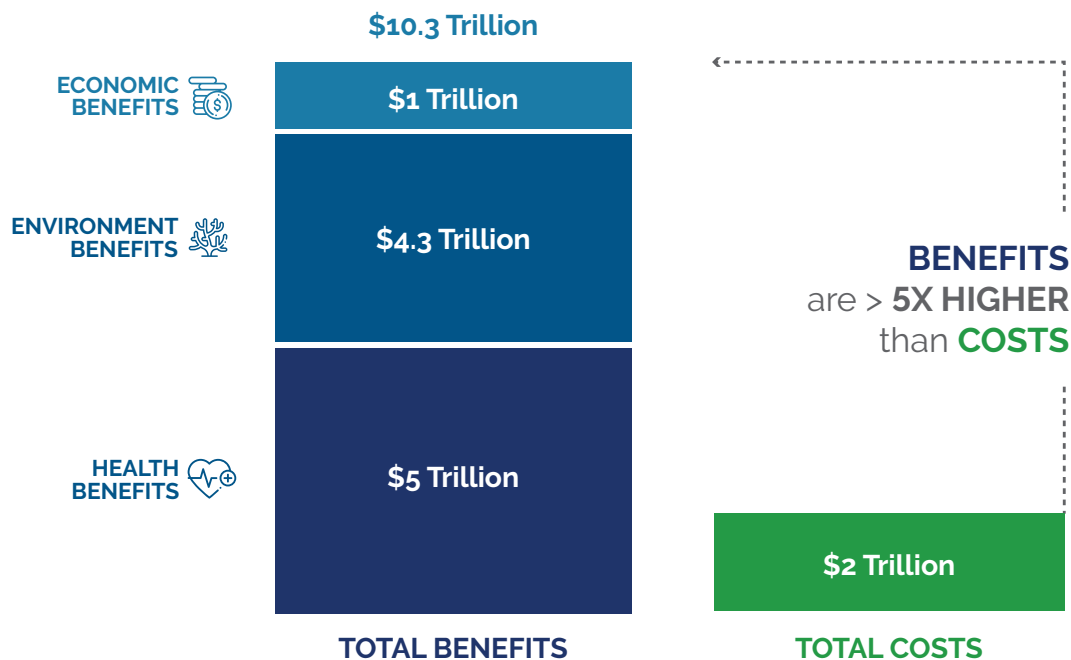
Advance participants identified a number of opportunities, acknowledging a strong desire to complement and build on existing initiatives.

- **Impact investing trend:** Investors are increasingly interested in impact investing and driving positive change and solutions, while also earning a competitive return. Impact assets under management (AUM) in Canada now total \$14.75 billion, up from \$8.15 billion reported two years prior. It will be important to think long term about the consequences of poor ocean health and the climate crisis — and tell a story about how the money will make an impact on ocean health.
- **Coastal regions:** Investment in coastal regions may be a good bridge to ocean-related investments. Almost every coastal city is, or will be, addressing how they manage core wastewater infrastructure. Investors expect these projects to meet criteria for reducing emissions while producing clean water. Investor appetite to fund such sustainable projects is strong and growing, and an eligible use of proceeds for issuers of and investors in green bonds.



## Investments in a Sustainable Ocean Economy Offer Vast Benefits

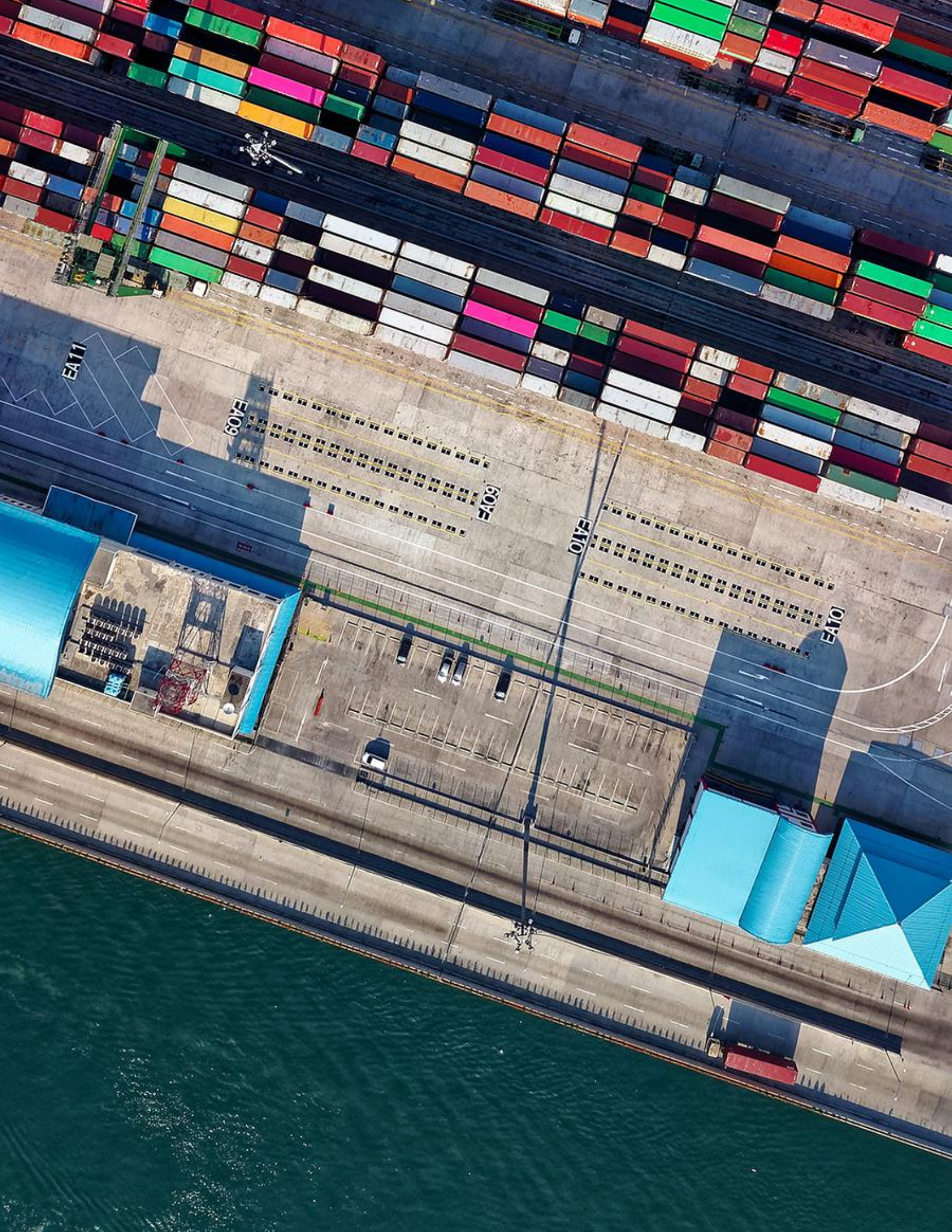
Source: [wri.org](http://wri.org)



- **Blue bonds:** Blue bonds offer an opportunity for private sector capital to be mobilized for the Blue Economy. Since the World Bank issued the first green bond in 2008, the market has grown to more than US\$750 billion. In 2018, the Republic of Seychelles launched the world's first sovereign blue bond, raising a total of \$15 million. In 2019, Morgan Stanley, working with the World Bank, sold \$10 million worth of blue bonds with the aim of solving the challenge of plastic waste pollution in oceans. With more collaboration among investors, banks, development agencies and scientists, the market for blue bonds could grow to be on par with the green bond market.
- **Investments that support ocean solutions without giving up financial returns:** Activities in the Blue Economy range from ocean tech companies that can be profitable and provide a return to investors, to restoration projects that benefit the ocean and environment but do not have a financial return. Diverse investment vehicles are needed to reflect and support the range of these activities. Identifying co-benefits and key beneficiaries of activities and projects will be key.

- **Ocean innovation accelerators:** There are several centres in North America and around the world where research and investment are starting to be directed to oceans (e.g., Maritime Blue in Washington State and the Marine Supercluster in Atlantic Canada). These are a critical part of the Blue Economy ecosystem, and can support education on the Blue Economy as well as research and development and commercialization efforts relating to ocean technologies.
- **Ocean-reliant sectors:** With respect to ocean health, sectors that rely on the ocean for commerce — such as shipping/transport, coastal tourism, fishing and tidal and offshore renewable energy — have a lot at stake. They can be leveraged as early partners and allies in the Blue Economy.
- **Economic models that drive action and investment:** Faster and deeper action on ocean health is required across sectors, and the Task Force on Climate-Related Financial Disclosures (TCFD) framework is a good tool to start the conversation. Identifying product and service opportunities resulting from the impacts of climate change are part of the TCFD reporting process. Shoreline and near-shore restoration services (natural infrastructure) aimed at preventing erosion will likely be more in demand, and this demand could be leveraged to support conservation activities.







# Key Challenges to Financing the Global Blue Economy

## **A clear definition of the “Blue Economy” is needed**

The definition needs to capture the broad scope of the Blue Economy, from preserving seagrass and mangroves to plastics pollution and regulatory responses. A consistent definition will pave the way for a clearer understanding of needed action and initiatives, and the role that each actor in the Blue Economy ecosystem can play.

## **Unclear and overlapping jurisdiction has led to poor coordination and collaboration**

Most of the ocean is international waters. This leads to both a reduced sense of responsibility and ownership, and also a need for increased cooperation around both governance and data. Given the importance of the ocean to global health, stronger collaboration and coordination across the Blue Economy is needed.



### **Lack of data drives investor uncertainty and prevents investment in innovation and solutions**

Private capital is needed to drive innovative solutions and financing mechanisms in the Blue Economy. However, given the jurisdictional issues, the ocean is poorly studied and understood. The lack of quality data and certainty may discourage investors from flowing the necessary capital into the Blue Economy. Quality data is essential for creating the economic case for resilient infrastructure in the Blue Economy and for applying new technology. It can also be leveraged to identify investment opportunities. New innovations in technology, such as autonomous vehicles (see <https://openoceanrobotics.com>), are starting to demonstrate how data can be collected more affordably and easily.

A consistent set of standards and definitions are also important as they underpin the success of blue bonds. The model established for green bonds is a good place to start.

### **The Blue Economy ecosystem is underdeveloped**

Even if there is enough private capital seeking Blue Economy-style investments, ocean technologies are few and far between, and there are few accelerators. The small number of technologies is a barrier to capital inflows into the space. Data collection and monetization by ocean technology companies can be a path to growth and spur development of the technology ecosystem.

### **Scaling**

The ocean is big, shorelines are millions of miles long, and the challenges associated with ocean health are huge. Solutions need to be scalable in order to have a bigger environmental and economic impact, while also addressing local and regional circumstances.

### **Blue carbon certification is a developing space**

Blue carbon certification — which refers to the process whereby carbon credits are issued based on the carbon sequestered in coastal ecosystems such as sea grasses,

mangroves, and salt marshes — is still an emerging field. While some offset methodologies are available for certain project types and jurisdictions, various questions remain regarding measurement and generating verifiable carbon sequestration claims.

#### **Current carbon market reliance on permanence**

The multi-decade permanence proof requirement for carbon sequestration projects is a barrier to entry in the carbon market. Creating a blue carbon market that doesn't require this — or finds ways to demonstrate permanence without needing extended post-project monitoring — is important to support the proliferation of these projects.

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**\*These priorities were identified by the participants in the Scaling Up the Blue Economy: A Domestic and International Roadmap discussion**

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## POTENTIAL PRIORITIES FOR CAPITAL EXPENDITURE\*

- 💧 Sustainable ocean aquaculture
- 💧 Nairobi Summit outcomes
- 💧 Decarbonization of ocean shipping and transportation
- 💧 Monitoring the oceans and pollution / trash, and collecting better data for decision-making, transparency, insurance, etc.
- 💧 CO<sub>2</sub> capture via wetlands, eel grass and kelp forest restoration
- 💧 Ocean energy (tidal)
- 💧 Coastal infrastructure, with a focus on green infrastructure
- 💧 Technology







# Canada and The Blue Economy

# Canadian Leadership

In the last few years, Canada has hosted and/or co-hosted a number of key events, including:

## THE 44TH G7 SUMMIT

The 44th G7 summit in June 2018 in La Malbaie, Quebec, at which members endorsed the [Charlevoix blueprint for healthy oceans, seas and resilient coastal communities](#).

Themes in the blueprint include ocean plastics and marine litter, resilient coasts and coastal communities, and sustainable oceans and fisheries.

## THE G7 OCEANS PARTNERSHIP SUMMIT

The G7 Oceans Partnership Summit in September 2018 in Halifax, Nova Scotia, which brought together more than 200 participants representing industry, civil society, and the research sector to discuss themes raised in the Charlevoix blueprint.

## SUSTAINABLE BLUE ECONOMY CONFERENCE

In partnership with the governments of Kenya and Japan, Canada co-hosted the [Sustainable Blue Economy Conference](#) in Nairobi, Kenya, November 2018. This first-ever global conference on the sustainable Blue Economy aimed to help further the international community's support of the United Nations' 2030 Agenda for Sustainable Development.



# Partnerships

Canada is also working with governments and institutions around the world to support existing initiatives and advance the Blue Economy in the most efficient way possible. Efforts include:



Under Canada's leadership, on June 9, 2018, France, Germany, Italy, the United Kingdom, and the European Union adopted the Ocean Plastics Charter to demonstrate their commitment to take concrete and ambitious action to eradicate plastic pollution. The charter has been since been endorsed by governments, businesses and civil society organizations.



As part of Canada's \$100 million investment to help developing countries improve their management of plastic materials and reduce plastic pollution, Canada serves as a founding and steering committee member of the [Global Plastic Action Partnership \(GPAP\)](#). GPAP is a multi-stakeholder platform dedicated to translating commitments to reduce plastic pollution and waste into concrete action. They are working with corporations and developing countries such as Indonesia, Ghana and Vietnam to develop national strategies and domestic policies that address these issues.



Canada supports the global efforts of UNEP to address marine litter through many avenues, including participating in the Ad Hoc Open-Ended Expert Group on Marine Litter and Microplastics; the steering committee of the Global Partnership on Marine Litter (for which UNEP provides the secretariat); and participating in the Global Ghost Gear Initiative, which focuses on solving the problem of lost and abandoned fishing gear worldwide.



Together with the United States and Mexico, Canada is working collaboratively through the Commission for Environmental Cooperation to bring together communities and decision makers to build local solutions and raise awareness of marine litter in North America.

# Financial commitments and domestic action

## 1

Canada's domestic action includes a vision to achieve zero plastic waste by 2030, whereby plastics stay in the economy and out of the environment. Canada's federal government has worked closely with provinces and territories under the Canadian Council of Ministers of the Environment (CCME) to develop a Canada-wide Strategy on Zero Plastic Waste. The Strategy was published in 2018 and the Phase 1 Action Plan in 2019. Phase 2 (the final phase) of the Action Plan was being implemented in late 2020.

## 2

Canada is among the 8 percent of countries in the world to ban toiletries containing plastic microbeads. Through sustainable procurement and reducing the use of unnecessary single-use plastics at its events, meetings and in its operations, Canada has also committed to diverting 75 percent of its plastic waste from federal operations by 2030.

## 3

The Canadian government is also investing in robust science to address priority research gaps. Canada's Plastics Science Agenda and Plastics Science for a Cleaner Future are recent steps in investments in research to better understand the impacts of plastic pollution and support solutions across the value chain.

# 4

In March this year, UNEP and Canada signed a five-year agreement whereby Canada provides CDN\$ 3.1 million annually to the Environment Fund of UNEP, placing Canada among the top-10 contributors of core, flexible resources to UNEP in 2020. Canada also provides:

- \$150m annually to the GEF.
- [\\$100m](#) to achieve the objectives of the Ocean Plastics Charter. Part of this investment is dedicated to the Incubation Network, launched by SecondMuse and Circulate Capital, which aims to create and support the ecosystems of waste management and recycling innovations to increase the quality and quantity of problem solvers working to reduce ocean waste.
- Up to \$9.5m to advance activities of the Decade of Ocean Science.
- Up to \$1m to the World Economic Forum's Friends of Ocean Action and for the Government of Canada's support to the United Nations Special Envoy for the Ocean.
- \$10m to the Pacific Initiative for Biodiversity, Climate Change and Resilience. Funding for this joint initiative with the European Union, France, New Zealand and Australia will support efforts in the Pacific region to adapt to climate change, protect biodiversity, and improve ocean and fisheries health.
- \$20m for capacity development and technical assistance in Small Island Developing States. This includes areas of public financial management, financial sector supervisory capacity, and fostering inclusive growth.



# Key Opportunities for Canada



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Canada's Ocean Supercluster is a great platform to encourage ideation, R&D and investment in ocean technologies and solutions. However, the Ocean Supercluster does not address the Great Lakes and other interior waterways. This is worth considering given major restoration projects in the Great Lakes, driven by federal and provincial funding and resulting in local economic benefits well beyond the initial investment. Turning the focus of the Blue Economy to include freshwater systems is important for Canada and could provide an added perspective to the international discussions in this area.



Canada can provide nation-wide leadership by promoting ocean literacy.

[The Canadian Ocean Literacy Coalition](#) is advancing a national strategy on this topic.



Priorities for further investment include convening key nations interested in ocean restoration, ocean-based R&D, and studying the impacts of tidal energy generation on fish and sea life.



There's an opportunity to incorporate oceans into municipal bonds focused on the impacts of climate change (e.g., shorelines and large-scale infrastructure), and to connect marine ecosystem services to related initiatives (e.g., Municipal Natural Assets Initiative).



Canada can provide support for bi-lateral or multi-lateral projects and international agreements on preserving the ocean and important habitats (sea grass, kelp beds, coastal areas, and sustainable environment for marine life).



# Scaling Up the Blue Economy:

A Domestic and International Roadmap

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## ACTION ITEMS FOR **GLOBE SERIES**

Build a centralized and coordinated platform for advancing the **Blue Economy discussion and work**. Given the number of existing initiatives that are underway, it's important to avoid duplication and *connect and coordinate* the community virtually through a digital space. GLOBE Series is looking to partner with interested organizations on developing tools and processes that accelerate the Blue Economy. These tools and processes will be instrumental in continuing the conversation about how sustainable finance meets ocean innovation, and advancing key topics such as:



### **Priority Setting**

#### **Building on existing collaborations and partnerships to drive investment and response.**

- Foster stronger Canada / US collaboration across ocean clusters, while also involving international organizations (e.g., World Bank).
- Given that COP26 has been delayed to November 2021, consider a virtual event in advance of the COP to continue the conversation and sustain momentum — potentially a North American Ocean Investment Innovation Forum.
- GLOBE Advance participants could collaborate on a Blue Economy initiative at COP26 in the UK.



### **Creating a Blue Investments Working Group.**

Convening a group that focuses on creating new investment opportunities will support a coordinated effort to diversify products (bonds, equities and other investment products) and strategies.



### **Creating an Ocean Education Working Group.**

If capital is to begin to flow into ocean priorities, more research and education into the Blue Economy is needed. This group would play a role in connecting environment, technology, economic and ENGO actors, and considering the needs across age groups.



### **Exploring the Great Lakes as a Blue Economy opportunity.**

A number of [major shoreline restoration projects have been conducted in the Great Lakes](#) with federal and provincial funding. The results point to major economic gains for the region well beyond the initial investment, sometimes higher than ten-fold. The Great Lakes offer significant potential value and return on investment and warrant further exploration.





## ACTION ITEMS FOR THE **BLUE ECONOMY ECOSYSTEM**

**1**

### **Use ocean plastics as a bridge to a bigger story about ocean health.**

Public attention on and concern about the issue of plastics and ocean debris can be used as a gateway for broadening their understanding of other economic and environmental issues associated with the ocean. It can also be used to drive more support and investment in Blue Economy initiatives.

**2**

### **Support a robust ecosystem, including accelerators — and, specifically, establish a Canadian accelerator.**

**3**

### **Showcase and celebrate small-scale examples of success.**

These could include shoreline restoration projects in the Great Lakes as well as sea grass restoration programs managed by hotels in collaboration with diving certifications.



## ACTION ITEMS FOR **STANDARD-SETTING ORGANIZATIONS**

**1**

### **Develop a common language for blue bonds so that benefits are clearly defined.**



## ACTION ITEMS **FOR GOVERNMENT**

1

### **Enact enabling policies that support the Blue Economy and send important signals to the market.**

These signals underpin capital flowing to Blue Economy financial mechanisms. Policies could include a "blue tax," similar to a carbon tax but applying to companies operating / benefiting from the ocean.

- These policies would apply to actors that reside within the border of the country of origin of the shipping or fishing activity, even if their impact occurs in international waters
- Litigation in these home countries is a tool to hold these actors accountable, and potentially change corporate governance and actions

# Conclusion

The health of our ocean is indivisible from our health as a society. The ocean is the source of half the breaths we take. It sequesters carbon and helps combat climate change. It provides food for a majority of the world's population and has untapped potential to help feed our growing population in the coming decades. The ocean supports billions of livelihoods globally.

We have a lot to lose, and even more to gain in protecting and preserving our ocean. A flourishing Blue Economy, with diverse ocean-based investments, will empower us to preserve one of our most valuable resources while also realizing vast social, health, economic and environmental benefits.

Whether you are a leader from business, government, civil society or the scientific community, we invite you to stay connected with GLOBE Series as we continue to explore how we shape innovation, policy, financing and markets to support a flourishing Blue Economy.





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**John Thet** CEO | ADEX

**Environment and Climate Change Canada**

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