

The 2030 Agenda

Relating also to: Climate & Finance; Trade & Investment

Sustainable Ocean Economy, Innovation and Growth: A G20 Initiative for the 7th Largest Economy in the World

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Abstract

G20 should initiate a global Ocean governance process and call for Ocean Economy dialogues, strategies and regional cooperation to ensure that investment and growth in ocean use become sustainable and reach their full potential.

The ocean is the largest and a most critical ecosystem on Earth, with many interactions between the ocean Sustainable Development Goal (SDG14) and other SDGs. It is one of the most biologically diverse and highly productive system on the planet, and potentially the largest provider of food, materials, energy, and ecosystem services. However, past and current maritime sectors' uses of the ocean continue to be unsustainable. Increasing demand for resources, technological advances, overfishing, climate change, pollution, biodiversity and habitat loss, along with inadequate stewardship and law enforcement, are contributing to the ocean's decline.

As a standing agenda item for the G20, and with associated good governance, a sustainable Ocean Economy can improve the health and productivity of ocean ecosystems, and reverse the current cycle of decline. Better governance, appreciation of the economic value of the ocean and 'Blue Economy' strategies can reduce conflicts among uses, ensure financial sustainability, ecosystem integrity and prosperity, and promote long-term national growth and employment in maritime industries.

Challenge

Germany's G20 Presidency can help strengthen the growing ocean economy by calling for national Ocean or Blue Economy Development Frameworks, coordination among coastal and ocean states, and for integrated and ecosystem-based management ensuring the ocean economy is sustainable.

The G20 countries have a special responsibility towards the ocean. They are all coastal states with 45% of the world's coastline among them, and jurisdictional responsibility over 21% of exclusive economic zones (Shugart-Schmidt et alii 2015). Argentina and India are committed to addressing the ocean economy in their upcoming G20 Presidencies. Complementing the G20, Italy's current G7 Presidency has a broad ocean agenda, with a focus on cooperation in regional seas, building on the Presidencies of Germany (2015) and Japan (2016). Canada may consider the ocean in its G7 Presidency in 2018.

The ocean covers 71% of the Earth's surface and provides both renewable and non-renewable resources that sustain hundreds of millions of livelihoods in coastal areas and on islands, and in inland areas. 80% of life on Earth is in the ocean, 50% of the available oxygen is from the ocean, which is also the largest carbon sink, absorbing about a quarter of the carbon dioxide emitted, thus reducing global warming. It also absorbs 90% of the additional heat caused by greenhouse gas emissions.

The ocean's productivity is greatly reduced and likely to deteriorate further because of overfishing and destruction of ecosystems by bottom trawling, sea-bed mining and offshore industries (e.g. oil and gas extraction), pollution from maritime industries and land-based activities, urban development of coasts, acidification caused by CO₂ emissions from fossil fuels, and warming of the ocean. The rapid acidification destroys critical ecosystems, such as coral reefs, and the ocean's ability to provide the fish and seafood as a source of protein in 20 to 30 years. Current trends cannot be allowed to persist, or there will be 1kg of plastic waste in the ocean for every 3 kg of fish by 2025. More plastic in the ocean with many of the chemicals they contain poses a great risk of contaminating the food system. Marine litter, which is mostly plastic was an issue in the G7 presidencies of Germany (2015) and Japan (2016).

The ocean is a great potential driver of economic growth, jobs, and innovation, and expected to provide economic opportunities in the future. The (lower bound) of the value of key ocean assets has been estimated at US\$24 trillion and the value of derived services at US\$2.5 trillion per year (Hoegh-Guldberg et alii 2015; Lillebø et alii 2017) or US\$1.5 trillion without non-market benefits (OECD 2016). This is equivalent to 3-5% of global GDP or possibly the size of France or California.

The value of ocean is reduced by environmental pressures from overfishing, climate change, pollution, loss of habitats and biological diversity, and urban development of coasts, which are symptoms of weak ocean governance (GOC 2014, 2016). Despite progress with the UN Convention on the Law of the Sea (UNCLOS), there are gaps and outdated approaches in ocean-related policy and law, and severe shortcomings in implementation and law enforcement, resulting in many unregulated, partly illegal activities, and inadequate or non-existent stewardship of many parts of the ocean. Bad governance increases investment risks and holds back growth of a sustainable ocean economy.

The challenge is now understood, but meaningful action is still pending. SDG14 is a universally agreed instruction to conserve the ocean, seas and marine resources, and use it sustainably – with a focus on the access and benefits for small island states and small-scale fishers. The UN Ocean Conference in June 2017 will highlight the ocean's importance for sustainable development and the relationship of a healthy ocean to all other SDGs. The UN climate negotiations are also considering the ocean's role in the climate system, and the effects of global warming, ocean acidification, increased energy in the ocean, and accelerating sea-level rise on island and coastal communities, and their adaptation needs.

Germany's G20 Presidency initiative on the ocean economy is sure to have support and follow-up.

Proposal

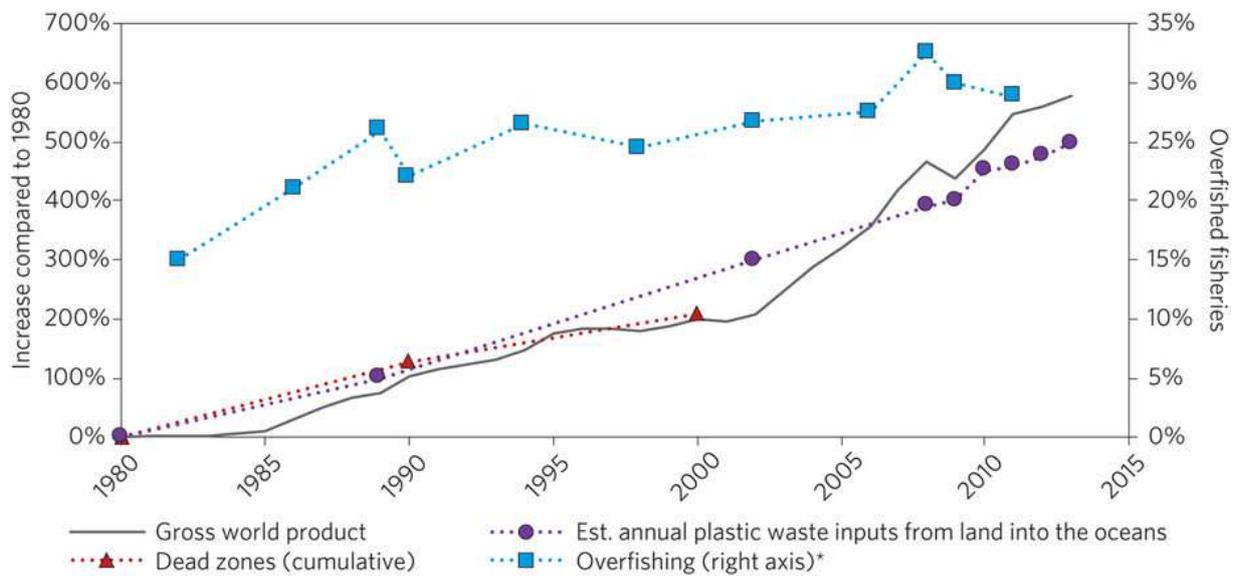
The Ocean or Blue Economy – the human use of the ocean – is rapidly expanding. We are at the threshold of a new wave of industrialisation and exploitation of the ocean (McCauley et alii 2015). It holds the promise of more innovation, growth and jobs (UNEP et alii 2012; UNEP 2015; OECD 2016; Patil et alii 2016; Rustomjee 2016a+b; Bhatia 2017a+b). As the Ocean Economy expands, the world must ensure that maritime industries and the use of ocean space, resources and ecosystems are ecologically sustainable; economic activities must be in balance with the long-term carrying capacity of the ocean ecosystems (Visbeck et alii 2014, Silver et alii 2015). They also need to be sensitive to regional differences and conditions (e.g. Kildow 2016; Bhatia 2017a+b) and demands on resources.

In parallel, it is important to acknowledge that different measures to support conservation of ocean ecosystems and biological resources, for example the designation of marine protected areas (MPAs), can generate economic benefits both to individual sectors and to society overall through the delivery of wider ecosystem services and increased human wellbeing. The realisation of such synergies, however, depends on various factors, including that the MPAs and their regulatory measures are designed and managed in collaboration with relevant stakeholders, that sufficient resources are allocated for effective monitoring and enforcement, and that any benefits accrued are shared fairly (Russi et al 2016). Valuable as well-managed MPAs with effective enforcement may be, they are no substitute for effective governance of the whole ocean.

Our understanding of the links between economic development and maintained environmental sustainability in the marine environment is still developing, but action cannot wait. The state of the ocean is anything but satisfactory (UN 2016). Let our past experiences with whaling, fishing of species to (commercial) extinction, and the aggregate effects of marine pollution be warnings (G7 Science Academies 2015; Spalding 2016; Arnason et alii 2017). The current state of the ocean and projected future exploitation and use calls for G20 leadership to ensure the new Ocean Economy is "green", that the integrity and productivity of ocean ecosystems is maintained, and, where possible, restored (Visbeck et alii 2014, Golden et alii 2017).

The responsibility of the G20 countries in the global community goes beyond their shares of coastlines and marine areas. The world is looking to them to provide robust coastal and ocean governance and leadership in the protection of the ocean, maintaining the integrity of its ecosystems, and the sustainable use of ocean resources. The ocean is clearly an important part of the world economy, and a potential driver of sustainable growth in the future. However, this growth is only possible with better and more complete ocean governance and blue economy strategies that break the past trends.

The consequences for the ocean of unsustainable patterns of (largely terrestrial) industrialisation, production and consumption are illustrated in Figure 1. It shows how the rise of gross world product (global GDP) is coupled with plastic waste dumped and washed into the ocean, the rise in dead zones in the ocean (where there is no oxygen to sustain the ecosystem), and with overfishing. There are just a few of the many interlocking challenges that need to be addressed to ensure ocean health, the integrity and productivity of ocean ecosystems, and thus the sustainability of the Ocean Economy, which also needs protection from harmful economic activities on land and in the atmosphere. Each of these challenges is the consequence of activities in different sectors, and subject to regulation or the absence of regulation, or its enforcement, by different departments of government, international bodies or agreements. The lack of integrated and adaptive management of maritime industries, the lack of effective ocean governance, is an overarching challenge that heads of state and government must address in the G20.

Figure 1: Can they decouple? Trends in gross world product, overfishing and ocean pollution

Source: Golden et alii 2017: 1; <http://www.nature.com/articles/s41559-016-0017/figures/1>

A Selection of Pertinent Challenges on the Way to a Sustainable Ocean Economy

Global marine **fisheries** are declining (FAO 2016): with almost a third of those assessed considered as overfished (compared to just 10 percent in 1974), and another 58 percent are fully fished with no room for further expansion. 90% are thus fully fished or overfished. The result is not only a threat to nutrition and human health (Golden et alii 2016) but also lost economic benefits of approximately US\$83 billion a year (Arnason et alii 2017). Reducing overfishing would allow highly exploited and overexploited fish stocks to recover over time. Subsequently, the combination of larger fish stocks and reduced but sustainable fishing activities would lead to higher economic yields and increased good production. Ye et alii (2013) suggest an additional 16.5 million tons of fish could be sustainably harvested from the ocean per year. However, to reach that equilibrium, comprehensive and coordinated reforms are necessary (see also Onguglo et alii 2016).

Offshore **oil and gas** industries have expanded markedly over the last decades, with drilling more frequently moving into deep and ultra-deep waters, which increases threats to the environment and natural resources as well as human activities and the industries that depend on the integrity of ecosystems. The current regulatory framework for oil and gas industries has significant gaps (Rochette et alii 2014). Following the Deepwater Horizon accident in 2010, the G20 recognized “the need to share best practices to protect the marine environment, prevent accidents related to offshore exploration and development, as well as transportation, and deal with their consequences” (G20 2010, no. 43). Although the Global Ocean Commission (GOC) addressed the issue, there is no substantial initiative apart from the proposed oil and gas safety protocol under the Abidjan Regional Seas Conventen, and offshore oil and gas remains the least regulated maritime industry of all.

Ocean and climate (atmosphere) are interlocking systems with dynamics that are better understood now than in the past. The ocean therefore moderates warming of the atmosphere by absorbing considerably this additional heat we generate. This has major impacts on ocean ecosystems and the behaviour of the ocean itself (Gattuso et alii 2015), particularly its acidification. Policy interlinkages between the ocean and climate have yet to be built as strongly as they should be. As a first step and in view of the Paris Agreement, governments should integrate ocean-related components in their

Nationally Determined Contributions (NDCs) for climate protection in order to minimize the adverse effects of climate change on the ocean and to contribute to its protection and conservation.

Sea-bed mining is currently seen as both the potentially greatest opportunity for short-term growth in the Ocean Economy and as currently the gravest emerging threat to the integrity and productivity of marine ecosystems. There are concerns about irreversible losses caused by an unpremeditated and uncontrolled expansion of sea-bed mining before environmental impacts have been understood and properly assessed. There is a risk of undermining trust in and acceptance of the Ocean Economy, which may be mitigated by improving the transparency of sea-bed mining and its regulation and oversight (Christiansen et alii 2016).

Pollution, mostly from land-based sources, remains a major threat to the Ocean Economy, with impact on fisheries, fish farming and other sea-food production for human consumption, and on wider ocean ecosystems as well as tourism. Five large marine ecosystems are now most at risk, all of them affected mostly by emerging economies with insufficient policy frameworks to avoid and reduce pollution: The Bay of Bengal, the East China Sea, the Gulf of Mexico, the North Brazil Shelf, and the South China Sea. Dead zones, areas deprived of oxygen in the deep ocean, are expanding, and the deoxygenation of ocean waters is increasing. The solution requires many and varied policy responses – from land use planning in coastal areas and flood plains, to waste management and the transition to a circular economy, and improvements to the design and management of waste water treatment systems.

Plastic in the oceans – marine litter or marine debris – is a threat to the ocean that has gained some attention in recent years, from media, NGOs, business entrepreneurs as well as policy makers. It is increasingly recognised that the damage to the ocean ecosystems also creates risks to social and economic systems (Oosterhuis et alii 2014, Watkins et alii 2017, Brouwer et alii 2017). There is an urgent need for a wide range of policies to keep plastic and its value in the economy and out of the ocean and the responses so far are far from what will be required. The new political focus on the circular economy offers a window of opportunity to encourage upstream measures (eg product design and multiuse products), consumer measures (awareness and pricing to inform purchasing and waste disposal habits) and downstream measures (eg collection and recycling) (ten Brink et alii 2016).

Sustainable Development Goals as a Framework for Leadership

The United Nations Sustainable Development Goals (SDGs) provide a framework for the integration of the numerous challenges into one conceptual framework for action (Nilsson et alii 2016). SDG14 recognises the role of the ocean for future economic, social and ecological development. SDG14 seeks to "conserve and sustainably use the oceans, seas and marine resources for sustainable development" and most importantly is linked in one way or another to 97 of the 159 targets in other SDGs. It may indeed be the most cross-cutting SDG of all (Unger et alii 2017). The SDG Interactions which the ocean has are particularly important in relation to:

- SDG1 "**End poverty** in all its forms everywhere", especially and directly in islands and coastal communities, but indirectly everywhere and indispensable for sustaining (subsistence) livelihoods;
- SDG2 "**End hunger**, achieve food security and improved nutrition and promote sustainable agriculture", especially with seafood from the ocean being an important source of protein and micronutrients, and indispensable for sustaining (subsistence) livelihoods;
- SDG6 "Ensure availability and sustainable management of **water and sanitation** for all", where concern over ocean health can drive improvements in land-based water supply and sanitation;
- SDG7 "Ensure access to affordable, reliable, sustainable and modern **energy for all**", with ocean and off-shore renewable energy a large potential source of sustainable energy;

- SDG8 "Promote sustained, inclusive and **sustainable economic growth**, full and productive employment and **decent work for all**", through the contribution the Ocean Economy to innovation, and further growth and employment;
- SDG9 "Build resilient **infrastructure**, promote inclusive and sustainable **industrialization** and foster **innovation**", where concerns about ocean health and its environmental integrity need to be integrated into the choice, design, location, and management of infrastructure and patterns of industrialisation;
- SDG10 "Reduce inequality within and among countries", because a sustainable and equitable ocean economy would, for example, ensure access for small-scale fishers, which constitute the largest employment category in the ocean economy and are among the bottom 40% of the population by income. This would benefit developing coastal and island populations, which are also part of the global bottom 40% by income.
- SDG11 "Make **cities** and human settlements inclusive, safe, resilient and sustainable", with coastal regions at risk of being damaged or even lost because of climate change-induced storms and sea-level rise. Coastal cities may become 'underwater assets', literally;
- SDG12 "Ensure sustainable **consumption and production patterns**", both of resources, products and services derived from the ocean, and of (land-based) production and consumption affecting the ocean (e.g. plastic litter);
- SDG13 "Take urgent action to **combat climate change** and its impacts", with the interface of 'ocean' and 'climate' being perhaps the most important interaction between any two SDGs.

This leadership framework is conceptual but at this point not programmatic or strategic. It highlights the possible synergies among the SDGs, where attainment of one goal will make it not only easier to attain others, but will also increase the return on investment for reaching the other goals. However, the SDG framework lacks clarity on the processes and instrument for ensuring a sustainable ocean economy.

Ocean or Blue Economy Strategies for Guiding and Coordinating Action

A framework for action can be provided by Ocean or Blue Economy Development Frameworks (BEDF), spelled out *inter alia* by the World Bank (2016) and the Prince of Wales's International Sustainability Unit (ISU). There are various standards relating to marine activities that are thereby relevant to the ocean economy (Potts et alii 2016), but no international agreement or standards are yet in place regarding ecologically sustainable Blue or Ocean Economy (NMF 2017).

Ocean or Blue economy strategies based on ecosystem-based management should be developed in dialogues with all relevant stakeholders, including representatives for public interests, such as health, conservation, the environment, or consumer interests. Dialogues should take regional circumstances and geographic characteristics into account and be mindful of the specific needs and limitations of each case. In general, however, ocean or blue economy dialogues and strategies, drawing from and building on the initial concept of the ISU, should include *inter alia*:

- The understanding of socially, economically and ecologically sustainable international ocean governance as means of international (economic and political) cooperation as well as international peace building and thus 'pacem in maribus' – the most sustainable basis for economic and social progress and ecological sustainability (Mann Borgese 1999; Ekstrom et alii 2009, Fritz 2016);
- Articulation of Blue Economy Principles for guiding investment, based on consensus among actors in government, among stakeholders, and in business. The principles should ensure the environmental sustainability of all ocean activities and investment, broad access to opportunity and fair sharing of benefits. This should include mechanisms to ensure that a fair and sufficient

share of the expected financial gains is re-invested in the restoration, protection and sustainable management of ocean ecosystems and ocean-dependent communities;

- Mapping the state of the ocean and its ecosystems, and the ecosystem services it provides, including trends and the outlook; and mapping in geography and seasonal variations of all investments and activities in marine and coastal areas. This should include relevant land-based and air-borne activities that impact the marine environment;
- Linking the status of the marine environment, trends and outlook to activities (as mapped). This analysis should include subsistence livelihoods and activities not captured in the money economy and provide the basis for identifying risks and opportunities as well as formulating value propositions for the Ocean or Blue Economy;
- Mapping of data, information, knowledge and gaps, research capacities and needs;
- An assessment of the current allocation of competences in government and administration, including gaps and options for improvement and reform. This should include consideration of any overlaps with neighbouring countries sharing access to or draining into (enclosed) seas;
- Mechanisms and incentives at country and regional level to implement measure to protect the ocean as an asset providing ecosystem services as the basis for the ocean economy, including commitments contained in international agreements (e.g. SDG14);
- Creating EU standards and protocols for mapping, protecting and promoting European maritime heritage sites.
- Investing in the scientific knowledge of ocean ecosystems – at each of the ecosystem, species and genetic levels – should be a high priority. An appreciation of both the intrinsic values and anthropocentric values, given the multiple (potential) social and economic values of the ocean ecosystem services is needed, as is an understanding of risks to these from climate change and other man-made pressures. The ocean can be seen as the largest “living laboratory” with over a billion years of 'experimentation' and hence a, to date, largely untapped 'library of life'.

G20 should encourage, scientists, ocean economy practitioners, civil society organisations and governments to develop, on this basis, international agreement and standards regarding ecologically sustainable Blue or Ocean Economy. One way would be to convene stakeholders and existing ocean data collection initiatives to identify a set of Essential Ocean Economy Variables – built as much as possible on existing data collection. The purpose might be to incorporate a small but critical set of G20 economic indicators that can be tied to existing marine data collection to offer the first global set of indicators on the sustainability of the Ocean Economy.

Developing Ocean Economy Development Strategies and Regional Partnerships

Most of marine biodiversity is found and marine fish catch occurs predominantly in the exclusive economic zones (EEZs) that can be regulated by coastal states (Sumaila et alii 2015). The development of effective Ocean Economy strategies and the implementation of SDGs and related targets is first and foremost the responsibility of the national authorities. States must transpose these commitments into standards and policies, establish monitoring mechanisms and provide regular reporting on actions undertaken. The implementation of SDG 14 will however fall short of the transformative ambition of the Agenda 2030 without an effective coordination between States, especially at the regional level, with a focus on regional seas, especially enclosed and semi-enclosed seas, or migratory fish populations and other marine life and non-living resources.

Over the last decades, regional organisations and mechanisms have proved to be effective in fostering marine conservation and sustainable ocean management (GOC 2014, 2016). They are a cornerstone of marine ecosystem-based management, the best-known practice to facilitate long-term sustainability, and have frequently succeeded in securing greater commitments by States and stakeholders than global instruments (Rochette et alii 2015). Their inclusive nature facilitates cooperation among

national and local stakeholders, fosters peer-to-peer learning, and invites the involvement of civil society in decision-making processes, allowing for the ecological, economic, political, and cultural characteristics of marine regions to inform policy and practice.

Regional partnerships should therefore be developed and bring together States, regional and global organisations and mechanisms, and a broad spectrum of stakeholders, including non-governmental organisations, research centres, and private sector actors, and donors (Unger et alii 2017). The regional partnerships would provide mechanisms through which countries and competent organisations could cooperate towards the harmonised implementation of the 2030 Agenda for the oceans, especially SDG14, and other measures to address sustainability challenges, in particular where these are subject to different legal regimes or call for cross-cutting action (Bhatia 2017a+b). Ocean acidification and overfishing both fall within the latter category, for example. Moreover, regional partnerships are well placed to respond to the integrated nature of the 2030 Agenda and to establish linkages between different sectors.

The High Seas, Areas Beyond National Jurisdiction and the Ocean or Blue Economy

Developing a sustainable and prosperous ocean or blue economy in areas beyond national jurisdiction or the high seas presents a complex set of challenges. Some are currently being addressed in the development of rules for the extraction of deep-sea or sea-bed minerals within the aegis of the International Seabed Authority (ISA), or the exploitation of biological diversity in areas beyond national jurisdiction (ABNJ) under the UN Convention on Biological Diversity (CBD).

These and other approaches cannot do justice to the interconnected nature of the challenges, and a more overarching, global governance framework to complement the regional and sectorial agreements, mechanisms and institutions remains to be established. This will require significant additions and changes to the UN Convention on the Law of the Seas (UNCLOS), notably to make the laws and institutions concerning the high seas compatible with and contributing to achieving the UN Sustainable Development Goal 14 (SDG14) on the ocean.

Financing the Ocean Economy, with an Eye on Poor, Small, and Vulnerable Countries

Recognising that the ocean economy offers pathways to economic and social transformation, growth and sustainable development, many African, Caribbean, Pacific and other poor and small developing countries are developing robust national frameworks and enhancing regional cooperation to strengthen the inter-sectoral and intra-government planning and coordination necessary to transit to the blue economy. But many institutional, governance and financing impediments remain, that are beyond the ability of these countries to address and that require concerted international support. Among many challenges, two stand out:

- Identifying and securing sources of long-term financing for the investments needed in enabling infrastructure for these countries to transform from terrestrial to integrated land, coastal and maritime sources of production, employment and growth. There are large unfilled sectoral financing gaps, including in protecting and conserving ocean resources and ecosystems, fisheries, aquaculture, promoting food security and increasing sustainable productivity in marine food systems, sustainable tourism, coastal and maritime transport, ocean renewable energy, marine bioprospecting, protection and management of habitats, water supply and infrastructure, as well as other new ocean economy activities and sectors. The G20 can help address this challenge in at least three ways including:
 - Supporting the establishment of a catalytic fund to support the transition of these countries to the blue economy, including dedicated resources to finance conservation and blue growth;

- Recommending and encouraging increased resources and the development of new financing instruments by international financial institutions and regional development banks to support blue economy investment; and
- Encouraging and supporting innovative financing for the blue economy, including accelerating the development and financing of blue bonds and developing new initiatives to price blue carbon.
- New international initiatives to improve the valuation of marine ecosystem services, as these the value of these services as a global public good is poorly quantified, limiting the opportunity for poor and small states to claim value from their efforts to help manage these services. The G20 can examine how similar global agreements to compensate for forestry conservation and sustainable management, such as the United Nations Framework Convention on Climate Change's Reducing Emissions from Deforestation and Forest Degradation (REDD+) mechanism, can be developed to recognize the services provided through marine ecosystem conservation and management; can put forward proposals for such an initiative; and can catalyse new international initiatives to promote global accord on the goals, targets and measures that can most effectively protect and manage marine ecosystems

As a first practical step, the G20 can simultaneously establish a G20 task group to examine the most practical opportunities for supportive G20 action; and can convene a broad consultative meeting of G20 members, together with small and other developing countries to develop a focused, collaborative joint agenda and programme for this purpose.

Implementation Overview: Text for G20 Summit Declaration

The Ocean Economy

We are concerned about the state of the ocean and deteriorating trends, and recognise that the ocean economy is a last chance to reconfigure extraction, production and consumption to ensure that social and economic development respects the planetary boundaries, the integrity of ecosystems to maintain their productivity, and the principles of sustainable development as expressed in the UN Sustainable Development Goals, notably SDG14. In view of the potential contribution of the ocean economy, we call on the scientific and business communities, civil society organisations and governments to develop and agree on criteria, principles and standards for an ecologically, socially and economically sustainable management of ocean space, resources and ecosystems.

Recognizing the importance of the ocean, its economic, cultural and environmental value and the role of the maritime industries for employment and growth opportunities, and its importance for international cooperation and cross-regional peace-building, we commit to improve the sustainability of the Ocean Economy and to build ocean and coastal resilience. In line with the G20 Leader's Communique in Hangzhou paragraph 21 on sustainable growth we believe that also in the ocean space efforts could be made to provide clear strategic policy signals and frameworks, promote voluntary principles for blue finance, expand learning networks for capacity building, support the development of local blue bond markets, promote international collaboration to facilitate cross-border investment in blue bonds, encourage and facilitate knowledge sharing on environmental and financial risks, and improve the measurement of blue finance activities and their impacts.

We further commit to identifying in each of our governments a focal point for the International Ocean Governance and the Ocean Economy, and so to promote policy coherence and enforcement across sectors as well as across different scales, including improved international coordination. We invite them to submit a joint report on the Ocean Economy status, trends, outlook, and a concept for an

integrated Sustainable Ocean Governance Framework, including concrete actions for G20 to ensure its global implementation.

Existing Agreements

There is an emerging "mainstream" of political commitments but no legally binding agreements (yet) in support of Ocean Economy Development dialogues and frameworks. The concept of and demand for an Ocean or Blue Economy Development Framework has been verified in different forms, including by:

- The Ministers of Finance at the World Bank Spring Meeting in April 2016;
- The Grenada Blue Growth Week in May 2016;
- A series of meetings between public and private-sector institutions convened by the Prince of Wales's International Sustainability Unit (ISU);
- The European Commission with an explicit commitment to a Blue Growth Strategy Framework at the Our Ocean conference in Washington DC in September 2016, which was supported by the World Bank; the European Commission also has specific regional strategies (e.g. the [Baltic Sea](#)).
- Building on earlier initiatives (European Commission 2012a+b), the institutions of the European Union published a joint communication for the future of the ocean in November 2016. The development of a BEDF is among the 50 points in the agenda: "In 2017, the [European] Commission and the High Representative will support the development of a robust, evidence-based Blue Economy Development Framework" (European Parliament et alii 2016, p.9; with detail provided by European Commission 2017). It was based on a consultative process initiated by the European Commission on how best to strengthen policy coherence and comprehensiveness on improving its marine international governance framework. Part of this are the recent shifts towards international ocean governance, a new marine spatial planning approach (EU 2014: Directive 2014/89/EU), a focus on tourism (European Commission 2014a) and the Marine Knowledge 2020 initiative (European Commission 2014b+c).
- Heads of State and Government from Africa are said to have adopted the African Union Charter on Maritime Security, Safety and Development on 15 October 2016 (Lomé Charter) to establish a roadmap for protecting the ocean and seas around Africa in view of promoting and securing a sustainable Blue Economy. The Charter awaits publication.
- In addition to UNCLOS, other instruments are relevant to the conservation and sustainable use of marine biodiversity in Areas Beyond National Jurisdiction (ABNJ). This includes
 - Regulations adopted by the International Seabed Authority (ISA) for the protection and preservation of the marine environment;
 - The Convention on Biological Diversity (CBD);
 - Instruments adopted by the UN Food and Agriculture Organization (FAO) relevant for fisheries;
 - Measures adopted in the context of the International Maritime Organization (IMO) on point and non-point sources of pollution;
 - Trade and intellectual property, such as measures considered in the context of the World Trade Organization (WTO) and the World Intellectual Property Organization (WIPO).
- UNGA [Resolution 69/292](#) established a process to develop a new legally binding high seas marine biodiversity treaty in the form of an agreement under the UNCLOS.
- States are committed to complete a preparatory process towards a decision on the opening of a formal treaty negotiation by September 2018. Two final UN preparatory committee meetings to prepare occur in March and July of 2017 in New York.
- The United Nations Conference on Small Island Developing States (SIDS), meeting in Apia, Samoa, in 2014, presented a "[Blue Economy Concept Paper](#)".

- The Food and Agriculture Organization of the United Nations (FAO) has created a Blue Growth Initiative (described in FAO 2016) to accelerate its work in support of sustainable management of living aquatic resources, balancing their use and conservation in an economically, socially and environmentally responsible manner.
- Following the Paris Agreement, the Intergovernmental Panel on Climate Change (IPCC) decided to prepare a special report on climate change and the oceans and the cryosphere (i.e. frozen water part of the Earth system).

Existing Policies and Monitoring, and New Initiatives

To date, there is a paucity of overarching policies to ensure sustainability of maritime industries, ocean uses, and the future of the ocean economy. Even sectoral policies or regional management organisations often suffer from a lack of information, instruments, resources and political will for effective implementation.

Despite the best efforts of government agencies, civil society, and the scientific community, and caused by a lack of funding and political will, there are generally poor data on the ocean and its ecosystems and how human pressures interact with these. Further, available observation systems and data are sometimes not acted upon. There are no high-resolution maps of the sea-bed and marine environment. This lack of data, information, and conventions for visualisation (in maps) presents a major challenge for the good governance of the ocean.

The state of the ocean, the rate of deterioration, and projected trends imply that governance needs to be strengthened with urgency and action be taken without delay. While there is a need for investment in ocean observation to improve the knowledge base, governance cannot wait and must act on the strength of current data, information and knowledge. The international ocean governance framework is being developed to fill some of the gaps:

- Under the Convention on Biological Diversity (CBD), a process is underway for identifying Ecologically or Biologically Significant Areas (EBSAs) in Areas Beyond National Jurisdiction (ABNJs) which might then be protected from harmful activities to safeguard their ecological or biological integrity and productivity (Ardron et alii 2014; Dunn et alii 2014; Bax et alii 2016).
- In its resolution 69/292 of 19 June 2015, the UN General Assembly (UNGA) decided to develop an international legally binding instrument under the UN Convention on the Law of the Sea (UNCLOS) on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ).
- A number of heads of state and government meeting during the Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC) in Paris signed the "Because the Ocean" Declaration (29 November 2015) pledging to address the ocean-climate nexus. A second such declaration was signed on at COP22 in Marrakesh on 14 November 2016.

While the United Nations, with UNCLOS and the CBD, provides the right forum and framework for the development of international law, the G20 should support the process by providing leadership and initiate a review of the Ocean or Blue Economy, including marine spatial planning and adaptive ecosystem-based managements. Much can be accomplished by states working through UNCLOS, on the condition that they act and address deficits in implementation.

Resources

The United Nations General Assembly set up in 2004 the “Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects”. The first output was the first global integrated assessment of the marine environment – World Ocean Assessment I. The [Summary](#) of this was approved by the United Nations General Assembly in December 2015. <http://www.worldoceanassessment.org/>

The [Ocean Action Hub](#) aims to facilitate multistakeholders’ engagement as part of the preparatory process for the Ocean Conference. Bringing together governments, the UN system, intergovernmental organizations, international financial institutions, NGOs, civil society organizations, academic institutions, the scientific community, private sector, philanthropic organizations and other actors to assess challenges and opportunities related to SDG-14. <http://www.oceanactionhub.org/>

"Our Ocean" is a series of high-level conferences of governments and civil-society organisations, initiated by the United States in 2016. [Our Ocean 2017](#) will be in Malta (hosted by the European Union), followed by Indonesia (2018), and Norway (2019).

The Economist (magazine) hosts an annual series of "[World Ocean Summits](#)".

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