

Towards a sustainable and equitable blue economy

The global rush to develop the ‘blue economy’ risks harming both the marine environment and human wellbeing. Bold policies and actions are urgently needed. We identify five priorities to chart a course towards an environmentally sustainable and socially equitable blue economy.

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Concerns about the state of the world’s oceans are widespread^{1,2}. At the same time, interest in the economic potential of the oceans is escalating, with their contribution to the global economy projected to double from US\$1.5 trillion in 2010 to US\$3 trillion by 2030³. Numerous governments and corporations herald ocean sectors as lucrative frontiers for investment, including fisheries, aquaculture, tourism, bio-prospecting, seabed mining, oil and gas, renewable energy, and shipping. The blue economy — a term that originally implied socially equitable and sustainable development but has come to encapsulate international interest in the growth of ocean-based economic development — has been a central theme of recent global ocean policy conferences^{4,5}.

Many coastal countries and small-island developing states (SIDS) also see promise in ocean-based growth^{6,7}. Indeed, SIDS were among the first to advocate for attention to the blue economy, which, in their vision, features social equity and environmental sustainability as core tenets^{7,8} (Fig. 1). We are concerned that the push for economic growth through ocean development is sidelining these tenets in policy and practice. Unbridled ocean development risks producing substantial harms for both the marine environment and human wellbeing.

Sustainability and equity

Healthy oceans are linked to prosperity and human wellbeing. Attention to ocean sustainability has grown steadily since the Earth Summit in 1992 and accelerated with the 2015 adoption of Sustainable Development Goal (SDG) 14: Life Below Water. However, ocean-based industries and human activities are having significant negative impacts on marine systems^{1,2,9}.

Further exploitation and new industries will place additional burdens on already stressed marine environments. New forms of development, such as seabed mining, come with less-known risks. Furthermore, the cumulative impacts of existing and new uses of the oceans, coupled with pressures associated with climate change, remain poorly understood¹⁰. Policy frameworks and environmental assessment processes to adequately understand and manage the environmental risks of maritime development are nascent or often do not yet exist.

Our ability to understand and address the distribution of social and economic benefits and harms of the ocean economy is equally inadequate. Potential benefits include revitalization of coastal economies, provision of alternative livelihoods and improved food security and wellbeing^{3,6,7}. New economic opportunities may also enable SIDS and coastal states to re-assert sovereign control and regain access to marine resources. However, assumptions of a ‘trickle-down’ blue economy are problematic. Unregulated economic growth can produce economic inequality, generate limited local benefits due to elite capture, create damaging social and cultural impacts, expose marginalized groups to pollution and displace local populations. Mounting evidence from the global fishing industry demonstrates how unchecked development can lead to human-rights abuses, including enslavement and erosion of local access to fisheries and food security¹¹. International social movements claim that ‘ocean grabbing’ is occurring as ocean spaces and resources are enclosed and privatized for growth¹². Similar issues are reported in other maritime sectors (for example, aquaculture and oil), with discussions of the need for

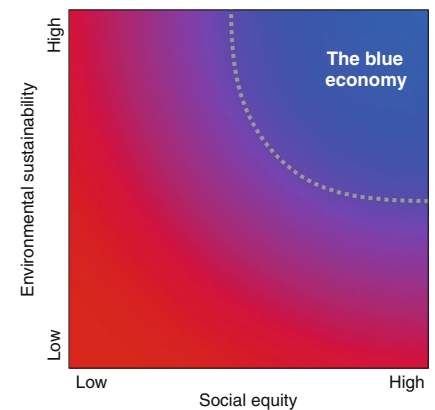


Fig. 1 | Economic development in the oceans. The blue economy must feature environmental sustainability and social equity as core tenets.

social equity and ‘blue justice’ emerging at global meetings. At the 2018 Sustainable Blue Economy Conference in Kenya, for example, specific concerns relating to small-scale fisheries (SSFs), Indigenous peoples, women and youth featured prominently. However, the rhetoric of equity, inclusion and benefit sharing appears to be outpacing policy-making and the implementation of best practices.

Ocean governance

Addressing sustainability and equity demands attention to governance. However, ocean governance is subject to a high degree of complexity and often lacks coherence and coordination⁴. International, regional and national governance frameworks establish jurisdiction and authority over marine resources. The United Nations Convention on the Law of the Sea (UNCLOS) is the fundamental international legal and governance framework, allocating sovereign

exclusive economic zones (EEZs) and identifying what remains as common global property (that is, 'the high seas'). Under UNCLOS, global institutions — including the International Tribunal for the Law of the Sea, the International Seabed Authority and the Commission on the Limits of the Continental Shelf — were established to deliberate on ocean issues. Within EEZs, states have jurisdiction and hold authority for fisheries management, biodiversity conservation and the allocation of rights for military, shipping or development purposes. Regional governance mechanisms — such as regional fisheries management organizations and Regional Seas programmes — enable states to collaborate on multilateral sustainability challenges. However, significant regulatory and institutional gaps exist across sectors and spatial scales.

Furthermore, ocean spaces and resources are often shared and accessed by numerous users — including coastal communities, SSFs and Indigenous peoples — who should have a right to participate in decisions regarding allocation of property rights, resources and benefits from, and management of, the blue economy¹³. Local citizens and civil-society organizations frequently oppose new developments when marginalized from decision-making or concerned about potential environmental damages or social harms. Indigenous peoples, SSFs or other resource users will test state laws and legitimacy by asserting their territorial rights to coastal and ocean spaces or demanding free, prior and informed consent for new and expanded developments¹⁴. Geopolitical tensions may increase as neighbouring states lay conflicting claims over valuable ocean spaces and resources, countries more stridently police and enforce their EEZs, or developing coastal states and SIDS demand their fair share of benefits from migratory fish stocks, seabed minerals and marine bio-resources¹⁵.

Charting a course

Proactive, systematic and bold policies and actions are needed as ocean development proliferates within EEZs and in areas beyond national jurisdiction. Here, we identify five priorities to 'chart a course' for an environmentally sustainable and socially equitable blue economy.

First, sustainability and equity must be prioritized in international negotiations and instruments relating to the oceans and ocean development. Numerous global agreements — including the Convention on Biological Diversity, the United Nations (UN) SDGs, the UN Declaration of Human Rights and the UN Declaration on the Rights of Indigenous

Peoples — contain commitments relating to sustainability and equity. Other ocean guidelines and conventions touch on these issues and, notably, UNCLOS was integral in establishing the international legal principle known as 'the common heritage of humankind'. Yet, neither an obvious coordinating body nor a comprehensive set of blue-economy guidelines currently exist. Thus, we recommend that the UN establish or designate a commission or agency within the Economic and Social Council system to be responsible for developing best practices and establishing international guidelines for the implementation, monitoring and management of blue economy activities. Guidelines would provide a foundation for international deliberations and multilateral discussions, as well as guidance for national policies and corporate activities. Achieving this will require resources, time and broad support. Several existing initiatives show momentum and provide building blocks including the UN Food and Agriculture Organization's Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries, The Commonwealth Blue Charter and The European Commission's Blue Growth Strategy.

Second, comprehensive legislation and effective regulatory agencies are necessary pre-conditions for sustainable blue economy development within national jurisdictions. National governments must strategize and focus their efforts on: addressing regulatory and institutional gaps that exist within current legal and governance frameworks; ensuring coherent policy coverage across different agencies and sectors; enabling integrated, inter-sectoral and science-based planning and management; harmonizing across jurisdictions and with international institutions; and providing financing to support management capacity and to ensure accountability. While many countries (for example, Seychelles, South Africa, Grenada and Norway) are convening diverse groups of experts and stakeholders to tackle challenges associated with the emerging blue economy, other national governments must act quickly.

Third, national governments ought to develop guidelines that require equitable treatment of local populations and sharing of any wealth generated through blue growth. Insights may be gleaned from international agreements, existing corporate codes of conduct and principles of social responsibility¹¹. Key considerations include: recognizing and protecting the tenure and access rights of coastal and Indigenous populations to fisheries and areas of the ocean; ensuring that labour and human rights are respected; establishing

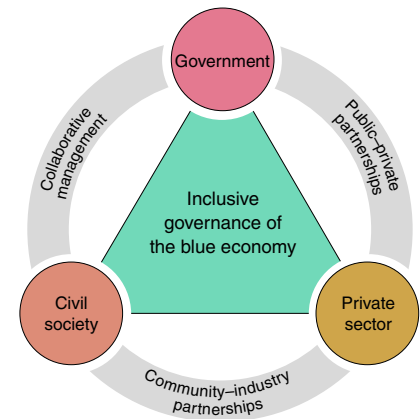


Fig. 2 | Inclusive governance of the blue economy.

Blue-economy governance focuses on how the ocean will be developed and by whom, how and to whom benefits will be distributed, how harms will be minimized, and who will bear responsibility for environmental and social outcomes. Inclusive governance requires that decision-making structures and processes are representative of diverse actors from civil society, the private sector and governments.

mechanisms to improve social and economic benefits (for example, impact-benefit agreements, hiring and procurement procedures, and capacity building) for local communities; and creating pathways to increase local ownership (for example, technology transfer, credit schemes and connections to markets). These actions may also help the private sector to create and maintain social license to operate in coastal and ocean spaces.

Fourth, inclusive governance of the blue economy at all scales (Fig. 2) is required to realize social equity and sustainability. Contemporary environmental governance consists of decision-making structures and processes that catalyse participation among governments, the private sector and civil society¹⁶. Civil society (including scientists, media, non-governmental organizations (NGOs) and marginalized groups) must be represented in decision-making processes focused on how the ocean will be developed and by whom, how and to whom benefits will be distributed, how harms will be minimized, and who will bear responsibility for environmental and social outcomes. At the international scale, SIDS and coastal developing nations, Indigenous groups and SSF organizations, and NGOs are actively advocating for their preferred visions for the blue economy, yet often remain marginalized and sidelined in global oceans governance^{5,13}. One strategy that smaller delegations of nations and civil-society organizations have used to

overcome this is to work in blocs to assert shared objectives in international and multilateral processes. At the national scale, inclusive governance of the blue economy may require legal obligations that necessitate participation, adequate funding mechanisms for meaningful engagement, government mandates guaranteeing information transparency and well-designed decision-making processes ensuring all voices are heard and incorporated into decisions. For example, marine spatial planning (MSP) plays a critical role in helping to overcome the sector-by-sector approach found in ocean governance. Yet, to be effective and equitable, MSP must be attentive to representation, power dynamics and how new boundaries, rights and activities can impact the tenure, rights, livelihoods and food security of local communities.

Finally, at all scales, insights from and investments in interdisciplinary ocean science will be needed to inform international negotiations, design ocean policy, shape blue-economy initiatives and monitor social and environmental impacts and outcomes. The upcoming UN Decade of Ocean Science for Sustainable Development (2021–2030) offers an important opportunity to identify how natural and social science can be employed and mobilized to enable the realization of a sustainable and equitable blue economy.

An opportunity to transform

Producing a sustainable and equitable blue economy rests on the proactive and rapid design and implementation of systematic policies and bold actions, based on interdisciplinary ocean science and made through inclusive governance processes. There are several upcoming policy windows to chart the course of the blue economy. The Norwegian Prime Minister has convened a High-level Panel for a Sustainable Ocean Economy, made up of 14 sitting heads of state and governments to create a roadmap for sustainable ocean development. Global policy-makers will assemble at the sixth annual Our Ocean Conference hosted by Norway in October 2019 and the second UN Ocean Conference in Portugal in June 2020. These international policy initiatives could

yield a ‘business-as-usual’ ocean economy — by which we mean unsustainable practices and elite capture of economic benefits — or they could help transform how we govern the oceans and support the development of a truly sustainable and equitable blue economy. Getting it wrong will have dire consequences for the ocean and the people who depend on it. □

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Published online: 14 October 2019

<https://doi.org/10.1038/s41893-019-0404-1>

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