



## The ocean as a nation: reimagining the blue economy through sovereignty

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### Abstract

Through a thematic lens that frames the ocean as a sovereign nation, this article reimagines the ocean as a sovereign country with its own economy, institutions, and citizens, offering a framework for understanding the scope and structure of the blue economy. Moving beyond conventional approaches that treat the sea as fragmented resource zones, this metaphorical mapping considers marine life as the primary citizenry, supported by a diverse labor force and a wide range of industries; from fisheries and maritime transport to blue biotechnology and coastal tourism.

Key elements of a national economy; such as borders, governance, labor, GDP, taxation, and diplomacy; are paralleled with existing oceanic systems to illustrate the richness and complexity of marine economic activity. The article also explores the ocean's revenue, currency, and intangible capital, highlighting ecological value, marine genetic resources, and ecosystem services such as carbon storage and climate regulation. These are framed as the ocean's hidden wealth; essential to human well-being yet often excluded from traditional financial statements.

The dispersed and transboundary nature of the ocean's economy presents challenges similar to a decentralized nation-state, requiring ecological stewardship akin to economic policy. By exploring this conceptual shift, the article provides a fresh lens for policymakers, researchers, and the public to engage more deeply with marine stewardship and economic planning. The sea, envisioned as a nation, emerges not merely as a natural expanse but as a living economy; structured, interdependent, and indispensable.

**Keywords:** Blue economy, ocean GDP, marine resources, ocean sovereignty, sustainable development

### Introduction

#### Reimagining the Ocean as a Nation

The ocean has long been treated as a resource, an untamed expanse from which the world draws food, energy, trade routes, and recreational value (Cisneros-Montemayor *et al.*, 2020) [9]. These fragmented views have often shaped narrow policies, with little regard for the ocean's complexity as a living, working space. In recent years, the concept of the blue economy has offered a more cohesive framework; one that sees the ocean not just as a provider, but as a structured and sustainable economic system. But what if we went further? What if the sea were imagined not just as an economy, but as a sovereign country?

Thinking of the ocean as a nation allows us to give it the kind of serious, structured attention reserved for land-based countries. This mental shift offers more than metaphor; it becomes a framework for evaluating the ocean's industries, citizens, borders, governance, infrastructure, and international relationships. In this country of the sea, the economy has sectors, trade, capital, and productivity (OECD, 2023). It has obligations and influence. It deserves recognition as a unified, strategic actor in global development.

At the heart of this ocean nation are its first and most important citizens: marine life (McCauley *et al.*, 2018) [38]. Before humans ever boarded ships, built ports, or laid underwater cables, the ocean was home to ecosystems that sustained themselves with remarkable order and resilience. These biological communities are not merely components of the environment; they are the original population, the lifeblood of the sea's economy. Every other activity, from fishing and transport to energy and tourism, is built upon their existence and balance.

This article adopts a thematic approach, using the lens of national analogy to explore the blue economy in its fullest sense. It maps the defining features of a functioning country; citizenship, governance, sectors, labor, infrastructure, currency, and more; to their equivalents in the marine world. By drawing these parallels, we open a space for renewed thinking about ocean management, policy design, and investment strategy (Sumaila *et al.*, 2021) [46]. The goal is not to romanticize the sea, but to recognize its complexity, its structure, and its right to be treated as more than a boundaryless resource pool (Epstein *et al.*, 2023) [15]. In doing so, we expand both the language and logic with which the ocean is understood in the global economic conversation.

### The Ocean's Territory: Borders and Sovereignty

#### 1. The Fluid Nature of Maritime Borders

Every nation begins with territory; defined borders that mark its space, protect its interests, and shape its identity. But when the nation in question is the ocean, the idea of borders becomes far more fluid, both literally and politically. Unlike landlocked countries with fixed frontiers, the ocean stretches across the globe in a continuous, restless motion, refusing easy partition (Steinberg 2021) [45]. Still, it is not lawless. Its jurisdiction is carved out in segments, regulated by international agreement, and disputed by national interest (United Nations, 1982) [73].

#### 2. Exclusive Economic Zones: The Ocean's Internal Boundaries

Within this ocean nation, Exclusive Economic Zones (EEZs) function as its primary boundaries. These zones, outlined by the United Nations Convention on the Law of

the Sea (UNCLOS), give coastal countries the right to manage and benefit from marine resources up to 200 nautical miles from their shores (Schofield, 2019) <sup>[44]</sup>. Within this zone, a nation exercises something close to sovereign rights, managing fishing activity, offshore energy, and seabed mining (Mansfield, 2020) <sup>[37]</sup>. In our imagined sea country, these EEZs represent its internal provinces or federal districts; administrative regions with localized authority but part of a larger system (Childs, 2023) <sup>[8]</sup>

### 3. The High Seas: Shared Commons

Beyond these maritime borders lie the high seas, the ocean's equivalent of shared or federal lands, open to all but owned by none (Wright *et al.*, 2018) <sup>[48]</sup>. They are governed by collective norms, much like international airspace or demilitarized zones (Berkman *et al.*, 2022) <sup>[4]</sup>. These waters do not belong to a single state, yet they hold enormous economic and ecological value. In this framework, international waters become the sea country's diplomatic commons, where cooperation is not optional but necessary.

### 4. Tensions and Disputes in Ocean Territory

But just like land borders, ocean territories are often sites of tension. Nations vie for overlapping claims, sometimes sparked by rich fish stocks or promising energy deposits. And while satellite surveillance and marine patrols attempt to impose structure, the sea resists fixed lines. Currents carry pollutants across boundaries, migratory fish ignore political divisions, and deep-sea mining interests raise global concerns (Levin *et al.*, 2020) <sup>[35]</sup>. In response, international courts and maritime tribunals act as this ocean nation's legal institutions, mediating disputes and shaping precedent.

### 5. Relational Sovereignty and Shared Responsibility

Understanding the ocean in this way means recognizing its borders not as hard lines but as negotiated spaces. They are zones of both autonomy and responsibility, where coastal states manage resources while also participating in broader efforts to protect shared ecosystems (Epstein *et al.*, 2023) <sup>[16]</sup>. Sovereignty here is relational; it comes with duties toward both local stewardship and international cooperation. The ocean nation, then, is not a single uniform state but a federation of interests, layered with agreements, tensions, and collective ambitions.

## The Sea's Citizens and Workforce

### 1. Marine Life as the Primary Citizenry

In imagining the sea as a country, its most important citizens are not human at all. Marine life; from plankton to whales, corals to crustaceans; represents the original and most essential population of the ocean nation (Roberts, 2022) <sup>[42]</sup>. These biological inhabitants are not only intrinsic to the ocean's identity, but they also form the base of its ecological and economic systems (Worm *et al.*, 2023) <sup>[49]</sup>. Without them, there would be no fisheries, no marine tourism, no biodiversity to study or protect, and no food chains to support larger ocean functions (Lotze *et al.*, 2019) <sup>[36]</sup>.

Like the population of a country that contributes to its health, productivity, and resilience, marine life forms the living capital of the sea. Coral reefs serve as underwater cities, teeming with life, providing shelter, food, and spawning grounds. Plankton, invisible to the eye, help regulate the Earth's climate by absorbing massive amounts

of carbon dioxide (Falkowski, 2022) <sup>[18]</sup>. Fish populations migrate like seasonal workers, maintaining balance in ecosystems and supplying billions with food (Pauly & Zeller, 2016) <sup>[40]</sup>. Marine mammals, seabirds, and shellfish contribute to the richness and vibrancy of this nation in ways that science is still striving to fully understand.

Taken together, the sea's citizens reflect a dynamic, interdependent society (Folke *et al.*, 2021) <sup>[20]</sup>. But at the very core is marine life; the permanent population of the ocean. Every other citizen, every sector of its economy, and every decision made about the ocean's future ultimately rests on the health, abundance, and continuity of its living ecosystems (Halpern *et al.*, 2022) <sup>[23]</sup>. Without them, the nation of the sea would not merely be weakened; it would cease to function altogether (Díaz *et al.*, 2023) <sup>[12]</sup>.

### 2. Human Stakeholders of the Ocean Nation

Next in line are the coastal communities and maritime workers, who serve as the ocean's human citizens; those whose lives and livelihoods are deeply tied to the sea (Bennett *et al.*, 2023) <sup>[3]</sup>. Fisherfolk, operating in both small-scale and industrial capacities, harvest food and resources that feed entire nations and economies. Their role mirrors that of agricultural laborers in land-based countries, providing nourishment and income at both local and national levels.

The ocean's transport and logistics sector is driven by seafarers, port operators, and shipping professionals, who ensure that goods move efficiently across maritime borders. These individuals are the truck drivers, railway workers, and customs officials of the sea nation, facilitating trade that accounts for over 80 percent of global commerce by volume (International Maritime Organization [IMO], 2022) <sup>[46]</sup>.

### 3. Ocean Professionals: Scientists and Stewards

Marine scientists, engineers, and conservationists' function as the ocean nation's planners, inspectors, and caretakers (Glegg *et al.*, 2022) <sup>[22]</sup>. Through their work in marine biology, oceanography, climate science, and sustainable development, they study the ocean's changing conditions, protect its biodiversity, and innovate ways to make marine industries more sustainable. They also support data-driven decision-making in ocean governance, much like civil servants and research institutions in a traditional nation.

### 4. The Marine Hospitality Sector

Tourism professionals; including diving instructors, cruise operators, and eco-tourism guides; represent the hospitality industry of the sea nation (Cisneros-Montemayor *et al.*, 2020) <sup>[9]</sup>. They market the ocean's beauty to visitors from around the world, transforming biodiversity and clean coastlines into economic opportunities while also bearing the responsibility of protecting the very resources they depend on.

## Governance: Institutions and Rule-Making in the Ocean Nation

### 1. The Need for Governance and a Legal Foundation

If the sea were to function as a sovereign state, then it would require a governance system robust enough to manage its citizens, resources, industries, and diplomatic relations. In most countries, this function is fulfilled by a network of ministries, agencies, legal frameworks, and enforcement bodies. The ocean, too, is governed; not through a singular

government but through a decentralized, layered structure involving coastal states, regional bodies, and international institutions (Epstein *et al.*, 2023) <sup>[15]</sup>. When treated as a nation, these mechanisms collectively serve as its governing architecture.

At the heart of this structure lies the United Nations Convention on the Law of the Sea (UNCLOS), often considered the constitution of the ocean (United Nations, 1982). It outlines rights, responsibilities, and conduct for all who interact with marine spaces, much like a national constitution governs the conduct of citizens, the role of the state, and the protection of resources (Rothwell & Stephens, 2023) <sup>[43]</sup>. This legal framework defines not just ownership and access, but also conflict resolution, stewardship, and environmental obligations (Rayfuse, 2022) <sup>[41]</sup>.

## 2. Enforcement, Federalism, and Intergovernmental Coordination

However, the enforcement of ocean law is distributed and often fragile. In the analogy of the ocean as a country, its law enforcement agencies are scattered across navies, coast guards, marine police, fisheries inspectors, and scientific observers. Their mandates vary widely, and their reach is often constrained by geopolitical priorities, budget limitations, or lack of jurisdiction (Allen & Craig, 2022) <sup>[1]</sup>. This makes governance a complex affair, where rules exist but are not always uniformly applied or respected.

The ocean's governance also includes a kind of federalism. Coastal nations manage their own marine territories; especially their Exclusive Economic Zones; much like provinces or states within a country. Meanwhile, transboundary concerns such as migratory fish stocks, deep-sea mining, and pollution are handled through multilateral platforms like the International Maritime Organization (IMO), regional fisheries management organizations, and the International Seabed Authority (Wright *et al.*, 2021) <sup>[48]</sup>. These function as the ocean nation's diplomatic corps and inter-ministerial councils (Kimball, 2022) <sup>[32]</sup>.

## 3. Inclusion, Voice, and Moral Obligation

Yet, no governance system can claim full legitimacy without representing its citizens (Epstein, 2023) <sup>[16]</sup>. In this imagined ocean country, marine life must be seen not only as the primary citizens but as key stakeholders in policy outcomes. And yet, marine species; from whales to corals to microscopic plankton; have no formal voice in governance processes (Browning, 2023) <sup>[5]</sup>. Their interests are interpreted and advocated by scientists, environmental organizations, and at times sympathetic governments. This arrangement places the ocean in a precarious position, where many of its most vital residents are represented only indirectly, if at all (Kauffman, 2022) <sup>[31]</sup>.

To envision the ocean as a functioning nation is to confront the challenge of creating a governance model that goes beyond jurisdictional claims and economic interests (Campbell *et al.*, 2023) <sup>[7]</sup>. It requires institutions that can legislate for the voiceless, manage shared spaces, and enforce laws even in regions far removed from land-based authority. In this sense, the governance of the sea is not just a legal matter; it is a test of global responsibility, imagination, and moral clarity (Jouffray *et al.*, 2023) <sup>[30]</sup>.

## Industries and Economic Sectors of the Ocean Nation

Every country builds its economic identity on the strength of its industries. From manufacturing to agriculture,

technology to tourism, these sectors generate income, create employment, and shape national priorities. The ocean, reimagined as a sovereign nation, would boast one of the most diverse and globally integrated economies in existence. Its industries stretch across multiple domains; biological, mineral, energy, logistical, and recreational; each contributing to what could be considered its marine gross domestic product.

### 1. Living Resources and Blue Innovation

At the core of the ocean nation's economy lies fisheries and aquaculture, a sector that supports hundreds of millions of people around the world with food and livelihoods (FAO, 2023). In many coastal communities, this industry is as central to survival and culture as farming is to rural regions of land-based nations. Yet unlike terrestrial farming, marine food systems are heavily dependent on natural ecological cycles, fragile food webs, and international cooperation for sustainability. Overfishing, illegal catch, and habitat degradation continue to pose existential threats to this cornerstone of the ocean economy (Costello *et al.*, 2022) <sup>[11]</sup>. Closely linked to fisheries is the marine biotechnology sector; a fast-growing industry harnessing genetic material from marine organisms for use in pharmaceuticals, cosmetics, and agriculture (Leal *et al.*, 2022) <sup>[34]</sup>. The ocean, rich in unique life forms and chemical compounds, offers possibilities for innovation that rival any land-based research frontier. If the sea were a nation, marine biotech would be its high-tech industrial corridor, blending science with commerce and intellectual property.

### 2. Infrastructure, Trade, and Connectivity

Shipping and maritime transport form the logistical arteries of the ocean nation. As over 80% of global trade by volume is carried by sea, this sector functions like the national railways, highways, and airline networks combined. Ports are the bustling cities. Vessels are the trucks, trains, and cargo planes. Maritime transport is not only vital to the ocean nation's economy; it connects the nation itself to every other country in the world (IMO, 2022).

Another major pillar of this economic structure is energy; both traditional and renewable. Offshore oil and gas fields have long underpinned energy security for many nations, and if the sea were sovereign, these fields would be its extractive industry heartlands. More recently, offshore wind, tidal, and wave energy are emerging as the ocean's green industrial revolution, offering clean alternatives in an era of climate urgency (IRENA, 2022). These technologies also raise questions about the balance between economic development and ecological stewardship, a tension faced by all resource-rich nations.

### 3. Marine Tourism and Extractive Frontiers

Coastal and marine tourism provides yet another robust revenue stream. Iconic destinations, coral reefs, beach resorts, diving zones, and cruise lines transform vast stretches of the ocean into cultural and economic hotspots (Cisneros-Montemayor *et al.*, 2020) <sup>[9]</sup>. In the imaginary ocean nation, these would be its scenic provinces and tourist cities; destinations that draw millions while requiring careful planning to avoid environmental degradation and cultural erosion.

Lastly, deep-sea mining and seabed exploration represent the ocean nation's speculative investment sector; rich in

potential but fraught with risk. Mineral deposits such as cobalt, manganese, and rare earth elements are drawing attention as land-based supplies dwindle. Yet these pursuits venture into ecological frontiers barely understood, raising questions of ethics, regulation, and long-term impact (Levin *et al.*, 2020)<sup>[35]</sup>.

#### 4. An Interdependent Marine Economy

Together, these industries form a complex, interdependent economy that mirrors that of a modern state. Each sector depends on the health of marine ecosystems, the stability of legal frameworks, and the cooperation of various actors. The ocean's industries are not just sources of profit; they are expressions of its identity, its resilience, and its value to the broader global economy.

#### Citizenship and Stakeholders of the Ocean Nation

Every nation is defined not only by its borders and industries but by its people; those who live within its territory, rely on its systems, and shape its future (Steinberg, 2021)<sup>[45]</sup>. In the imagined ocean nation, citizenship extends beyond conventional human boundaries. It begins with those whose existence is woven into the very fabric of the sea: marine life. Without them, the ocean ceases to be a functioning ecosystem and collapses as a viable economy.

##### 1. Core Citizens: Marine Life and Human Dependents

Marine organisms; from phytoplankton and coral reefs to large predators like sharks and whales; are the original citizens of the sea. They form its food webs, regulate its chemistry, build its habitats, and maintain the ecological equilibrium on which all other stakeholders depend. Without marine life, there would be no fisheries to manage, no biodiversity to conserve, no tourism to attract, and no carbon to sequester. Their survival is not simply an environmental concern; it is a matter of national stability for the ocean nation (Duarte *et al.*, 2021)<sup>[14]</sup>.

Following this primary citizenship is the community of human stakeholders who directly or indirectly derive their livelihood, nutrition, identity, or wealth from the ocean (Bennett *et al.*, 2023)<sup>[3]</sup>. These include fishers, mariners, port workers, coastal dwellers, scientists, divers, shipbuilders, and tourism operators. In a country, these individuals would represent its working population; the labor force across various sectors who build, transport, feed, and sustain the economy.

##### 2. Institutional Citizens: Governments, Corporations, and NGOs

Governments and coastal nations act as regional administrators or provincial governments within the ocean's imagined federation. Their policies, maritime boundaries, naval enforcement, and environmental regulations either support or challenge the ocean nation's wellbeing (Campbell *et al.*, 2023)<sup>[7]</sup>. In many ways, these actors determine the internal governance of the sea by setting fishing quotas, managing marine protected areas, and overseeing shipping regulations (Epstein *et al.*, 2023)<sup>[15]</sup>.

Corporations and industries, particularly those in shipping, energy, mining, biotechnology, and tourism, can be seen as the ocean nation's corporate citizens. Their investments shape infrastructure and development priorities. Yet, like in any country, these entities must be held accountable for the

externalities they generate; from oil spills to noise pollution, carbon emissions to habitat destruction (OECD, 2023).

A growing class of non-governmental organizations (NGOs), research institutions, and civil society movements represent the ocean nation's advocacy and conscience. These are its activists, policy advisors, and think tanks; entities that amplify marine concerns, conduct oceanographic research, promote conservation, and push for equitable resource distribution (Epstein, 2023)<sup>[16]</sup>. They remind the world that the ocean is not just a resource pool but a living, breathing domain with rights and limits.

##### 3. Supranational and Transient Stakeholders

Then there are the international governing bodies; such as the International Maritime Organization (IMO), the Food and Agriculture Organization (FAO), and the United Nations Convention on the Law of the Sea (UNCLOS); which take on the role of supranational authorities. They are the diplomats and global courts, setting and enforcing shared rules for the ocean nation's citizens and neighbors (United Nations, 1982)<sup>[74]</sup>.

The sea also has transient stakeholders; tourists, recreational users, cargo shippers; who may not reside in the ocean nation but pass through it, benefiting from its services and impacting its systems. In the context of citizenship, they resemble visitors, immigrants, and foreign investors whose presence is temporary but consequential.

##### 4. Conclusion: A Layered Community

Ultimately, this layered citizenship; from plankton to port operators, from coral to corporations; reflects a diverse but interconnected population (Folke *et al.*, 2022)<sup>[20]</sup>. In the ocean-as-nation framework, acknowledging these citizens and their respective roles is essential to understanding the sea not just as a space of economic activity but as a community with competing interests, mutual dependencies, and shared responsibilities.

#### Governance and Law in the Ocean Nation

No country can function without a system of governance; a structure that defines authority, enforces law, and manages the interactions between its citizens and institutions. In the imagined ocean nation, governance is a patchwork of overlapping jurisdictions, international conventions, and regional compacts (Epstein *et al.*, 2023)<sup>[15]</sup>. It is a form of rule not based in a single capital or constitution, but distributed across coastal states, legal treaties, and global organizations.

##### 1. Legal Foundations and Institutional Architecture

At the heart of this governance structure is the United Nations Convention on the Law of the Sea (UNCLOS), often regarded as the de facto constitution of the ocean (United Nations, 1982)<sup>[75]</sup>. It establishes the rights and responsibilities of nations with respect to their use of the world's seas, including guidelines for navigation, resource exploitation, environmental protection, and dispute resolution (Rothwell & Stephens, 2023)<sup>[43]</sup>. In the context of the ocean as a nation, UNCLOS acts like a founding charter; defining the scope of authority, resolving internal boundaries, and articulating core legal principles (Rayfuse, 2022)<sup>[41]</sup>.

Complementing this are specialized institutions such as the International Maritime Organization (IMO), which regulates

shipping safety and marine pollution (IMO, 2022); the International Seabed Authority (ISA), which manages deep-sea mining in areas beyond national jurisdiction (Lodge *et al.*, 2021); and regional fisheries bodies that establish fishing quotas and enforcement mechanisms. These organizations, while diverse in mandate, operate like ministries or regulatory agencies within the ocean state; each charged with a distinct policy portfolio (Wright *et al.*, 2022) <sup>[48]</sup>.

Coastal nations function as regional administrators with delegated control over their maritime domains. Within their Exclusive Economic Zones (EEZs), these governments enact and enforce domestic laws, including those that govern fishing rights, pollution standards, port operations, and conservation zones. However, unlike land-based provinces, the interactions between these administrative units are frequently tense, particularly where EEZs overlap or when transboundary resources; like migratory fish stocks; are at stake.

## 2. Enforcement, Custom, and Diplomacy

Law enforcement in the ocean nation takes the form of coast guards, naval patrols, marine police units, and surveillance systems, many of which operate with limited coordination or capacity. The challenges of policing illegal, unreported, and unregulated (IUU) fishing, deterring piracy, or managing vessel traffic are compounded by the sheer scale of the ocean and the complexity of maritime laws (Allen & Craig, 2022) <sup>[1]</sup>. In this light, law enforcement within the ocean nation resembles a decentralized system with varying levels of effectiveness, depending on geography, political will, and technological capability.

In parallel, customary practices and traditional maritime laws continue to play a role, especially in small island nations and indigenous coastal communities. These localized systems of stewardship; often based on cultural knowledge and ancestral ties to the sea; offer models of governance rooted in sustainability and long-term respect for marine life (Epstein, 2023) <sup>[15]</sup>. While not always formally recognized, these frameworks contribute to the ocean nation's informal legal culture.

Governance also extends to diplomatic relations, as the ocean nation's affairs intersect with global trade, security, climate policy, and environmental treaties (Campbell *et al.*, 2023) <sup>[7]</sup>. From climate negotiations to maritime boundary disputes, the ocean is increasingly a subject of geopolitical interest. Thus, the imagined ocean nation is not merely governed from within, but constantly shaped by external diplomacy and multilateral engagement (Epstein, 2023) <sup>[16]</sup>.

## 3. A Fluid and Shared Governance System

Still, the governance of the ocean is far from unified. There is no single president, parliament, or supreme court (Steinberg, 2021) <sup>[45]</sup>. Authority is scattered, often fragmented, and riddled with jurisdictional gaps (Jouffray *et al.*, 2023) <sup>[30]</sup>. Yet this very condition reflects the nature of the ocean itself: fluid, interdependent, and shared (Peters, 2022). To govern it well requires not dominance, but cooperation; a commitment among its many stewards to safeguard a space that belongs to everyone and yet to no one alone.

## The Ocean's Currency and Value

### 1. Tangible and Intangible Wealth

If the sea had a currency, it would be measured in ecological value, economic yield, and strategic influence. The trade of

seafood, for example, represents one of the most direct and visible streams of revenue, with billions of dollars exchanged annually in fish and shellfish exports (FAO, 2023). Maritime shipping, which enables over 80 percent of global trade by volume, is another economic backbone of the sea nation. Its ports, like economic gateways, channel commerce to and from terrestrial economies, making the sea both a conduit and a participant in global wealth generation.

The blue economy also contains intangible capital that would be equivalent to intellectual property and natural endowment in a land-based nation (Costanza *et al.*, 2021) <sup>[10]</sup>. The genetic material of marine organisms, for instance, holds promise for pharmaceutical and scientific breakthroughs (Leal *et al.*, 2022) <sup>[34]</sup>. Ecosystem services such as oxygen production, climate regulation, and carbon storage are also part of this hidden wealth; forms of revenue not always captured by financial statements, but essential to planetary stability and human wellbeing (Díaz *et al.*, 2023) <sup>[12]</sup>.

### 2. Volatility, Underestimation, and the Case for Recognition

However, unlike land-based nations that can enforce centralized monetary policy, the ocean's economy is dispersed, transboundary, and susceptible to unregulated extraction (Sumaila *et al.*, 2021) <sup>[46]</sup>. Its "currency" fluctuates not on market confidence, but on ecological health and human stewardship (Halpern *et al.*, 2022) <sup>[23]</sup>. When coral reefs bleach or fish stocks collapse, the ocean nation loses value, just as a terrestrial economy falters when inflation rises or productivity falls (Hughes *et al.*, 2023) <sup>[27]</sup>. In this light, maintaining a healthy balance of extraction and regeneration is the only path to sustainable revenue; a kind of economic discipline that transcends national interests.

In mapping economic output, it becomes clear that the ocean's GDP is both vast and undervalued (Costello *et al.*, 2022) <sup>[11]</sup>. It supports the livelihoods of over three billion people worldwide, and yet much of its contribution remains unrecorded in national accounts. Small-scale fisheries, subsistence harvesting, informal boat-making industries, and untapped knowledge systems all generate wealth that is culturally embedded but statistically invisible.

To treat the ocean as a country is to insist that its economic output be seen, measured, and respected; not only in terms of financial gain, but in the sustaining value it provides to life on Earth. Its revenue, if properly accounted for, would rival the GDPs of the world's largest economies. But more importantly, its "currency"; ecological equilibrium; must be defended with the same rigor that sovereign states apply to financial stability.

## Education, Research, and Innovation

Every thriving nation invests in the intellectual development of its people and the advancement of ideas. In our metaphor of the ocean as a country, the equivalent would be its ongoing role as both subject and site of scientific inquiry, innovation, and traditional knowledge exchange (Hau'ofa, 2021) <sup>[24]</sup>. The sea is not only a repository of mysteries but a living classroom, laboratory, and library (Helmreich, 2023) <sup>[25]</sup>.

### 1. Educational Infrastructure and Knowledge Systems

Marine research institutes, oceanographic missions, coastal universities, and indigenous coastal communities form the

educational infrastructure of this imagined nation (McCauley *et al.*, 2023) <sup>[38]</sup>. Their work contributes to a growing body of knowledge about ocean chemistry, biodiversity, geological processes, and climate interactions. Satellite technologies scan ocean currents, remotely operated vehicles (ROVs) probe the depths, and sensor-equipped buoys collect data in real time. These tools are the instruments of a national education and innovation system; one that operates across disciplines, sectors, and continents. The sea has always been a site of learning, even before formal science entered the scene. Indigenous communities have long held ecological wisdom about tides, fish migrations, and seabed contours. This traditional marine knowledge is akin to oral libraries and local universities in land-based nations. When combined with modern research, it expands the knowledge base of the sea nation, making it richer and more inclusive.

## 2. Innovation at the Human-Ocean Interface

Innovation within this ocean country is not limited to scientific exploration. It includes the design of low-impact fishing gear, development of algae-based biofuels, construction of floating wind farms, and advancement of biomimetic materials inspired by marine organisms. These innovations often emerge at the intersection of necessity and creativity, particularly in response to environmental stressors or resource scarcity (Jouffray *et al.*, 2023) <sup>[30]</sup>. Moreover, research does not exist in a vacuum. Like any national system, it feeds into policy, industry, and education. Studies on coral resilience, for example, inform conservation strategies (Hughes *et al.*, 2023) <sup>[27]</sup>. Aquaculture trials shape the future of food security. And climate models based on ocean behavior help nations prepare for rising seas and shifting weather patterns (Cai *et al.*, 2023) <sup>[6]</sup>. These outputs are part of the sea's contribution to global problem-solving; a diplomatic offering in the form of knowledge.

## 3. Investing in Intellectual Capital

In treating the sea as a country, we highlight the need to increase investment in marine education and research as a national imperative. For this nation to thrive, its citizens; marine life and human stakeholders alike; must benefit from a continuous cycle of discovery and adaptation (Epstein, 2023) <sup>[15]</sup>. The ocean's intellectual capital, though often scattered across institutions and disciplines, is among its most valuable resources (Costello, 2022) <sup>[11]</sup>. Protecting and expanding that capital is not only an investment in the future of the sea nation, but in the future of the planet (Gattuso *et al.*, 2023) <sup>[21]</sup>.

### Infrastructure and National Assets

A country's infrastructure forms the backbone of its development, enabling movement, productivity, communication, and access to essential services. In the context of the sea as a nation, this infrastructure is both natural and human-made, visible and invisible (Barbier, 2022) <sup>[2]</sup>. It ranges from coral reefs that protect coastlines to deep-sea cables that carry global data. Together, these elements make up the national assets that support life and commerce in this vast, fluid state.

## 1. Natural and Engineered Systems

Natural infrastructure in the sea includes barrier reefs, mangroves, kelp forests, and seagrass meadows. These

ecosystems act as the sea's coastal defense systems, carbon sinks, breeding grounds, and nutrient filters. They are the highways, power stations, and agricultural fields of this oceanic nation (Hoegh-Guldberg *et al.*, 2023) <sup>[26]</sup>. A coral reef, for instance, is not just a biodiversity hotspot; it is a living fortress that cushions coastal communities against storm surges and erosion.

Human-engineered infrastructure is layered onto this natural foundation (Klinger *et al.*, 2023) <sup>[33]</sup>. It includes ports and harbors, shipping lanes, oil rigs, wind turbines, underwater pipelines, aquaculture farms, and artificial reefs. Submarine cables stretch for hundreds of thousands of kilometers beneath the surface, forming the communication network that links the digital world. These installations are comparable to terrestrial roads, railways, power grids, and telecom towers; key enablers of commerce and governance.

## 2. Challenges and Stewardship

Unlike in land-based nations, infrastructure in the sea must constantly contend with the elements: saltwater corrosion, extreme pressure, waves, and the shifting behavior of marine ecosystems (Firth *et al.*, 2023) <sup>[19]</sup>. This makes its construction and maintenance costlier and more technologically demanding. Nevertheless, the expansion of ocean infrastructure is accelerating, driven by the blue economy's growth and the search for new energy, transport, and food systems.

The sea's national assets also include shipwrecks, fisheries, mineral-rich seabeds, and the vast reservoirs of water that regulate global climate. These resources, whether actively exploited or not, are part of the sea nation's wealth. Some are tangible and tradable; others, like climate regulation and oxygen production, are ecological services that benefit the entire planet (Díaz *et al.*, 2023) <sup>[12]</sup>.

As with any country, managing infrastructure and assets requires planning, monitoring, and enforcement. Maritime spatial planning acts like urban zoning, designating uses and protecting critical areas (Douvere, 2022) <sup>[13]</sup>. Surveillance systems and marine protected areas offer a form of national defense and asset protection. When left unmanaged, these resources are vulnerable to overexploitation, pollution, or degradation; risks that would be considered catastrophic if applied to land-based infrastructure.

## 3. Sovereign Responsibility

Recognizing the ocean's infrastructure and assets as part of a national system invites more coherent investment strategies, stricter accountability, and long-term stewardship (Campbell *et al.*, 2023) <sup>[7]</sup>. It challenges the notion that the sea is a borderless void, and reframes it as a sovereign space with strategic capital; one that must be safeguarded not only for its current inhabitants but for generations to come.

### The Ocean's Diplomatic and Global Presence

Every sovereign nation engages in diplomacy; negotiating treaties, building alliances, managing disputes, and asserting its interests in the global arena. If we are to consider the sea as a country, it too maintains a form of diplomacy, though it speaks through the actions of those who engage with it. Its presence is embedded in international law, multinational agreements, economic policies, climate accords, and conservation frameworks.

## 1. Strategic Presence and Cooperation

The ocean is both everywhere and nowhere, touching the coasts of over 140 countries, influencing weather systems,

trade flows, and geopolitical strategies. It participates in diplomacy not as a sentient actor, but as a shared force that nations must constantly address. Agreements such as the United Nations Convention on the Law of the Sea (UNCLOS), the High Seas Treaty, regional fisheries management organizations, and international maritime safety protocols function as diplomatic tools that help define the sea's rights, responsibilities, and protections (Wright *et al.*, 2023) <sup>[48]</sup>.

In this diplomatic realm, the sea often acts as a bridge between nations. Maritime trade connects global markets, naval cooperation fosters collective security, and transboundary conservation initiatives reflect shared stewardship. Ports serve as embassies of ocean-based commerce, and naval presence projects national power while navigating the unspoken rules of ocean diplomacy.

## 2. Discord, Diplomacy, and Soft Power

Yet, the ocean's interests are not always uniformly represented (Epstein, 2023) <sup>[16]</sup>. The priorities of small island nations; who depend intimately on marine health; can clash with the economic agendas of distant-water fishing nations or large shipping powers. The result is a constant negotiation of rights: who may fish where, who bears responsibility for pollution, who is entitled to deep-sea mining, and who should lead in preserving marine biodiversity. In this way, the ocean as a nation has many voices speaking on its behalf, and not all of them speak in harmony (Jouffray *et al.*, 2023) <sup>[30]</sup>.

Climate diplomacy places the ocean at the heart of global discourse. Rising sea levels, acidification, warming currents, and shifting fisheries are reshaping economic and political calculations around the world. Coastal adaptation funding, loss and damage negotiations, and ocean-climate finance mechanisms are all evidence of the sea's central position in international policy. Through these discussions, the ocean asserts its presence not as a passive backdrop to human progress, but as a pivotal element in our collective future (Hoegh-Guldberg *et al.*, 2023) <sup>[26]</sup>.

The sea's diplomatic presence is also exercised through science. Global oceanographic research, marine data-sharing agreements, and cross-border conservation efforts are forms of soft diplomacy that promote trust, knowledge, and shared responsibility. Institutions like the Intergovernmental Oceanographic Commission (IOC) and initiatives like the Decade of Ocean Science for Sustainable Development give the sea an intellectual embassy; one that fosters cooperation beyond politics.

## 3. A Nation Without a Flag, Yet Everywhere

To treat the sea as a country is to recognize that it has a seat; perhaps unmarked; at every international table that deals with trade, climate, security, migration, or sustainability. Its influence is not declared through a flag or anthem, but through its unceasing impact on life, prosperity, and peace across the planet (Epstein, 2023) <sup>[15]</sup>. Any nation that ignores the ocean's diplomatic role does so at its peril, for no treaty is complete, and no policy resilient, without the sea as a partner (Jouffray *et al.*, 2023) <sup>[30]</sup>.

## Conclusion

To reimagine the ocean as a country is to reshape how we think about its value, complexity, and place in the global order. No longer simply a space for extraction, passage, or

recreation, the sea emerges as a fully-fledged economic entity; one with borders, citizens, industries, institutions, and a global voice. This metaphor challenges us to assign the same urgency, accountability, and care to marine affairs that we assign to national development.

In this imagined nation, marine life stands as the primary citizenry; without which no other economic activity could be sustained. Fishing fleets, offshore energy workers, researchers, transport operators, and tourism stakeholders form a diverse labor force. Industries flourish in the form of blue biotechnology, coastal infrastructure, maritime transport, and aquaculture, all contributing to a measurable output akin to a national GDP. Governance exists in the form of multilateral treaties, regional policies, and institutional oversight, while taxation and revenue emerge through licensing, trade, and ecosystem services. Even diplomacy; perhaps the most elusive domain; finds its counterpart in international collaboration, climate negotiations, and shared stewardship.

This exercise is more than a creative analogy. It is a necessary shift in worldview. By treating the ocean as a structured, sovereign economic system, we invite more consistent investment, more equitable governance, and deeper public understanding of the ocean's vital role in human affairs. We also resist the tendency to treat marine issues as isolated, technical matters. Instead, we position them as integral to global wellbeing; woven into the same systems of responsibility and decision-making that shape terrestrial life.

The sea, imagined as a nation, is not only vast and powerful; it is also vulnerable. Like any country, its prosperity depends on balanced management, cooperation, and respect for the interdependence of its parts. The policies we write, the industries we build, the lives we touch; all belong to this ocean nation in one way or another. And it is in recognizing this shared belonging that we find our greatest chance to protect it.

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