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PORT CITIES AND THE BLUE ECONOMY

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The port-city relationship has evolved over time, from organic integration to complex conflicts. Today, the challenge is to nurture a sustainable reconnection, emphasising the role of ports in the blue economy.

The blue economy and the protection of the oceans are at the heart of global governance frameworks, as was seen at the Third UN Ocean Conference (UNOC-3, June 9th–13th, 2025), highlighting the role of port cities as gateways to the seas.

Several such cities have taken the lead and are investing in new roles and ways of connecting ports, cities, citizens and the oceans.

Introduction: framing the port-city narrative

Ports have historically been the interface between land and water for economic activities. They are at the origin of many coastal settlements, and it is often impossible to differentiate between the creation of the city and the beginning of maritime activities. In the Mediterranean, we can trace the expansion of the different empires throughout history via the entry points to the new territories: the ports. Maritime connectivity was crucial in establishing the Greek colonies, or for the growth of the Carthaginian or Roman empires.

The evolution of the port-city relationship has been a key research topic for many academics. The work of geographers, historians, sociologists, urbanists, economists, architects, or engineers demonstrates the important impact these settlements have had, structuring coastal territories, fostering urban growth and accelerating socioeconomic changes such as the industrial revolutions or globalisation. Their

importance is also apparent in wars or in shaping local or national identities. A key element of this evolution is the port-city interface: the transitional space between urban environments and port infrastructure, which has undergone significant transformation over time.

This article does not attempt to summarise the complex evolution of the port-city relationship; there are academics who are more qualified to do that. It is important, however, to recognise the evolution and how ports and cities experienced a strong connection, followed by disconnection in centuries gone by and, more recently, a new reconnection in which the blue economy can play a key role.

Historical evolution of port-city relationships

As explained by Brian Hoyle, ports were indeed at the origin of many port cities, and the interaction evolved in a "organic" way; the activities of the port would have a visible effect on the urban fabric. Even when cities raised walls to protect themselves from threats arriving from the sea, the ports often remained connected to key public spaces, nurturing the creation of wealth, jobs and routines. This symbiotic relationship endured until the first Industrial Revolution and is well documented in artistic and literary representations.

The advent of industrialisation brought dramatic changes. Novel production methods, the increased capacity of new factories, and the accelerated demand for raw materials and access to new markets required fresh, more efficient maritime connections. Alongside these socioeconomic shifts, one of the most evident transformations was the redefinition of the port-city interface. New logistics requirements and technological advancements led to the construction of increasingly complex infrastructure: artificial coastlines, taller quay walls, larger warehouse districts, and integrated rail and road networks. These developments altered the

nature of port-city interaction. While physical barriers such as fences had yet to be erected, ports gradually became functionally and spatially detached from their urban environment.

The next stage of this evolution unfolded during the 20th century, when global trade emerged on a greater scale, supported by international trade agreements, global supply chains and naval gigantism. In this evolution, the shipping container – invented in the 1950s – was a crucial step towards integrated logistics. New maritime technologies brought a new scale to ports and logistics areas, which became increasingly detached from cities and, particularly, the local population. This process accelerated during the second half of the 20th century, with the increasing automation of operations. Port authorities and terminals erected walls and fences, creating a barrier between the port and the city, following stricter security guidelines.

The detachment was not only spatial, but also visible in the social and environmental dimensions of the port-city territory. Port expansions were necessary to respond to naval gigantism and the acceleration

A "regenerative" blue economy not only minimises ecological harm but also actively enhances marine biodiversity and mitigates climate change.

of global commerce; they were often justified on the basis of the positive economic effects the new infrastructure would generate. Ports became highly specialised economic zones, essential for global trade yet increasingly invisible and disconnected from the cities they served.

During the same period of large port expansions, from the 1960s and 1970s, the changes in the scale and the new demands for space originated port brownfields. These spaces presented opportunities to restore contact with the water, but in most cases failed to reflect the maritime identity of the city ties while undervaluing the important impact of the port and the seas on society. Fortunately, over the past three decades we have witnessed major efforts from port authorities to reconnect with the local population and increase their visibility. They have, in most cases, started to reflect and step up their engagement with some of society's greatest challenges, such as the energy transition, climate change or protecting the oceans, often visible in international initiatives like the Agenda 2030¹ by the International Association of Cities

and Ports (AIVP).² These efforts can be framed in the renewed interest in economic activity related to the oceans or, as it is also referred to, the blue economy.

Defining the blue economy and the role of ports

The concrete definition of the concept of blue economy remains contested, with no universally agreed upon definition. As underscored by Judith Kildow and other scholars, this conceptual ambiguity reflects an ongoing transition: from a narrow focus on traditional ocean-based industries towards a more integrated framework that explicitly incorporates sustainability. This expanded perspective resonates with the United Nations 2030 Agenda, particularly Sustainable Development Goal 14 (SDG 14: Life Below Water), which emphasises the conservation and sustainable use of oceans, seas and marine resources.

The effort to distinguish the blue economy from earlier, extractive maritime development models only gained traction in the early 2000s. A recent report by the International Union for Conservation of

Nature (IUCN), Towards a Regenerative Blue Economy, documents this evolution. It traces the progression from a "brown" blue economy – anchored in conventional, anthropocentric uses of the sea – towards a "sustainable"

blue economy, a concept that gained prominence during the Rio+20 Summit in 2012. In the same document, the IUCN proposes the idea of a "regenerative" blue economy, one that not only minimises ecological harm but also actively enhances marine biodiversity and mitigates climate change.

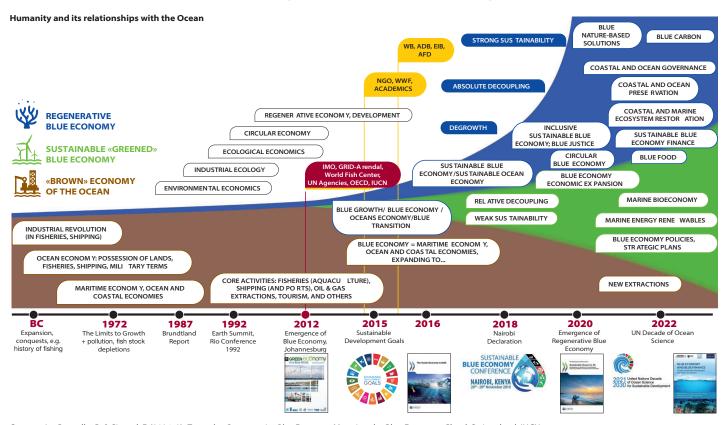
Despite these conceptual adjustments, the terms "blue economy" and "ocean economy" are still frequently used interchangeably in policy and public discourse. Yet there are distinctions. For instance, the Grantham Research Institute on Climate Change at the London School of Economics differentiates between the two: the ocean economy encompasses the full spectrum of ocean-based activities, while the blue economy should, in principle, embed sustainability at its core. However, as Romano et al. (2023) warn us in a previous Nota Internacional CIDOB, the simple designation of an activity as "blue economy" does not inherently guarantee sustainability or ecological responsibility. Many so-called blue economy sectors continue to generate environmental pressures, underscoring the need for robust governance

^{1.} Agenda 2030 by AIVP. After the UN launched the 2030 Agenda framework based on the 17 Sustainable Development Goals in 2015, AIVP published its own Agenda 2030, focusing on the sustainable development of cities and ports and the interaction between them. This initiative gathers 10 goals and concrete measures for port city

actors, encompassing society's biggest challenges from a port city perspective.

The organisation's origins are in France, hence the acronym matches its French name: Association International Villes et Ports.

Figure 1. A brief narrative of blue economy its related concempts and key dates



Source: Le Gouvello, R. & Simard, F. (2024: 2). Towards a Regenerative Blue Economy: Mapping the Blue Economy. Gland, Switzerland: IUCN.

mechanisms – led, for example, by the United Nations and the European Union – to ensure alignment with sustainable development principles. Environmental NGOs such as WWF had already raised similar concerns as early as 2015, prior to the adoption of the 2030 Agenda by the UN.

Romano et al. base their analysis in the OECD's (2016: 22) definition of the blue economy as "the sum of the economic activities of ocean-based industries, and the assets, goods and services of marine ecosystems". Within this framework, they estimate that blue economy industries could generate employment for more than 40 million people by 2030, with an economic output exceeding \$3tn and representing approximately 2.5% of global Gross Value Added (GVA).

While the debate on the core definition of the concept of blue economy has evolved, so too have the sectors included in it, changing over the past 15 years. Traditional activities – fisheries, coastal tourism and maritime transport – remain central, but new economic areas are rapidly emerging. As mentioned in the EU blue economy report 2025, these include, for example, offshore renewable energy production or the innovative use of marine biomass (e.g., algae-based products). The report also stresses the importance of including education, research, environmental protection and national defence within a comprehensive blue economy framework.

As we have seen, the concept of blue economy has undergone an important evolution, and sparked debate. The ocean was once seen mainly as a source of extractable resources; it is now increasingly understood as a dynamic system with ecological, economic and social dimensions, connected to most of the challenges identified in the UN 2030 Agenda. This connection has also been the subject of increased focus by international organisations, gaining attention in global forums.

The UN ecosystem's focus on the oceans and blue economy

Evolution of the global debate on the oceans

Although the protection of the oceans was already included in Agenda 21, resulting from the Earth Summit in Rio de Janeiro in 1992, it is only more recently that the topic has been given greater attention at the centre of the UN agenda. Historically, ocean issues were addressed primarily by specialised agencies. For example, the International Maritime Organization (IMO), overseeing global shipping, adopted the MARPOL Convention in 1973 to prevent pollution. Similarly, the Food and Agriculture Organization (FAO) established its Committee on Fisheries in the 1960s, turning attention to responsible fishing practices from the 1980s onwards. Outside these specialised domains, attention to the oceans remained fragmented.

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A striking example is World Ocean Day, proposed at the 1992 Rio Earth Summit but not officially celebrated until 2008. It is symbolic of the delayed recognition of ocean issues in global governance.

In the past 15 years, however, we have seen an important shift. A first key development was the 2009 World Ocean Conference, which prepared the ground for three landmark moments that have structured the action and debate around the oceans in recent years:

- In 2015, the inclusion of ocean protection in the UN 2030 Agenda as Sustainable Development Goal (SDG) 14: Life Below Water emphasised the connection of the oceans to all the other dimensions of sustainability.
- In 2017, the UN Decade of Ocean Science for Sustainable Development (2021–2030) was confirmed, coordinated by UNESCO's Intergovernmental Oceanographic Commission (IOC). As the title indicates, its goal is to develop and stimulate scientific research to achieve SDG 14.

the success of the conference as a demonstration of global multilateralism at a critical geopolitical moment. Among the main themes, the development of a sustainable ocean-based economy – the blue economy – was particularly prominent, recognising its essential role in society, from securing food chains and supporting global logistics to sustaining cultural and community connections. At the same time, the declaration stresses the interlinkages between ocean protection, climate and biodiversity, underlining their importance in mitigating climate change impacts, especially for coastal communities.

Within this framework, we can identify five priority areas with direct implications for port cities:

• First, the global 30×30 commitment to protect 30% of marine and coastal areas by 2030,³ which will influence urban and port planning, requiring integration of marine protected zones and encouraging nature-positive infrastructure such as habitat restoration or climate-resilient waterfronts.

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• In the same year, 2017, the first UN Ocean Conference (UNOC-1) took place in New York City. The purpose of this event and the following editions was to catalyse efforts and innovative actions from public and private bodies towards achieving SDG 14, i.e., the protection of the oceans and sustainable use of their resources. In 2022, the Second UNOC took place in Lisbon, Portugal. In both cases, the result was a high-level dialogue, concluding with a political declaration emphasising the urgent need for action, as well as thousands of commitments from the different public and private parties involved. The Third UNOC took place more recently, between June 9th and 13th, 2025, in Nice, France, and was co-hosted by Costa Rica. It brought 15,000 participants and 60 heads of state to the French port city. We will look at this event in detail given its relevance for the portcity relationship and the blue economy.

The UNOC-3 declaration and its relevance for port cities and the blue economy

The final result of the conference was the declaration entitled "Our ocean, our future: united for urgent action", which, together with the commitments made by states and other stakeholders, forms the Nice Ocean Action Plan. Its central message, following the preceding UNOCs, is a call for urgent action to conserve and sustainably use the oceans. UN officials highlighted

• Second, the call for urgent action on climate and coastal resilience, which underscores the vulnerabilities of all territories located on the water's edge – including ports – where exposure to

sea level rise and extreme weather makes resilience planning a central concern.

- Third, the declaration calls for accelerated action against marine pollution, explicitly supporting the work of the IMO and FAO on issues such as waste management, abandoned fishing gear or underwater noise.⁴ This positions ports as key nodes for reception facilities, recycling initiatives, gear return schemes and clean-up logistics.
- Fourth, the declaration places strong emphasis on building a sustainable and inclusive blue economy, which is highly relevant to port cities. Progress is expected not only in shipping decarbonisation and greener logistics, but also in sustainable fisheries, aquaculture and offshore renewable energy all of which are sectors closely tied to port-city economies.
- Finally, the declaration stresses three cross-cutting elements: the need to strengthen ocean science and knowledge-sharing across all action areas,

The target of protecting at least 30% of the world's lands, inland waters, coastal
areas and oceans by 2030 was originally established in the <u>Kunming-Montreal</u>
<u>Global Biodiversity Framework</u>, adopted at the COP to the Convention on Biological
Diversity, in 2022.

During UNOC-3 the High Ambition Coalition for a Quiet Ocean was launched, co-led by the governments of Panama and Canada: <u>For a Quiet Ocean</u>.

reinforcing the role of port cities as observation and innovation hubs; the importance of multilevel governance, which highlights the role of local authorities such as city halls, port authorities and regional governments in advancing ocean action; and the central role of education and social engagement in coastal communities, which from our perspective reinforces the need to strengthen the port-city-citizen relationship promoted by AIVP.

Special events preceding UNOC-3

In the days leading up to the official opening of UNOC-3, three high-level special events were held: the Ocean Rise and Coastal Resilience Coalition Summit, the Blue Economy and Finance Forum (BEFF) and the One Ocean Science Congress. While all three touched on issues of interest for port cities, the first two provided concrete discussions on the specific role ports and maritime communities will play in shaping two strategic themes: strengthening coastal resilience and advancing a sustainable blue economy.

 The Ocean Rise & Coastal Resilience Coalition Summit launched a concrete initiative to support

coastal cities and regions in adapting to sea level rise and ocean changes. The coalition has a clear Action Programme (2025–2028) which includes several working groups on themes such as science-based

adaptation, governance and nature-based solutions and which are open for local governments to join. The coalition will develop its work supported by different specialised working groups. One of them focuses specifically on port cities, led by AIVP, recognising their role in climate-adaptive infrastructure, risk management and resilient maritime communities. The event also featured sessions on risk assessment, social justice and coordinated action, and formalised commitments through the signing of the coalition's charter by participating stakeholders.

• The **Blue Economy & Finance Forum**, brought together policymakers, investors, maritime industry figures, philanthropists and development banks to address the annual \$175bn gap in the investment needed for a sustainable and inclusive blue economy. The event spotlighted €8.7bn in new pledges over five years, alongside €25bn in investments already identified, targeting decarbonised maritime transport, port infrastructure, marine ecosystem restoration, ocean energy and biotechnology. For port cities, these commitments are particularly relevant: they confirm that the transition to cleaner shipping, port electrification, sustainable fisheries and offshore renewables is now firmly on the global investment

agenda. Port authorities, shippers and logistics operators were active in the debates, stressing that financial flows must connect with the realities of maritime territories where infrastructure, innovation and communities converge. As highlighted by the president of AIVP in the session, cooperation between port and municipal authorities is crucial for successfully developing local projects in the different fields of the sustainable blue economy.

The Third UNOC showcased the increasing attention the UN, political leaders and companies are giving to the oceans. In this context, the sustainable blue economy presents an opportunity for port cities and their key actors: the port authorities and the municipalities. The declaration of Nice and the outcomes of the conference's special events highlight that this agenda will materialise most tangibly in port cities, where maritime trade, coastal ecosystems and urban development converge. These cities are uniquely equipped to lead the transition towards sustainable ocean use through investments in climate-resilient infrastructure, decarbonised logistics, sustainable fisheries, offshore renewable energy and inclusive coastal tourism.

The blue economy can serve as a common ground for port-city cooperation, bridging global ocean goals with local development.

Blue economy in action: port-city initiatives

The commitments of the UNOC-3 declaration are already being put into practice in several port cities. Urban authorities, port institutions and private actors are developing strategies to advance a sustainable and inclusive blue economy. Several AIVP members have developed projects that cover different sectors and scales of action, emphasising the social role ports have in maritime cities. These cases range from general strategies to facilitate the implementation of blue hubs to testing facilities or direct funding. In several instances, interventions in the port-city interface have also provided more direct visibility to the sector, facilitating engagement with the local population.

- Barcelona (Spain) has launched its Blue Economy strategy, coordinated by the City Council and the Port, to promote employment, entrepreneurship and new maritime industries. Planned facilities such as BlueTechPort and the redevelopment of Port Vell will provide platforms for innovation and citizen-oriented activities linked to the sea.
- **Lisbon (Portugal)** is developing projects under the national **Hub Azul programme**, managed by Forum

Oceano. The Port of Lisbon supports this agenda through an **Innovation Accelerator** and the planned **Ocean Campus**, positioning its waterfront as a space for research and new ventures in aquaculture, ocean observation and digital services.

- Vigo (Spain) stands out for its comprehensive Blue Growth strategy, launched in 2016. It integrates projects in fisheries, aquaculture, shipbuilding, biotechnology, renewable energy and the circular economy, combining industrial modernisation with environmental protection and stakeholder participation.
- San Diego (USA) has become a benchmark through its Blue Economy Incubator, which supports startups and pilot projects in aquaculture, shoreline resilience, biotech and clean energy. By lowering regulatory and financial barriers, the port helps test solutions with potential global impact.
- In Los Angeles (USA) the port authority and the city are advancing the AltaSea institute, which is already operational, as a hub for research, startups, and training in marine technology, aquaculture and energy. This initiative is reflected in recent reports by the Economic Development Corporation. Other initiatives include broader educational efforts, such as Blue Economy and Climate Action Pathways.

Together, these initiatives highlight how the blue economy can serve as a common ground for port-city cooperation, bridging global ocean goals with local development through projects in logistics, fisheries, tourism, energy and innovation. From the AIVP perspective, such initiatives also reinforce the importance of strengthening the port-city-citizen relationship, ensuring that economic growth, environmental protection and community benefits are pursued together, and that residents are active participants in shaping the sustainable development of their ports.

Conclusion

The evolution of port-city relationships over millennia illustrates a persistent tension between maritime functions and urban life. This tension has been more visible in the constant reconfiguration of the port-city interface. However, today, the port-city relationship needs to encompass all social and environmental challenges, without ignoring the configuration of its territory. The challenge remains to strike a balance between all values and dimensions in this territory, engaging all stakeholders, including its citizens. The increasing importance society is attaching to the oceans, their protection and their sustainable use, under the framework of the blue economy, and spearheaded by the UN in its numerous initiatives, provides an opportunity for cities and ports to reconnect and to enhance maritime culture and identity. Port city actors, particularly port authorities, are best placed to demonstrate the importance of this relationship for the future of the planet.

Case studies shared here indicate that ports can simultaneously be engines of economic growth, hubs of innovation and leaders of marine ecosystems. The shift in the past 15 years shows that the future of port cities depends not only on their capacity to manage maritime commerce but also on their ability to align global ocean priorities with local development. Strengthening the port-city-citizen relationship, fostering multilevel governance, and integrating social, economic and environmental objectives are essential to ensuring that port cities steer the path towards the 2030 Agenda.