



**KNOWING
ACTING
TRANSFORMING**

**CORPORATE ACTIONS
FOR THE OCEAN AT SEA AND ON LAND**

CHAIRMAN'S MESSAGE

Vital to many communities and economic activities, oceans are at the crossroads of multiple uses: over 3 billion people rely on them for their livelihoods; approximately 40% of the world's population lives within 100 kilometres of the coast; 90% of international trade occurs by sea; and renewable electricity generation in Europe mainly depends on the development of offshore wind farms, whose capacity, currently around 30 GW, is expected to double by 2030.

The ocean provides a variety of ecosystem services, such as regulating global climate and biogeochemical cycles, absorbing over 25% of carbon dioxide emissions, storing more than 90% of excess heat, and hosting rich biodiversity, among others. However, due to pressures from human activities on land and at sea, these functions are eroding and must be preserved and indeed restored.

With the third United Nations Ocean Conference scheduled for June 2025, ocean issues are high on the international agenda. Several ongoing negotiations are critical for the future of the oceans and the sustainability of their usage. The most significant among these are an agreement to protect the high seas and the seabed, as well as a treaty to reduce plastic pollution.

The diversity and interdependence of issues raise many questions for economic players. To date, Sustainable Development Goal 14, "Conserve and sustainably use the oceans, seas and marine resources for sustainable development", is the least prioritized by businesses and the least funded among the 17 SDGs. To better understand and assess the risks and opportunities of ocean-related activities, the French association Entreprises pour l'Environnement (EpE) has, since 2018, led a commission consisting of French and international companies from various sectors (energy, finance, industry, infrastructure, etc.).

Drawing from the best practices these businesses already employ, this brochure illustrates how economic players can align three ambitions: using science to guide decisions, accelerating and financing blue economy solutions, and transforming business practices to protect this fragile environment.

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CEO, TotalEnergies

Chairman, Entreprises pour l'Environnement

(1) European SDG Stock Take 2024

(2) www.weforum.org/publications/sdg14-financing-landscape-scan-tracking-funds-to-realize-sustainable-outcomes-for-the-ocean/

ISSUES AT STAKE

GROWING PRESSURES ON OCEANS

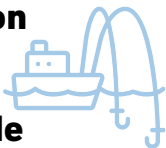
Climate change



► CO₂ absorption has increased **ocean acidity** by **30%** over 250 years, creating a major risk to marine life⁽³⁾

► **About 50%** of **coral reefs** have vanished since the 1950s⁽⁴⁾

Overexploitation of natural resources and illegal trade



► **Annual fish consumption more than doubled** between 1960 and 2022, increasing from 9 to 21 kg per inhabitant⁽⁵⁾

► In 2021, **38%** of **fish stocks** were overexploited, while 57% were already fully exploited⁽⁶⁾

Pollution



► **8 million tonnes of plastic** are spilt annually at sea⁽⁷⁾

► **80%** of **waste at sea** originates from land-based activities⁽⁸⁾

Invasive species



► **The primary** factor in the introduction of invasive species that threaten local species is **ballast water**⁽⁹⁾

► **The global cost** of invasive alien species on land and at sea is **€390 billion**⁽¹⁰⁾

Destruction and artificialisation of natural environments



► Disturbances in marine environments include noise pollution, which affects **150 marine species** including mammals, fish, and invertebrates⁽¹¹⁾

► **Coastal sprawl:** the construction rate on France's Mediterranean coastline is **12%**⁽¹²⁾

SOURCES :

(3) Pernet F., Gazeau F., 2024. *L'acidification des océans : quels effets ? quelles solutions ?*, Versailles : Éditions Quæ, 124 p

(4) ICRI Report, 2024

(5) FAO, 2024

(6) OECD Fisheries Review, 2025

(7) *Plastic waste inputs from land into the ocean*, 2015

(8) European Environment Agency, 2023

(9) Marine biological invasions, 2024

(10) UICN Comité français, 2024

(11) *Convention on the Conservation of Migratory Species of Wild Animals*, 2023

(12) MEDAM

ISSUES AT STAKE

FRAGMENTED AND INCOMPLETE OCEAN GOVERNANCE

More than 260 multilateral treaties are related to marine resource management. As well as the many regional treaties, there are the following protocols:

- ▶ **The High Seas Treaty (BBNJ Agreement):** adopted in 2023, focuses on protecting oceans and their diverse resources beyond states' exclusive economic zones (EEZs).
- ▶ **The Kunming-Montreal Global Biodiversity Framework :** aims to conserve 30% of land, inland waters, coastlines, and marine areas, restore 30% of degraded ecosystems, and halve the introduction of invasive species.



- ▶ **The Plastic Treaty:** The Fifth United Nations Environment Assembly adopted a landmark resolution in March 2022 to establish a global treaty aimed at combating plastic pollution.
- ▶ **The International Seabed Authority (ISA)** is responsible for regulating all exploration and exploitation of deep-seabed mineral resources and their subsoil beyond the limits of national jurisdiction.

SOME CHALLENGES OF THE BLUE ECONOMY



- ▶ **Decarbonising shipping:** the International Maritime Organisation (IMO) plans to reduce the carbon emission intensity of international shipping by at least 40% by 2030.
- ▶ **Developing marine renewable energies:** the target set by the European Commission is to achieve 450 GW of offshore wind energy in European waters by 2050.
- ▶ **Promoting sustainable fisheries and aquaculture:** the FAO estimates that the global share of fish stocks not being exploited at a biologically sustainable level has increased from 10% in 1972 to 37.7% in 2021, primarily due to overfishing.
- ▶ **Ensuring the sustainability and long-term viability of tourism:** 50% of global tourism is coastal or marine and relies on healthy ecosystems.

CORPORATE ACTIONS FOR THE OCEAN AT SEA AND ON LAND



1. MASTERING IMPACTS SCIENCE-BASED DECISIONS

Despite advances in biology, chemistry, and geology, marine ecosystems remain poorly understood. However, this knowledge is essential for optimising the use of aquatic resources and protecting them to ensure the services they provide. Developing scientific partnerships and utilising data collection and analysis tools enable businesses to identify risks, define, monitor and manage indicators, and make more informed decisions to support the development of solutions and reduce pressures on land or at sea.

“ We only protect what we love, we only love what we understand* ”

 **Séché** Promoting the application of the proximity principle to non-hazardous waste, a key challenge for the circular economy

The proximity principle means ensuring that waste is prevented and managed as close as possible to where it is produced⁽¹³⁾. Currently limited to disposal activities, extending the application of the proximity principle to plastic waste recycling activities will help reduce exports outside Europe, as well as the risk of marine pollution. Groupe Séché applies the proximity principle to its non-hazardous waste management activities, particularly plastics, giving priority to local recycling solutions and avoiding exports. Good traceability of flows is essential to achieving this objective.

More information: www.groupe-seche.com/uploads/2025/03/eche_environnement_deu_2024_fr.pdf

* Jacques-Yves Cousteau
(13) Article L541-1 of the French Environmental Code



Monitoring and data sharing: Enhancing marine knowledge with the scientific community

Since 2019, through its Biodiversity Ambition, TotalEnergies has committed to sharing its biodiversity data collected during environmental campaigns around its operations. In 2024, with 11 datasets from its offshore projects (South Africa, Brazil, and Namibia) were shared on the international platform Global Biodiversity Information Facility (GBIF), TotalEnergies ranks 3rd globally among private sector data providers on marine biodiversity. Since 2020, these shared data have been cited over 200 times in scientific literature, demonstrating the private sector's contribution to bridging knowledge gaps in the marine environment. The Company is also supporting the Seabed 2030 initiative to map the seabed.

More information: https://totalenergies.com/system/files/documents/totalenergies_sustainability-climate-2025-progress-report_2025_fr.pdf

K E R I N G



Water Resilience Labs: a land to sea approach to address water challenges and build resilience in priority water basins

In 2025 Kering is launching the Water Resilience Labs to address critical water challenges and build resilience in high-priority, water-stressed basins in regions of sourcing. By leveraging a land-to-sea approach at the nexus of hydrological, terrestrial, marine, and social ecosystems, the Labs link basin's state of nature with negative impacts of production activities (pollution...), and possible nature-based solutions (land regenerating, replenishing the watershed, restoring blue ecosystems). By working alongside key local stakeholders, Kering's projects reinforce coastal planning, marine ecosystem management and land-to-sea dynamics. Guided by SBTN framework, the first Lab will be in the Arno Basin in Italy where over a third of Kering's key suppliers are located.

More information: www.kering.com/fr/developpement-durable/preserver-la-planete/strategie-eau-kering/



Le réseau
de transport
d'électricité

R&D to measure and preserve marine environments

For over ten years, RTE has been developing an ambitious R&D program along with various partners to consider marine biodiversity in the life cycle of offshore electricity networks. One of these projects, OASICE (set up in partnership with TBM environnement and the LEMAR laboratory of the CNRS-UBO), aims to carry out environmental monitoring and studies on the properties of scallops as well as their behaviour. Measures have been carried out along the IFA2 interconnection cable with Great Britain and with submarine power cables of the Calvados offshore wind farm. Those researches on scallops growth and chemical composition allow to measure and anticipate the potential impacts of laying electric cables on water and environmental quality.

More information: https://www.linkedin.com/posts/rte-france_comment-mesurer-limpact-de-nos-activit%C3%A9s-activity-7135323899507990529-fAPe/?utm_source=share&utm_medium=member_desktop&rcm=ACoAABY6t30BPOGwy2s-0TCrzpyfswf4fFtIT4

 **VEOLIA** The marine coastline,
an interface between environmental and human health

Managing coastal water quality is a key issue for the marine coastal environment and for the sustainability of its dependent uses. It is also a matter of public health. Under the responsibility of local authorities, Veolia helps reduce potential sources of pollution, control coastal water quality through active management of bathing and shellfish waters, but also inform professionals and users during vigilance periods and crisis times. As an example, to monitor 70 beaches in the Toulon Provence Méditerranée Urban Community, Veolia is using a rapid analysis method that provides results in less than 4 hours.

More information: www.bfmtv.com/var/replay-emissions/bonsoir-var/var-comment-veolia-surveillance-la-pollution-dans-les-eaux-de-baignade_VN-202408080462.html



Study of the land-sea link of lighters in the environment: understanding flows and reducing their ecotoxic impact

For seven years, Plastic At Sea has studied what happens to lighters thrown away in the environment. From the gutters, they are carried by streams and rivers, frequently stopped by waterway infrastructures, until they finally end up in the open sea. Working with the Dupuy de Lôme Research Institute, Plastic At Sea has analyzed the environmental degradation of the BIC lighter and its 19 components, together with their ecotoxic impacts. These studies have demonstrated for the first time the importance of the plastic film shrink-wrapped around the lighter's body in protecting the lighters, facilitating their recycling and reducing their impact on terrestrial and marine biodiversity. These lighters are now being collected in recycling programs organized by BIC.

More information: www.bicworld.com



Acoustic monitoring buoys on shipping lanes to help protect cetaceans

As a major player in maritime transport, CMA CGM acts daily to reduce the impact of its activities on the oceans and marine biodiversity. In partnership with the Woods Hole Oceanographic Institution, the Group funded two passive acoustic monitoring buoys in 2022, deployed on the east coast of the United States, to cover the migration routes of North Atlantic right whales and thereby limit the risk of collisions. The data collected by these buoys are integrated into the Fleet Navigation Center's internal tool, allowing for anticipation of speed reduction zones defined by the National Oceanic and Atmospheric Administration. The partnership was renewed in 2025 to continue maintaining the buoys and preserve this endangered specie.

More information: www.cmacgm-group.com/fr/developpement-durable/engagement-pour-protger-la-biodiversite

2. ACCELERATING AND FUNDING BLUE ECONOMY SOLUTIONS

The blue economy offers numerous high-potential opportunities for society. To accelerate the scaling up of these emerging solutions, mobilising and coordinating stakeholders at various stages of the value chain (production, transport, logistics, etc.) is crucial. Businesses are also making efforts to mobilise the necessary capital to finance and secure new business models, guiding them towards sustainable solutions.



EDF

**Developing
offshore wind**

while preserving biodiversity

As the world's leading producer of low-carbon electricity, EDF plays a key role in the energy transition, particularly in supporting the maritime sector toward Net Zero. The group is committed to the development of offshore wind energy, with several wind farms either operational, under construction, or in development, including innovative projects such as Provence Grand Large, a pioneer of floating wind energy in France. This technology allows projects located further offshore, thus reducing visual impacts. Offshore wind energy also offers a unique opportunity for long-term monitoring of the marine environment, with some sites participating in the Sentinel Marine Areas network supported by EDF, aiming to monitor the evolution of marine biodiversity through environmental DNA (eDNA).

More information: www.edf.fr/ocean



A collaborative approach to meeting key challenges of the energy transition in the transport and logistics sector

Launched in 2020 by CMA CGM, the New Energies coalition brings together 20 key players committed to decarbonizing transport and global supply chains (Airliaque, CACIB, Engie, Renault Group, Michelin, Veolia, TotalEnergies, Schneider Electric...). Through a collaborative approach, the coalition aims to develop innovative technologies and promote knowledge sharing to accelerate decarbonized transportation solutions, whether in maritime, air, or land based. By conducting in-depth studies on topics such as ship dismantling, wind propulsion, port electrification, or on e-fuel production challenges, the coalition strives to raise awareness among public authorities and various stakeholders to accelerate the transformation of energy chains and facilitate more sustainable mobility.

More information: www.newenergies-coalition.com/fr/resources/

Seventure



An ocean investment fund to support innovative and sustainable companies in the blue economy

Through the Blue Forward Fund, Seventure Partners, a subsidiary of Natixis, has been investing 1m-to-10million Euros tickets in innovative companies for the past three years. The management team has met with ~1 000 companies active in sustainable aquaculture, sustainable exploitation of bioresources –algae and micro-organisms– to produce new products and materials, clean technologies (marine energy, decarbonisation of maritime transport, circular economy, ocean conservation) and the digitalisation of the blue value chain. With its partner BioMarine, which specialises in organising global events dedicated to the blue economy, the management team is promoting the deployment of these innovations.

More information: www.blueforwardfund.com/



ERM NatureTech Alliance: a collaboration to tackle the urgent biodiversity challenges

In 2024, ERM, Salesforce, NatureMetrics and Planet combine forces to form a new initiative to help companies tackle urgent biodiversity challenges. This alliance focusses on biodiversity measurement, management and disclosure, supporting businesses to get ahead of their nature impact reporting commitments. This collaboration aims to transform how businesses approach their impact and dependencies on nature including marine biodiversity. In this regard, NatureMetrics and Dartmouth Ocean Technologies partner to provide autonomous marine eDNA sampling technologies for marine biodiversity measurements close to activities.

More information: www.naturemetrics.com/news/naturemetrics-and-dartmouth-ocean-technologies-partner-to-provide-autonomous-marine-edna-sampling-technologies-for-biodiversity-measurements-at-scale



Managing Ocean impacts and directing financial flows to support ocean protection

Amundi tackles ocean challenges in portfolios notably through its biodiversity framework that relies on 3 pillars:

1. Avoiding investments in companies with significant negative impacts: Amundi screens ocean harming activities through its Responsible Investment policy which includes elements around deep-sea mining, plastic, and controversial pollution.
2. Reducing impacts through engagement: in 2024, 67 issuers were engaged on oceans and 759 companies on nature overall (including on major ocean impact drivers such as plastic and chemical pollution). Ocean impacts are assessed through an internal framework that maps ocean impacts per sector using internationally recognized frameworks and standards (e.g. TNFD).
3. Investing in corporate leaders on nature issues, including possible investment into blue bonds.



Supporting the entire maritime transport value chain to accelerate its decarbonisation

Societe Generale supports the maritime transport energy transition by providing financing solutions adapted to the challenges across the entire value chain. The Group finances the construction of low-emission vessels, the development of alternative energies, and the adaptation of port infrastructures, all contributing to the development of "green corridors". The Group finances the modernization of existing ships to reduce their environmental impact and is the exclusive advisor to the "Maritime Upgrade" debt fund for Eurazeo. As a co-founder of the Poseidon Principles, Societe Generale integrates climate criteria into its maritime financing to achieve its decarbonization objectives for the sector.



Parametric insurance for coastal community resilience in Mexico

AXA Climate, in collaboration with ClimateSeed and AXA Mexico, has implemented a parametric insurance program to protect a local fishing community in Mexico against tropical cyclones. The program's success relies on a strong partnership with ClimateSeed, acting as the seed investor and exclusive commercial representative for the carbon credits generated by the mangrove restoration and conservation. In case of cyclones, coverages are automatically triggered and covers the repair costs (palapas, boats, cleaning, channel dredging and business interruptions related to eco-tourism and fishery activities). The sale of the carbon credits allows the project to cover the insurance premium, making it financially viable and sustainable for the Ejido community.

More information: <https://climateseed.com/fr/mangrove-conservation-and-restoration-in-san-crisanto>

3. TRANSFORMING BUSINESS PRACTICES

In the face of multi-stakeholder, interconnected, imperfectly understood, and occasionally new challenges, some businesses are compelled to innovate and transform independently. In this process, they create synergies between climate and biodiversity strategies, engage in consultations and spatial planning, mobilise their stakeholders, and experiment with new economic and strategic models.



BNP PARIBAS

Financial innovation to regenerate marine ecosystems

In 2019, BNP Paribas took a pioneering stance on Ocean protection by publishing a fully-fledged position conveying how the Group supports a sustainable blue economy. Currently present in 64 countries, BNP Paribas actively contributes towards financial innovation, as illustrated by Blue Finance impact loan facility. With the purpose to fund small businesses in fisheries, aquaculture, and ecotourism while ensuring ecosystem preservation within 115 Marine Protected Areas (MPAs), this initiative uses a blended finance model where businesses pay dividends and revenues sharing mechanism to Blue Alliance to secure proper MPA management. Initially deployed in 2024 in Indonesia, the Philippines, Cabo Verde, and Tanzania, this model attracts private capital and could be replicated.

More information: <https://bluealliance.earth/launching-the-first-impact-loan-facility-for-marine-conservation/>



Blue Carbon

Project: restoring mangroves in Abu Dhabi

ENGIE and local stakeholders restore mangroves near the Mirfa power plant in Abu Dhabi through the Blue Carbon Mangrove project by using advanced drone technology to plant seedlings and minimize environmental impact without the presence of human in the ecosystem. Since 2020, the project has grown 344,388 mangrove saplings. In 2024, 567,200 additional seeds were planted, aiming for a 40% success rate (compared to the 5% nature vital rate). Coastal ecosystems such as mangroves play a major role in CO₂ sequestration, storing 10 to 20 times more carbon than forests. Restoring them therefore helps to mitigate climate change while protecting coastal ecosystems.

More information: <https://engiemiddleeast.com/media/environment-agency-abu-dhabi-and-engie-complete-phase-ii-of-the-mangrove-rehabilitation-project/>



Quality bathing water while promoting purified water

In Bora-Bora, SUEZ has been supporting all stakeholders in the blue economy since 1990. The island has held the Blue Flag for over 15 years, a label of environmental excellence for sustainable tourism development. Treating all wastewater, including that from the motus, the small islets surrounding the main island, SUEZ also uses the treated water for watering green spaces, fire protection, and even preparing concrete. This allows the island to save 85,000 m³ of drinking water per year while ensuring the comfort of the 200,000 tourists welcomed each year to the island's seven hotels.

More information: www.suez.fr/fr-fr/notre-offre/succes-commerciaux/nos-references/bora-bora-gestion-eau-et-assainissement-recyclage-des-eaux-usees



The Ocean: A Path to Awareness, Inclusion, and Mobilization

As part of its ambition to make impact accessible to all, Groupe BPCE is mobilizing in large numbers to support a responsible maritime economy. Leveraging its distinctive structure (as a non-listed cooperative group) and the regional reach of its two networks, it anchors its action in the long term and works to amplify its impact by raising awareness among its stakeholders, particularly younger generations, about the preservation of resources. Thus, for the Paris 2024 Torch Relay, Banque Populaire developed an educational tool that introduced 4 million students to the preservation of aquatic environments. Caisse d'Épargne, as a historical patron of the Belem, provides to young people from community or integration programs a silent sailing experience on board the three-masted ship, combining inclusion, transmission, and preservation of nature.

More information: www.casden.fr/les-dernieres-actualites-de-la-casden-banque-populaire/vivez-le-relais-des-oceans-avec-vos-eleves/
www.fondationbelem.com/actualites/medias/videos/item/13032-stage-de-decouverte-pour-les-jeunes-en-parcours-d-insertion-a-bord-du-belem-et-j-o-2024



Climate risk analysis, nature-based solutions and advanced engineering: towards a global approach to coastal resilience

VINCI offers predictive analysis, monitoring and diagnostic solutions to anticipate coastal erosion risks and mitigate their effects, notably through its subsidiary Resalliance. Applied in Saint Louis, Senegal, this solution has led to the production of vulnerability maps for local decision-makers, providing a better understanding of how the area could evolve by 2100. To protect coastlines from erosion and limit the speed of water, formwork mattresses made from geotextile and filled with concrete or sand are deployed. Some solutions help promote biodiversity by providing an environment conducive to plant growth, supporting ecological diversity and improving visual appeal, while reducing the need for heavy infrastructure. In addition, VINCI Energies carries out high-voltage electrical connections for cruise ships docked at the port, while VINCI Construction is increasing river access to the port of Le Havre.

More information: www.vinci.com/



Commit, from business to supply chain, not to damage the seabed

In February 2022, Renault Group (RG) joined the call for a moratorium on deep-sea mining, pledging not to source any deep-sea minerals until it has been scientifically demonstrated that such extraction can be carried out in a sustainable manner. Given the lack of knowledge and the potential risks to ecosystems, biodiversity, the climate and human beings, RG has chosen to adopt a preventive approach. Aware of its duty of care, the group is focusing its efforts more broadly to control environmental, social and governance (ESG) risks in its current supply chains, while developing the recycling and circular economy of batteries.

More information: www.stopdeepseabedmining.org/endorsers/

CONCLUSION

Whether close or distant, on land along the coast or at sea, old or emerging, the connections between the economic world and the marine environment are becoming increasingly material. Governments, scientists, civil society, and the private sector are gradually enhancing their involvement.

To meet the Sustainable Development Goals, a healthy ocean is essential. It is not too late to organise protective management and sustainable exploitation. This involves reducing the impacts of shipping on oceans, coastal construction, pollution, resource overexploitation, and invasive species. First and foremost, it is crucial to control the effects of climate change and the various pollutants and plastic waste that primarily originate on land.

Businesses are striving to develop sustainable solutions in many sectors, both individually and collectively. Some are assessing dependencies,

impacts, risks, and opportunities across their value chains while designing tools and capacities to act directly or indirectly on ocean-related solutions. Others are developing and financing sustainable management solutions that include decarbonisation, onshore prevention of pollutant releases and plastic waste, environmental monitoring, and coastal restoration and adaptation. They have initiated a dialogue with partners across their value chains, the scientific community, and their stakeholders to scale up these solutions and manage conflicts of use as they arise.

To make sustainable economic models attractive and permanent in a more competitive and open environment than any other, the business community needs public policies and financial frameworks that ensure fair competition and responsible use of marine resources in both territorial and international waters.

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Entreprises pour l'Environnement (EpE)

The French association Entreprises pour l'Environnement (EpE), established in 1992, unites around sixty major French and international companies to share best practices and collaborate on better integrating the environment into their strategies and operations. Its raison d'être – one planet and a prosperous world – encapsulates the resolve of its members to lead their own and society's green transition, while ensuring that economic development compatible with planetary boundaries is both socially accepted and indeed desired. EpE is the French partner of the World Business Council for Sustainable Development (WBCSD).

EPE publications and works are available on: www.epe-asso.org/publications-rapports

