

16 June 2025

Protecting the ocean, or how to ease our conscience by shooting ourselves in the foot

Third UN Ocean Conference (UNOC3)

As the **Third United Nations Conference on the Ocean (UNOC3)** in Nice comes to a close, with objectives to enhance **ocean protection**, mobilise **funding** for the sustainable conservation and exploitation of oceans, and **strengthen and better disseminate knowledge** related to marine sciences for improved policy-making, [\[read in French\]](#) it seemed useful to revisit the major questions posed by humanity's management of the oceans and the responses provided.



First, it is interesting to note that in the media, the information about the Conference has mostly focused on one key aspect (the **protection of marine biodiversity**) and on one solution (the establishment of **protected areas** with the aim of protecting 30% of marine areas by 2030)¹. This solution and the related objective are strongly endorsed by major NGOs active in the field of 'nature'

¹ Commitment made by close to 200 countries during the 15th Conference of Parties to the UN Convention on Biological Diversity (COP15), held in Montreal, Canada, in 2022 [\[read\]](#).

protection, such as [WWF](#), [IUCN](#) and [Greenpeace](#),² in order to raise additional financial resources.

If reports are to be trusted, it would be sufficient to declare an area as protected (meaning turning it into some kind of national park) and to organise research and controlled recreational activities (such as boating, scuba diving, and regulation of recreational fishing) for the problem to be solved.³

France already 'protected' 33% of its waters in 2022, with the majority located in the overseas departments and territories, while metropolitan France only had a few tiny parks for tourism purposes.⁴ This protection primarily aims to control fishing and reduce (or even stop) all extractions to allow marine life to replenish in quantity and diversity. However, it does not protect these areas against other dangers that threaten them.

Protecting the ocean through protected areas – a very partial solution

In reality, as shown in the titles of the UNOC3 working groups [\[read\]](#), the **marine areas issue is a little more complicated than that...** (see **Figure 1**) and the proven dangers are not limited to just overfishing.

Thus, the conference was invited to work on

- the prevention and significant reduction of **marine pollution** of all kinds, particularly originating from land-based activities, and,
- the promotion of the role of **sustainable food** sourced from the ocean with the view of eradicating of poverty and in support of food security.

It seems obvious that just being placed under protection cannot prevent pollutants from reaching the area, as the protected area is not surrounded by a barrier that could stop contaminants. Neither can it effectively improve the sustainability of ocean-derived food in terms of **quality and food safety of the food sourced from the marine environment**, nor diminish the **health risks incurred by people consuming products coming from a polluted sea**. It cannot

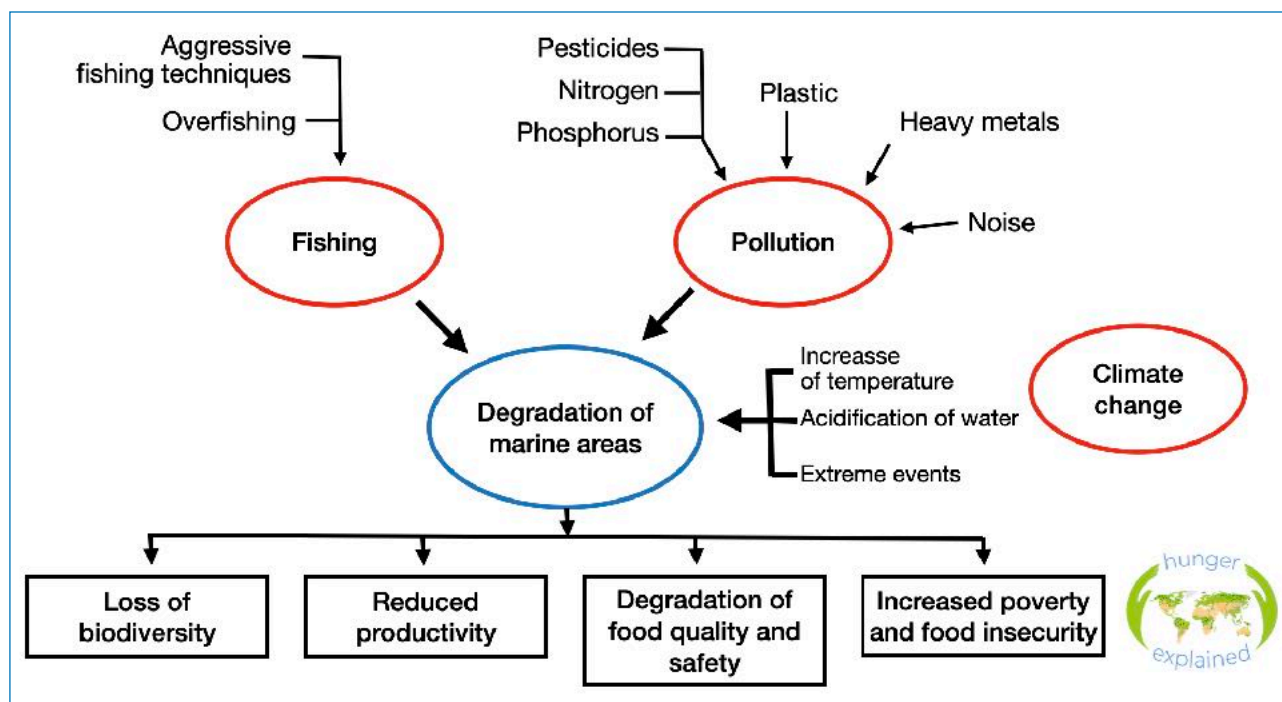
² On 7 June 2025, Laura Bergamo explains on the Greenpeace website which are the 4 actions required for protecting oceans and people: 1. Post on social networks to call on world leaders to ensure community-led marine protection. - 2. Share a particular Greenpeace post in your story on another social network to support people and oceans. - 3. Share Greenpeace-provided images in your story to show world leaders that solutions lies within voices making waves. - 4. Tell your friends to join the rising tide [\[read here to believe\]](#).

³ See, for instance, the Port Cros National Park the centre of which covers 4,600 ha and the adjacent marine area, 123,000 ha, or 1,230 km² [\[read in French\]](#).

⁴ The largest protected area is the 'Parc naturel de la mer de Corail' (Coral Sea Natural Park) in New Caledonia, created on 23rd April 2014, with an area of 1.3 million km², equivalent to two and a half times the size of metropolitan France and more than 1,000 times the Port Cros Park. In this regard, France continues to implement a very old-fashioned kind of 'nature protection' that dates back to colonial times, has a strong smack of colonialism and is based on a fairly simple principle that is found in many conservation efforts, further amplifying global inequalities (= here we produce, and we 'protect' over there) [\[read here pp. 4-5 and here\]](#).

even prevent the large-scale destruction of marine habitats due to the use of **aggressive fishing techniques** such as bottom trawling.

Figure 1 – Causes and consequences of the degradation of marine areas



Although it is frequently claimed that biodiversity quickly recovers in protected areas, compelling scientific studies on the subject are quite difficult to find.⁵ Furthermore, even if this recovery were documented in the **short term**, one might wonder if, in the **long term**, with the accumulation of pollutants and the degradation of water quality in the oceans – if nothing is done to decrease it or at least reduce it – this potential effect would persist. There are indeed serious indications pointing to the harmful impact of pollution not only on the quality and quantity of biodiversity but also on the health of individuals consuming seafood. However, while the issue of plastic pollution and the effects of microplastic penetration into the food chain are quite well studied [see for example [here](#)], the impact of other pollutants is much less documented.

Pollution of marine areas

Many studies show that **pollution** of marine environments is accelerating. This is not only about the invasion of **plastic** that is often mentioned in the media and which has been discussed in previous articles [\[read\]](#), but also about contamination by **nitrogen** and **phosphorus** (**box 1**), a significant part of which comes from agriculture, by **mercury** and other **heavy metals**, as well as by **pesticides**

⁵ It is regrettable that the recent diagnostic work conducted in France does not include the analysis of marine areas [\[read in French\]](#) and that the available scientific articles focus more on planning and management of protected areas [\[read\]](#), or their ambiguous roles [\[read\]](#), rather than on their impact. If our readers are aware of impact studies, please do let us know.

brought by rivers and streams to the sea where coastal areas [\[read\]](#), the richest in biodiversity, are affected (**box 2**).

Box 1 - Nitrogen and phosphorus

The use of phosphorus and nitrogen in agriculture has exceeded safe boundary levels, driving significant ecological change.*

Breaching this boundary has led to severe environmental impacts such as water pollution, eutrophication, harmful algal blooms, and "dead zones" in freshwater and marine ecosystems.

This issue has been prevalent in industrialised countries for a long time and is increasingly becoming a concern in developing regions as well.

Excerpts from [Planetary Health Check - A Scientific Assessment of the State of the Planet](#), Planet Boundaries, Science, p. 5, 2024.

* The rapid development of aquaculture during the last three decades contributes considerably to the release of these elements in the marine environment, particularly in coastal areas [\[read\]](#).

Box 2 - Heavy metals

Coastal environments are among the most dynamic and ecologically significant ecosystems on our planet, serving as crucial habitats for a diverse array of marine species and providing essential ecosystem services to human communities worldwide, ... including coastal protection, fisheries resources, and carbon sequestration, making them indispensable for both biodiversity conservation and human well-being.

However, these invaluable coastal ecosystems face increasing threats, particularly the release of heavy metals into both sediments and marine environments.

The release of heavy metals into coastal environments has become a growing concern due to their persistence, toxicity, and potential for bioaccumulation in the food chain.

Heavy metals, like lead (Pb), mercury (Hg), cadmium (Cd), and chromium (Cr), are naturally occurring elements that have become pervasive pollutants in coastal areas due to industrialisation, urbanisation, and agricultural practices.

Once deposited into sediments, these metals can persist for extended periods, posing significant risks to ecosystem health and human well-being. ... These sediments act as both sinks and sources of contaminants, trapping pollutants in the short term but potentially releasing them back into the water column under changing environmental conditions.

Excerpts from El-Sharkawy, M., et al., [Heavy Metal Pollution in Coastal Environments: Ecological Implications and Management Strategies: A Review](#), Sustainability, MDPI, 2025.

Noise pollution, caused mainly by boats and aquaculture, can have important effects on marine fauna. Among invertebrates and marine fish, disturbances ranging from stress to death, increased aggressiveness, and other behavioural issues have been observed, as well as a degradation of the environmental services provided, such as water filtration or sediment mixing [\[read\]](#). The consequences of noise on marine mammals include disruptions in foraging, reproduction and parental care, rest and migrations [\[read\]](#).

Climate change and its impact

Another risk against which the protection approach has no effect is **climate change**. It is now proven that climate change disrupts the marine environment by altering living conditions.

The most well-known case is that of **coral**, which is very sensitive to temperature variations. A rise of just one or two degrees can cause corals to bleach (due to the death of the algae that live symbiotically with the coral and provide it with nutrients through photosynthesis, while the coral in turn offers them shelter). This leads to a profound transformation of the ecosystem, particularly regarding its wealth in terms of underwater biodiversity [[read](#)].

Disruptions prompted by climate change also include the **migration of shoals of fish** (generally towards higher latitudes to flee from warmer water and acidification) and the alteration of their movements during the year, while the multiplication and intensification of certain extreme weather events contribute to the degradation of coastal areas [[read](#)], with a significant impact on the population who lives there.⁶

Poverty and food insecurity among sea workers and the quality of our food

In previous articles, hungerexplained already had the opportunity to observe that the living conditions of sea workers were often catastrophic.

We saw, in particular, how the competition from aquaculture and industrial fishing, concentrated in the hands of a few giant companies [[read about the situation in Europe](#)], had dramatic consequences for the approximately 500 million people whose livelihood is earned from traditional and artisanal fishing [read [here p. 5](#) and [here pp. 4-6](#)], and how intolerable the living conditions of industrial fishing workers were [[read](#)].

Aiming to achieve the goal of sustainable fishing therefore also means that the poverty and food insecurity of those living from this activity must be ensured. However, it is often seen that the protection of marine areas is at their expense and not done in collaboration with the communities concerned.⁷ For these reasons, there are many other measures to be taken.....

⁶ It is estimated that around 1 billion people live at less than 10 km from the coast, and 2 billion at less than 50 km from the sea [[read](#)].

⁷ Let us recall here that research has shown that communities are often the best protectors of the environment and that environmental protection must go hand in hand with satisfactory economic and social conditions for the people who live there [[read pp. 4-5](#)].



We have also had the opportunity to draw our readers' attention to the quality and food safety of products obtained from the marine environment and their worrying content of microplastics [\[read\]](#) and heavy metals [\[read\]](#), as well as the social and environmental effects of aquaculture development, which does not contribute to make the fishing sector more sustainable [\[read\]](#).

Conclusion

Saving the ocean – and saving ourselves in the process, given that the ocean is a crucial source of food, that it produces a significant portion of the oxygen we need to breathe and live, and that it absorbs the vast majority of the excess heat generated by the greenhouse effect – by just putting 30% of marine areas under ‘protection’ does therefore not appear to be a credible option.

It is a **deception** that allows us to continue as before in the remaining 70% of the ocean. In essence, this solution gives us the impression of doing something that is not too demanding and relatively easy to implement, and has the advantage of not disrupting much our daily lives, while producing some apparent impact in the immediate **short term**. So, why deprive ourselves of such a remedy that has the merit of mobilising resources, creating opportunities for tourism, and easing our conscience?

The difficulty with it is that it is only a very partial solution that will not fix the problem in the **medium and long term**. It is rather simple to apply – although scientific literature shows that it generates some serious challenges to solve – and comfortable because it carefully avoids tackling the more difficult, but fundamental, problems of pollution and climate change.

Once again, this illustrates that **real problems are complex**, intertwining with one another (biodiversity, climate change, pollution, social and economic crises, food insecurity, etc.), and that it is not possible to fix them without **addressing them simultaneously** along with their many different facets.

For sure, this means that the solutions to these questions will not be simple and comfortable: we will need to rethink our way of producing, so that it does not result in the release of multiple pollutants that will all, sooner or later, end up in the ocean, nor emit greenhouse gases that will further amplify climate change, of which we are increasingly bearing the negative consequences, nor continue to erode biodiversity (which ultimately equates to eroding ourselves, as we are part of it – if it collapses, we will collapse too).

Eating healthily, breathing comfortably, and preserving a liveable climate are **three vital necessities for humanity**. Securing them justifies sacrifices – on the condition that they are made within a framework of justice and not of increasing injustices. This is still possible, most scientists tell us, if we do not delay getting started and stop using these illusions as a smokescreen.

Hungerexplained repeats itself, some may think. Perhaps.

No problem, because, this message cannot be stressed and restated enough: **it is better to make some sacrifices today rather than having to – for certain – face consequences of an incomparable economic and human cost, not in some distant country, but everywhere, including here, in our families, our towns and our villages.**

To know more :

- France Diplomatie, [Troisième Conférence des Nations unies sur l’Océan \(UNOC3\) \(Nice 9–13 juin 2025\)](#), Ministère de l’Europe et des Affaires étrangères, 2025 (in French).
- Ayassamy, P., [Ocean plastic pollution: a human and biodiversity loop](#). Environ Geochem Health 47, 91, 2025.
- El-Sharkawy, M., et al., [Heavy Metal Pollution in Coastal Environments: Ecological Implications and Management Strategies: A Review](#), Sustainability, MDPI, 2025.
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- Wijesinghe, J., S.M. Botheju and N. R. Dayananda, [Coastal and Marine Pollution from Agricultural Activities – Fertilizers and Pesticides](#), In: Coastal and Marine Pollution: Source to Sink, Mitigation and Management, Wiley, 2025.
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- Weilgart, L., [The Impact of Ocean Noise Pollution on Fish and Invertebrates](#), Oceancare & Dalhousie University UNIVERSITY, 2018.
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Websites consulted

- [List of environmental organizations](#), Wikipedia.
- [Parc national de Port Cros](#) (in French).

Selection of articles published earlier on [hungerexplained](#) and related to this topic:

- [Green land grabbing : money-spinning operations, dispossessed communities, little impact on CO2 emissions](#), 2025.
- [Does ‘naming and shaming’ work? The case of US tuna industry](#), 2024.
- [Does aquaculture help make fisheries more sustainable?](#) 2024.
- [Fisheries: Can the world face a growing demand for fish while stocks are being depleted and environmental degradation accelerates?](#) 2022.
- [Protecting biodiversity: beautiful pictures concealing a reality made of violence and ineffectiveness](#), 2022.
- [Pervasive plastic \(Season 2\) : in the Mediterranean Sea and in our food](#), 2019.
- [Pervasive plastic : from food in plastic to plastic in food](#), 2018.
- [Seafood and tobacco blamed for being responsible for the high level of metal contamination of pregnant women in France](#), 2017.

Also read our article on our thematic pages on ‘[Fisheries](#)’, ‘[Water](#)’ and ‘[Methodological corner](#)’.