

# Whose Ocean? Exploring multidisciplinary perspectives towards ocean sustainability and implications for the un(der)represented

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## Abstract

The ocean's significance encompasses crucial ecosystem services including climate regulation, oxygen production and food supply. The ocean is also a major player in the global economy. However, human activities continue to harm the ocean, jeopardising these vital functions. In July 2022, the United Nations Ocean Conference adopted a political declaration entitled "Our ocean, our future, our responsibility," emphasising the need for sustainable ocean management and protection. However, an important initial question arises: who are the "Our"? or, rephrased "Whose ocean" is it? This study presents first answers to this question, based on interviews with ocean professionals from diverse backgrounds. Their responses showcased the complexity of the issue, with differing opinions on ocean "ownership" and "control". Despite the diversity of perspectives, a shared emphasis emerged: shifting from profit-driven decision-making to prioritising marine ecosystem health. Proposed approaches to build a sustainable relationship between people and the ocean include promoting ocean literacy and marine research and ensuring

global accountability. These voices offered valuable insights towards ocean sustainability, guiding future academic, educational and policy-making efforts.

## Keywords

Whose ocean, ocean sustainability, multidisciplinary perspectives, ocean governance, rights of nature

## Introduction

The ocean, as the lung of our planet, is responsible for about half of the oxygen produced on the planet (Grégoire et al. 2023). Additionally, the ocean regulates and buffers climate change by absorbing heat and storing carbon (Middelburg 2019). The many species, which call the ocean their “home”, create and significantly shape many of the ecosystem functions and services of the ocean. Thus, the ocean’s condition is critical to the planet’s health (Halpern et al. 2015). Humans interact with the ocean in multiple ways. For example, the ocean provides many tangible goods and/or products for humans, including food resources such as fish, unrenewable resources such as oil, gas and minerals and marine genetic resources. Additionally, it offers non-material benefits, for example, for science, education, recreation and spirituality. As such, the ocean plays a key role in the global economy (Costanza 1999; Nations 2021). Ironically, while human activities have often directly or indirectly negatively impacted the ocean, the ocean is now increasingly seen as the system where solutions for global negative impacts, such as climate change, can be found. The negative impacts in the ocean include pollution, habitat destruction, overfishing and climate change effects, such as ocean warming, acidification and deoxygenation (Bijma et al. 2013; van Sebille et al. 2015; IPCC 2019; Rousseau et al. 2019)(Fig. 1).

The 2022 United Nations Ocean Conference concluded with the adoption of an action-orientated Political Declaration entitled “Our Ocean, Our Future, Our Responsibility”. This highlighted that decisions on ocean use and protection need to be made to keep our ocean and our livelihood sustainable. To make such practical decisions, a first challenge is to understand and address the question: Who are the “Our” in that declaration? This often leads to follow-up questions regarding the responsibility assignment of the ocean and how we can build a sustainable relationship between people and the ocean.

From a legal perspective, the ocean is already subject to an intricate governance system. At its apex is the international treaty, known as the United Nations Convention on the Law of the Sea (UNCLOS). By defining the “rules of the road”, UNCLOS, in some cases supported by implementation by international bodies, such as the International Maritime Organisation (IMO) for shipping, provides a framework for managing and governing the ocean. Moreover, UNCLOS promotes cooperation amongst States to pave the way for the conservation and sustainable use of ocean resources. Additional treaties relevant to the ocean are: the Paris Climate Agreement, the global treaty to end plastic pollution and the

new BBNJ treaty (also commonly referred to as the “High Sea treaty”), which regulates the conservation and sustainable use of marine biological diversity beyond coastal State zones.

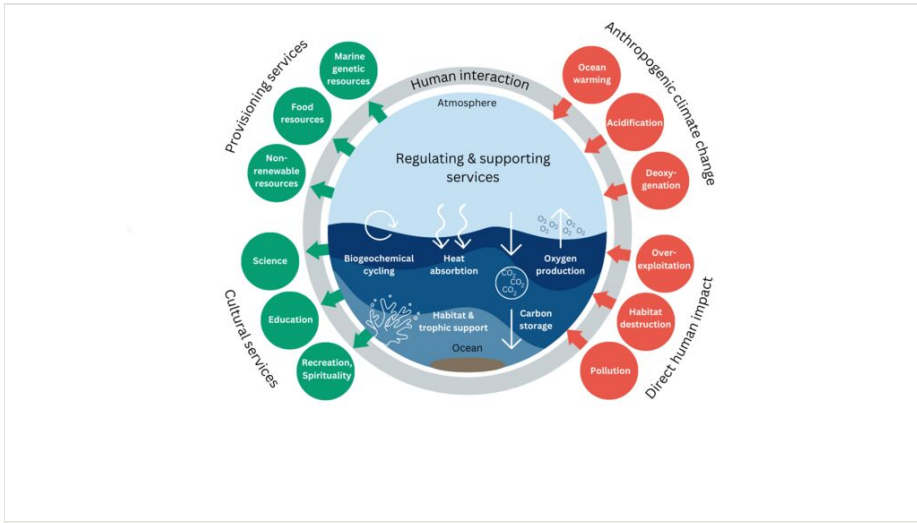


Figure 1. [doi](#)

Scheme illustrating the relationship between the ocean and humans: regulating, supporting, provisioning and cultural services of the ocean (green and blue backgrounds); as well as the threats the ocean is experiencing through humanity caused by anthropogenic climate change, overexploitation, habitat destruction and pollution (red background).

This existing legal system adds depth and complexity to the questions surrounding “whose ocean?” and highlights the importance of fostering discussions around ocean governance, ownership and control. When addressing these questions, it is crucial to ensure that a diverse range of voices are equally heard. For this study, we conducted interviews with a group of ocean professionals from various backgrounds to gain multidisciplinary perspectives, which can ultimately help shape future academic endeavours and education to support equitable and sustainable governance of the ocean.

## Methods

The responses were acquired during 20 interviews, of which 16 were one-on-one online interviews and four were written responses. The authors of this article compiled an extensive list of potential participants, adding names of individuals who would contribute original perspectives on the topic. Interviewees were then selected, based on their backgrounds, with the main goal of assembling a community of representative academic scholars and consultants covering diverse disciplines (the Faculties of Science, Geosciences, Humanities and Law at Utrecht University; Deltares; NIOZ; IFREMER;

Leeways Marine; and an artist in the Netherlands). Participants were asked three questions:

1. What does the question “whose ocean?” mean to you?
2. Who should control the ocean and how can we achieve this?
3. How can we develop the relationship between humans and the ocean in a sustainable way?

Each interview was recorded and transcribed. The interview responses were then sorted by question and those with similar themes were grouped together. In the case where participants proposed multiple approaches for question three, each point was tallied accordingly.

## Discussion

The participants’ diverse and, often, contradicting responses highlight the complexity of the overarching question of “whose ocean?”. The first question that asked participants what “whose ocean?” means to them generated a range of diverse answers (Fig. 2a), where four overarching ideas emerged. The most popular idea was that this was a misguided question since it implies ownership. A few participants believe that ownership, in this sense, is a very anthropogenic approach to the environment and the question “whose ocean?” implies possession of, and property rights to, the ocean. As one participant said:

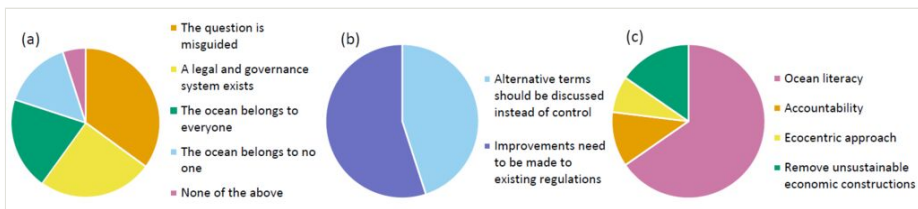


Figure 2. [doi](#)

Pie charts showing the answer distribution of the 20 interviewees for the three questions of: (a) What does “whose ocean?” mean to you? (b) Who should control the ocean and how can we achieve this? and (c) How can we develop the relationship between humans and the ocean in a sustainable way?

“The ‘whose’ question is a loaded question. It already presumes that the ocean is someone’s or something’s property. It presumes that it can be owned. I am not sure if this a constructive way to address this.” (Interview 20).

However, another participant who shared the same view further highlighted the complexity surrounding the concept of ownership, stressing that it cannot be easily dismissed or disregarded. They said:

“For me, the term or phrase “whose ocean” immediately implies proprietorship. So, the first thing, I think, that needs to be addressed is removing this concept of

ownership or steward. But this is a bigger issue than that, because contemporary relationships are mostly from a transactional point-of-view. That is, an owner or steward is someone or some entity that manages this transactional relationship. And these delegations or assignments are always made by those who hold the material and financial power.” (Interview 19).

The second most popular idea was that an intricate legal and governance system exists for the ocean. While the governance of Areas Within National Jurisdictions (AWNJ) may encounter frequent challenges, particularly regarding sustainability issues, larger complications in resource use and management arise for the regions that fall beyond AWNJ, since these areas are global commons open to all nations. One participant quoted:

“The law also has a more anthropocentric approach so we tend to believe that humans are the ones that own the ocean and its resources and therefore they are the ones that can control it. In a sense, we have actual power to influence the ocean, but we should consider that we are not the only ones on the planet.” (Interview 11).

The third most popular idea was that the ocean belongs to everyone since it supports our existence as humanity. One participant who shared this idea said:

“While the ocean provides environmental, ecological, economic, navigation and food functions, the dynamic property makes both the benefit and pollution shared by more than one country, even by the entire world.” (Interview 18).

In stark contrast, the fourth and least popular idea was that the ocean belongs to no one. Participants with this view believed that, just like any natural resource and nature in general, the ocean should not belong to anyone. In this view, it is seen as unfortunate that people try to claim the ocean for its benefits. As one participant stated:

“The ocean shouldn’t belong to anyone. It should be something we have responsibility and accountability for, but it should be cared for rather than claimed. The ocean shouldn’t be seen as a resource, but rather something we care for. We need to respect what allows us to live and think about our relation to it.” (Interview 2).

In summary, these four main ideas around “whose ocean?”— namely, the question itself is misguided, a legal system exists for the ocean, the ocean belongs to everyone and the ocean belongs to no one — highlight the diverse perspectives that exist regarding this topic. While the participants agree that the ocean provides important functions and is a shared benefit to humankind, it remains an open debate whose ocean it is and whether we should be answering this question at all.

A related, slightly more straightforward question is “who should control or be responsible for the ocean?”. This second question of our study still yielded diverse responses (Fig. 2b). While some participants argued that ocean “management” should be discussed instead of control, others argued that to achieve effective management, ocean control and

representation need to be discussed. When considering the management argument, participants believe that “management”, “governance” and “stewardship” were more important terms to investigate rather than “control”. Additional verbs to consider include “care”, “tend to”, “pay attention to” or even “fear”. However, the use of alternative verbs and terms create a more “affect”-based relationship instead of aligning with the technocratic hope for control. This could ultimately shift the perspective towards supporting life instead of human profit. One participant said:

“It seems to me that the question “who should control the ocean and how to achieve this?” is the wrong question to ask, as it continues to reify the ongoing *thingification* of oceans in the service of humans. The “who” in the question seems to imply a person, a State or a conglomeration of States. As a scholar in critical, social and environmental theory, I am trained to question such underlying assumptions.” (Interview 17).

In contrast, some participants explained that, under international law, the ocean is subject to extensive regulation. Participants feel that States have the capacity to achieve effective governance and management of the ocean, but many improvements can be made regarding how they act to achieve this. One participant highlighted that agreements aimed at governing the use of the ocean tend to prioritise the resource interests of States, leading to decision-making processes influenced by economic benefit biases. Thus, there is a need for ocean representation without this bias. As one participant stated:

“During the discussions about the Paris Agreement in 2015, all the countries had one voice, but there was no voice for the ocean. In terms of the negotiations, the ocean wasn’t represented, which is a big problem. This will be a problem when thinking about climate solutions, where the ocean will have to be included. Unfortunately, there is no State in the world that puts the ocean first.” (Interview 4).

Despite the above discrepancies surrounding whether we should be discussing ocean “control”, there was a common emphasis for removing the economic bias and transforming towards supporting marine ecosystem health by achieving sustainable ocean management. Most of the participants believe that, since the ocean is a shared resource, its management should be orientated towards the collective welfare. However, a balance needs to be made between human development and the protection of the environment, as reflected in the term “sustainable development”. This brings us one step closer to understanding the notion of “whose ocean?”.

If there is agreement that the ocean needs to be managed in a sustainable way, the next step is to discuss *how* we can achieve this and *who* needs to be ‘sitting at the table’ in terms of decision-making. This brought about the final question of our study. Participants suggested several ideas on how to promote ocean sustainability (Fig. 2c). These ideas encompassed enhancing ocean literacy, reducing inequality, strengthening accountability, taking an ecocentric approach and removing unsustainable economic constructions that merely favour profit. The first idea aims to change our perspective of the ocean through

ocean literacy and by raising awareness, whereas the others are more direct and target the constructions, approaches and people using the ocean. When considering the first direction, participants suggested that to achieve sustainable management of the ocean, we need to raise public awareness about the risks of certain practices and about the damage that has already been done. As one participant said:

“There is a big trend in oceans governance and policy that is growing, which is ocean literacy and raising ocean awareness. This is done through conferences and events which create platforms which make sure that different stakeholders are exchanging different perspectives, ideas, and opinions of the ocean. While reaching everybody isn't always possible, working towards ocean literacy and awareness will make sure that issues get discussed.” (Interviewee 5).

Additionally, participants suggested the importance of engagement with ocean users, including communities and stakeholders, to communicate the risks of certain activities with the hope of implementing additional protection measures. Participants also feel that engagement should target non-users to raise awareness of their impacts. Finally, the notion of “if we don't see it, we don't care” was raised several times during the interviews. This was substantiated by the fact that the most care and concern are given when effects are visible along coastlines. However, this care does not apply to the deep sea where damaging fishing and potential future mining practices are not visible. Moreover, there is often a discrepancy between the locations where the damaging human activity occurs and where the actual damage is found (the victim regions). For example, microplastics entering the ocean along the coastlines often drift and accumulate in deeper regions of the ocean (Van Sebille et al. 2015). Thus, initiatives should aim to bring all these effects to light and encourage more sustainable practices.

Participants who supported the second direction of action, which targets the constructions, approaches and people using the ocean, feel that it is crucial to understand the entities responsible for making use of the ocean. Participants also proposed the adoption of global accountability and feel that the economic constructions of our society need to be reassessed. Finally, a few participants believe that if the relationship between humans and the environment is to be developed, resource extraction aiming merely at profit accumulation should not exist. As one participant stated:

“I feel this can only be done by reshaping or removing the current economic construction where profit drives the demand for excess human and environmental exploitation. We can only begin to develop a new relationship if this approach of resource extraction, for the need of profit accumulation, is removed.” (Interview 19).

In addition to these above ideas, several participants believe that additional research is required to understand the greatest threats and challenges to the ocean. A broader and in-depth understanding of the ocean will ultimately aid in developing a sustainable relationship between humans and the ocean. One participant said:

“To achieve this balanced and healthy relationship, we need to first have a good understanding of the ocean system, how it has changed with human activities and the mechanisms of its feedback: buffering the changes and incapability of buffering further changes. This understanding should be comprehensive, taking into account the interactions between different biotic and abiotic components within the oceans, the interactions of the ocean with other systems like the atmosphere, land and freshwater systems, biodiversity change, climate change and feedbacks.” (Interview 18).

Ultimately, to achieve sustainable management of the ocean, we need to recognise and understand the complexity of the ocean, foresee future consequences in response to different human activities and management action, limit the harm to the ocean and take shared responsibility for letting the ocean heal.

## **Conclusion**

Here, we see how our three questions surrounding “whose ocean” foster a multitude of opinions. These multidisciplinary perspectives offer valuable insights into current opinions on “whose ocean”, “whose responsibility” and “how to act”. While different opinions exist, ocean sustainability, which serves as a shared goal amongst nearly all participants, received the most concern in their three answers. Moreover, transformation or removal of the current economic construction within society was highlighted as a crucial pathway towards achieving ocean sustainability. The voices from the interviews in this article pinpoint various directions for future academic research, educational endeavours and policy development relating to ocean sustainability.

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## Conflicts of interest

The authors have declared that no competing interests exist.

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