



# The Metaphor of Ocean “Health” Is Problematic; “The Ocean We Want” Is a Better Term

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## INTRODUCTION

The state of the ocean is increasingly described in terms of ocean “health.” The Implementation Plan for the United Nations Decade of Ocean Science for Sustainable Development describes the aim of the decade as achieving “a sustainable and healthy ocean” and refers to the ocean’s “health” throughout, including references to an overall “decline in ocean health” [Intergovernmental Oceanographic Commission (IOC), 2020], p. i, 6. Likewise, Sustainable Development Goal no. 14 aims “to achieve healthy and productive oceans” and “to improve ocean health” [United Nations General Assembly (UNGA), 2015, p. 23, 24]. In addition, scientific studies from all disciplines routinely use the same metaphor, including statements such as “the many benefits that society receives from a healthy ocean” (Duarte et al., 2020, p. 39), “the health of marine ecosystems” (Hagood, 2013, p. 75), and the “importance of ocean health” (Borja et al., 2020, p. 1).

However, we argue that the health metaphor (Suter, 1993; Jamieson, 1995) continues to be imprecise, ambiguous, and problematic. We suggest that the idea of ocean “health” misrepresents the Earth’s history of ever-changing and adapting ecosystems through time, wrongly suggests that ocean health is an apolitical and objective state and obscures how conditions in the ocean are irreversibly intertwined with human activities.

## A LONG HISTORY OF CHANGING OCEANS

The metaphor of ocean health fails to reflect the ever-changing nature of the ocean by suggesting that the marine environment “should” be or behave in a certain way. If oceans should be *this* way or *that* way, for whom or what ought they to be? During the history of the planet, ocean conditions have shifted continuously and profoundly, supporting different ecosystems, processes, and living organisms along the way. Changes in salinity, temperature, acidity, and oxygen and nutrient levels continually modify the aquatic environment in ways that favor some populations’ fitness over others. Eutrophication of the seas for instance generally supports cyanobacteria blooms and jellyfish while negatively impacting crustaceans, among other aquatic organisms (Ansari et al., 2010; Dorgham, 2014). Marine biologist Jeremy Jackson’s well-known vision of a “brave new ocean” describes an ecosystem dominated by “boom and bust cycles of toxic dinoflagellate blooms, jellyfish, and disease” (Jackson, 2008, p. 11458), but the depiction of a “diseased” sea comes from an anthropocentric perspective. People evaluate environmental conditions according to their own values (Smith, 1988). From the perspective of a natural history sensitive to the ocean itself and its many inhabitants, including bacteria and other simple organisms, oceanic states, and functions do not necessarily align nor follow predetermined routes. That is, how an ocean ought to be or behave

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is contingent upon whose interests are taken into account; depending on the perspective, the ocean could be perceived as both healthy and unhealthy at the same time.

## AN INCREASINGLY POLITICAL OCEAN

References to a "healthy" ocean encompasses a range of oceanic conditions that serve diverse human interests, including food provision and other extractive industries, coastal livelihoods, sense of place, biodiversity protection, and more (Halpern et al., 2012). What the desired conditions are that support these interests may not be as self-evident as the health metaphor suggests. The concept of oceanic "health" brings together potentially conflicting views and opinions that are agreed upon by (certain) people and communities. Different perspectives may not always be compatible or necessarily overlapping. For example, the UN's marine sustainable development goal (SDG 14) operationalizes competing interests that may serve different groups. Norway, for example, scores low on protected marine areas (indicator 14.5.1) but very high on resources for marine technology (indicator 14.A.1). The different indicators, in other words, do not necessarily depend upon each other or work equally toward the same outcome; allocating research funds for marine technology does not mean that this budget goes toward sustainable ocean use or sustainable technologies that serve protected areas. In a wider sense, while some actors argue that the ocean is an under-utilized resource representing a "final frontier" (Tabary, 2018), promoting so-called "blue growth" (Eikeset et al., 2018) or an expanded "blue economy" (Hotelling and Spinrad, 2021), others put sustainability first, warning that the ocean is approaching multiple tipping points and that a precautionary approach is needed to protect what remains of an already stressed and impoverished marine world that is "under threat like never before" [United Nations (UN) News, 2021]. Among these competing perspectives, opinions differ widely on whether the ocean is healthy, under-exploited, under threat, dying, or anything in between, all depending on who speaks.

Confusion around the health metaphor and what it communicates can cause problems for ocean governance and even hamper "effective actions to secure and maintain marine ecosystem functioning and services" (Franke et al., 2020, p. 559). While several attempts have been made to define what a "healthy" ocean could or should be (Halpern et al., 2012; Samhuri et al., 2012; Daigle et al., 2017), the perspectives adopted in these attempts can never fully represent the range of human and other interests. Moreover, when the health metaphor appears on its own, as it often does, it does not immediately reflect these in-depth definitions and the motivations they include, but instead gives the impression that the ocean can be "well" in a holistic sense, in the way a living organism can be healthy. Our critique of the "health" metaphor is thus not aimed at the scientific definitions of the term or efforts to clarify and even quantify the multi-dimensional uses of the ocean in recognition of diverse purposes and aims in determining ocean health (Mace, 2014; Eikeset et al., 2018). Our concern is with the term itself and how it frames and represents the

scientific research it is associated with. The importance of careful reflection around metaphorical terms used in scientific discourse, especially for environmental sciences, has been argued for earlier (cf. Carolan, 2006; Larson, 2011). In addition to misrepresenting the changing history of the ocean, the health metaphor can make the ocean seem apolitical, because it seems to reflect specific conditions found in the ocean itself, rather than interests and opinions. One consequence is that talking about a healthy sea may favor conversations about how to manage oceanic conditions themselves, through restoration and similar efforts, rather than addressing the human activities that impact the marine environment in the first place, which is likely to involve more overtly political and thereby also fraught discussions.

The idea of a healthy ocean resembles other concepts that seemingly suggest that ecological "limits" are present "out there," in nature, where they can be objectively identified and evaluated, such as the "planetary boundaries" framework (Rockström et al., 2009). Such frameworks can be useful for drawing attention to the potential dangers of anthropogenic impacts on ecological systems, but they are also rightly criticized for downplaying differences of opinion regarding what is acceptable and desirable when it comes to, for example, decisions on risk, time scales and reasons for limiting human environmental impacts (Biermann and Kim, 2020). Similarly, invoking ocean health as uncontested and rationally determined disregards competing visions of desired ocean states and diverts attention from the need to explicitly and transparently negotiate "the ocean we want" [Intergovernmental Oceanographic Commission (IOC), 2020].

## AN INEVITABLY HUMAN OCEAN

Our third objection to the metaphor of ocean health is that it is largely inspired by as well as reifies images of a "pristine" ocean existing sometime in the distant past, prior to human impact (cf. Katona, 2015, National Geographic Society: "Pristine Seas<sup>1</sup>"). In other words, the widespread use of the term ocean health during a period when anthropogenic impacts have increased the rates of change in the sea reinforces a nature/culture dichotomy between people and the ocean. Such a dichotomy is unhelpful for assessing the current condition of the ocean or as a guideline for what marine governance should aim for (cf. Mace, 2014). For instance, deferring to oceanic conditions unsullied by human impact presumes that we can account for the "shifting baseline syndrome," which shows that what we perceive as normal or natural about the environment (including the ocean) is an outcome of previous adaptations, ecological changes, and human impacts that have been made over generations (Pauly, 1995). It presumes that our historical records accurately depict oceans in a more desirable state and that these depictions of the oceans are innocent.

Moreover, an ocean without (or with fewer) humans invokes the oft-used perspective of nature in balance (Cuddington, 2001). Such labeling has the capacity to render other living organisms as passive victims or potential beneficiaries. Also, it relegates

<sup>1</sup>National Geographic Society. Pristine Seas. Available online at: <https://www.nationalgeographic.org/projects/pristine-seas/> (accessed December 17, 2021).

human impacts to unwanted disturbances, which is a poor way to prepare for a future where the conservation of certain marine functions and species may rely on active human governance and interventions, such as helping species move to new areas as a way to adapt to climate change. In a world of ever closer interactions between social and natural systems, the goal of ocean protection and conservation cannot be a return of marine ecosystems to a version of a "natural" state found sometime in the past or restoration of a "polluted" ocean to one that used to be more "healthy," but must rather be actively decided upon. We suggest that such decision-making would be better served by more transparently value-laden terms, describing ocean conditions as "good" and "bad," or "desired" and "undesired," and determining these in relation to why, when, what and for whom.

## WHO DECIDES WHAT OCEAN WE WANT?

The ocean health metaphor adopted by the UN and other governance bodies is hopefully a signal of increasing "good-will" toward the oceanic environment and a wish to protect it. It shows international recognition of the current state of the ocean as vulnerable and rapidly changing, but also deserving of protection, in its own right as well as for its importance to the well-being of people and societies around the world (Borja et al., 2020). In order to make progress along this path—and especially to tie that progress to related statements promising to "leave no one behind" [United Nations General Assembly (UNGA), 2015]—policy frameworks need to clearly recognize that oceanic conditions as well as anthropogenic impacts and interventions (or lack thereof) affect specific groups of people and communities in unique and situated ways, so that differences can be appreciated, and mitigating actions negotiated fairly and equitably.

To achieve such progress, we suggest that the widespread metaphor of ocean "health" is replaced with terminology that explicitly reflects and acknowledges that what a desirable ocean looks like depends on who you ask. Though we concur with marine scientists and policymakers who seek to integrate empirical and normative aspects in order to properly govern human actions that impact the seas (Franke et al., 2020),

we argue that using "health" to describe such benchmarks hinders rather than helps open dialogue about the ocean's instrumental, inherent, aesthetic, or life-giving properties. Much of this conversation, moreover, only accounts for certain human interests brought to these forums and does not consider other stakeholders that cannot or have not been allowed to participate (Tolochko and Vadrot, 2021). Alternative terms are already in use, such as "good environmental status" [European Commission (EC), 2017] or "the ocean we want" [Intergovernmental Oceanographic Commission (IOC), 2020], both of which signal a need for further definition—of what "good" means and who "we" are, for example. We render "the ocean we want" as especially useful because its need for definition, negotiation, and agreement is clearly visible, compared to the metaphor of ocean "health." Other options which are similarly straightforward include phrases like "desired ocean states," which also invokes interests rather than environmental conditions *per se*. By moving the conversation past health, discussions can be based more directly on particular aims and normative considerations regarding the value of different forms of marine life and ecosystems for specific groups of people as well as for humankind in general. We believe such a practice can be helpful for developing more adequate and inclusive ethical frameworks that extend beyond human-oriented values to nurture more equal and less hierarchical relationships between humans, aquatic organisms, and the oceans.

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