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## **We Already Know Everything We Need to Know to Save the Oceans**

**By:** Anna-Maria Hubert

**Note:** This post is a revised version of a presentation delivered by Professor Hubert on March 15, 2019 as a part of [UCalgary's Sustainability Speaker Series](#), which is an [Office of the Provost](#) initiative, led by the Academic Sustainability Advisory Committee in partnership with the [Office of Sustainability](#) to take action on UCalgary's [Institutional Sustainability Strategy](#). The event tackled issues of “Stewardship, Sustainability & Ethics” with the participation of moderator [Dr. Allen Habib](#), Assistant Professor in UCalgary's Department of Philosophy and panellist [Dr. Stephen Gardiner](#), Professor of Philosophy, Ben Rabinowitz Endowed Professor of Human Dimensions of the Environment at the University of Washington, for a solutions-focused discussion of ethical, moral and legal obligations to build a resilient and sustainable planet for present and future generations. Sections of this presentation on the science of ocean threats have been omitted in the interest of space.

We have gathered as a diverse group of scholars, students, and community members to discuss, in a unique community-based format, possible solutions to global issues of environmental sustainability. I will speak on oceans issues, including the nature and scope of problems being faced and law's measures being taken in response to degradation of the marine environment, and Professor Gardiner will address these issues in the context of climate change.

Due to major advances in science and technology, we now know more about the state of seas and oceans than ever before. The oceans face a long list of serious, perhaps irreversible, threats, including overfishing, loss of biodiversity, land-based pollution including plastic pollution, climate change, sea level rise, and ocean acidification. Facing the full brunt of the scientific evidence about the rapidly declining state of the marine environment can be confronting, and, inevitably, begs the question of where do we go from here? Why if we know so much are actions so seemingly feeble? What solutions are at our disposal to save the oceans? Whose role is it to call for and implement change in response?

These are just a few of the questions with which we will be grappling. And perhaps in anticipation of the fact that I, as a panelist, may be called upon to supply my own answers to these difficult questions, I have chosen to frame my initial comments in terms of the nexus (or lack thereof) between knowledge, expertise, and environmental action. Accordingly, my talk is entitled: “We already know everything we need to know to save the oceans”.

### **Between Reality and Utopia: The Role of Knowledge and Expertise in Advancing Sustainable Solutions**

As a threshold matter, it is useful to reflect on the question of what is the proper role of knowledge and expertise in identifying and promoting solutions for sustainability? And to what extent is it circumscribed?

A significant part of our job as academics involves producing new knowledge, which, hopefully, will contribute to the betterment of society and preservation of our natural world. If you are not generating and disseminating original scholarship, you probably are not fulfilling your role as university faculty. On the other hand, it is also important to consider the proper role and limits of knowledge and expertise in advancing solutions for sustainability. While we have a significant amount of knowledge and disciplinary expertise in the room that will surely come to bear on, and add value to, our conversation, the question of what “solutions” should society pursue to address environmental problems is not one that can simply be relegated to the expert realm.

Environmental solutions also represent commitments to particular norms, values and interests, and objectives. Though expertise may play an important role in the debate, environmental laws and policies need to be articulated and adjudicated through democratic processes if they are to be seen as legitimate and accountable. In other words, everyone in the room has a legitimate role, and arguably even the responsibility, to engage in questions of environmental protection and sustainability for themselves and within their communities.

Of course, no one would seriously question the importance of “knowing” to informing rational action. Environmental law and sustainable development require a firm commitment to a sound understanding of the physical environment and environmental problems as a basis for effective and legitimate environmental laws. Questions of environmental protection and sustainability are also informed by, and embedded in, a much larger body of knowledge representing a range of disciplinary perspectives from the social sciences and humanities that can help us understand the complex conditions under which decisions about the environment are being made, and the potential future consequences of those decisions.

As a result, academics play a prominent role in environmental decision-making processes – especially in light of our privileged position that affords us the time and freedom to study and develop, through our scholarship, various conceptions of the Good. In my field of international environmental law, for example, it is common practice to advance proposals for reforming environmental regimes and institutions through our writing. This exercise entails, in part, imaginative thinking about the future of international law for the protection and preservation of the environment. At the same time, this work requires acknowledgment of the “hard realities on the ground” – that is, the limits and trade-offs imposed by economic, social, and cultural life on what can be achieved in a particular moment in history. International environmental law scholarship therefore demands that we navigate between “Utopia and Reality” to develop solutions for sustainability (see [Francioni](#), “[Realism, Utopia and the Future of International Environmental Law](#)”).

### **The Difference between Knowing and Acting**

Thus far, I’ve described the importance of knowledge and expertise in informing environmental action. So, what do I mean when I suggest that we already know everything we need to know to save the oceans? What I mean to say is that, although knowledge and expertise is necessary, it is far from sufficient to ensure meaningful and legitimate environmental action. This notion can be further broken down into the following statements, which, as I will show, are supported by particular normative commitments in international environmental law and sustainable development.

1. *While we do not know everything, we know a lot, and certainly enough to do something*
2. *Not knowing everything should not be reason to postpone action where threats are serious or irreversible*

These first two statements go hand in hand, and point to a fallacy that we need clear and convincing evidence before we can act to adopt and implement environmental laws and measures. Though we don't know everything, we do know a lot about the declining state of the oceans, and certainly enough to know that more action is needed. In fact, the aspiration of perfect knowledge is a fool's errand when it comes to the environment. As [Professor Daniel Sarewitz points out in his paper, "How Science Makes Environmental Controversies Worse"](#), science and expert input can even escalate political gridlock surrounding environmental problems in particular circumstances. For example, he points out the risk that engaging in "technical debate – and the implicit promise that 'more research' will tell us what to do, vitiates the will to act."

The relationship between a lack of knowledge and environmental action is addressed in an important norm of international environmental law and sustainable development: the "precautionary principle" or "precautionary approach". Its orthodox formulation is expressed in Principle 15 of the [Rio Declaration on Environment and Development](#), which states:

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

It is clear that we have surpassed the threshold of "serious or irreversible" with respect to many ocean threats, and that we have more than a "plausible" indication of a risk of harm (for a recent interpretation of the precautionary principle in the international jurisprudence see [Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area \(Request for Advisory Opinion submitted to the Seabed Disputes Chamber\)](#)). While laws, regulations, and other measures are evolving, and new ones are being put in place, at present, these remain far from adequate to prevent severe and widespread damage to ocean ecosystems. While the Rio formulation of the precautionary principle permits environmental action under conditions of uncertainty, it does not compel such action, nor does it provide any guidance on what particular measures should be taken as a response. Moreover, though the precautionary principle is peppered throughout environmental treaties and soft-law instruments, it remains doubtful that the precautionary principle has yet reached the status of general international law. These are some of the harsh realities of our current laws to ensure the protection and preservation of the seas and oceans.

3. *Even if we knew everything, science and expert knowledge cannot tell us how to act, because addressing environmental problems is also a matter of negotiating politics, competing norms, values and interests, and navigating uncertainties about the future*

The idea that environmental problems and solutions are embedded in politics is elaborated in a large body of social science research. Against this backdrop, international environmental law

recognizes a right of the public to be involved in environmental decision-making. According to Principle 10 of the Rio Declaration:

Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available.

This principle has been elaborated in various international agreements, notably, the [Aarhus Convention](#) and the recently adopted [Escazú Agreement](#). Bringing about solutions for complex and uncertain problems of environmental sustainability entails a reiterative, inclusive, and often messy process. The increasing recognition of citizens' environmental rights, which are largely procedural in character, at the interface of human rights, international environmental law and sustainable development is a significant step forward towards a more fulsome and dynamic conversation about environmental protection and sustainable development within our societies.

Yet there are some challenges and limits in terms of what can be achieved through these environmental rights as currently conceived. For example:

It is important to remember that the right of the public to be informed and involved in environmental matters does not necessarily entail a duty on the part of citizens in this regard. To the contrary, (and much to the dismay of some scientists and experts), serious, possibly existential, environmental threats are far down the list of public concern. Citizen apathy, cynicism, depression, and denial may be some of the true bottlenecks to achieving progress on sustainable oceans. The response of “more science” does not induce action under these conditions. Something more is necessary to move society towards more sustainable outcomes for marine and coastal ecosystems.

Second, according to Principle 10, the right of public participation in environmental decision-making extends to “concerned citizens”. It is therefore limited in terms of who has a right to be informed and to have a say in matters related to environmental protection and sustainability. In particular, who speaks for the seas and oceans? How do we bring the voice of nature into such processes? While previously “utopian” within the context of international environmental law, which remains steadfastly anthropocentric in character, one emerging response is a [movement to grant “personhood” to environmental entities](#) such as rivers, wetlands and marine ecosystems. This may lead to more widespread changes in the law in which natural objects are granted legal standing and rights.

Another issue is how to meaningfully integrate the voices of future generations into current environmental decision-making frameworks with long-term implications. The tendency is to view intergenerational equity as an abstract problem of valuing the future in terms of imposing externalities and giving low discount rates. Increasingly, however, the divide between “present” and “future generations” is becoming uncomfortably close. Recently, [California senator Dianne Feinstein faced criticism](#) over her response to a group of children and teenagers asking her to

support the Green New Deal. In response to their demands that she listen to their views as “voters”, she questioned: “How old are you?” “I’m 16,” a young woman responded. “Well, you didn’t vote for me.” The starkness of this reply raises questions about accommodating long-term interests in short-term election cycles.

### **The Rights and Duties (?) of a Knowledge Society in Advancing a More Sustainable Future**

Unquestionably, there are vast possibilities in the pursuit and dissemination of knowledge about our global environment. Learning and the development of new ideas can open up major opportunities for change towards a more sustainable future. At the same time, the link between environmental knowledge and action is complex and tenuous. For this reason, it may be worth reflecting on, and more clearly articulating, the correlative duties that are implicated in being a “knowledge society”. To what extent should we more fully develop the idea that governments, corporations, and even individuals have an obligation to appropriately act in response to information about serious threats to the environment? To prevent irreversible, planetary scale damage to our atmosphere and oceans we need this information to take hold in our consciences – individually, collectively and through our institutions – to precipitate meaningful changes towards a more sustainable future. This may be increasingly challenging in a so-called Post-Truth society, in which we are constantly being bombarded with facts and alternate facts.

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