

THE ENVIRONMENTAL ETHICS AND POLICY BOOK

Philosophy, Ecology, Economics

THIRD EDITION

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27. Marine Environmental Ethics

Elliot Norse

... [A] number of lines of evidence show that our marine environment ethics are less advanced than those we have on land. Here are some examples.

On land, someone who dumped vast amounts of sewage on public lands would be arrested, but we routinely do the same into our streams and rivers, which empty into our estuaries, coastal waters, and oceans, as if the act of flushing made wastes go away, vanishing without a trace.

But in a growing list of places, phytoplankton, tiny drifting marine plant-like cells, are stimulated by the nutrients from sewage and have population explosions. Some kinds become so abundant that, when they die, their decomposition depletes vast areas of oxygen.

The largest of these "dead zones" where oxygen-breathing life on the sea floor disappears is an area the size of the state of New Jersey off the mouth of the Mississippi on the Louisiana continental shelf.

And more and more of these population explosions, called phytoplankton blooms, are blooms of toxic phytoplankton species, ones whose cells produce poisons that kill other marine wildlife and can sicken people as well.

I suspect that you have heard about *Pfiesteria piscicida*, the species that attacks fishes by the millions and the nervous systems of fishermen, a species whose increase has been linked to the overloading of estuaries with hog and chicken wastes from intensive livestock operations.

My guess is that states would act to clean up these massive sewage sources much faster if these harmful algal blooms were happening on land. We have a long tradition of using our waters as toilets, a tradition that springs from our underdeveloped marine ethics.

On land the vast majority of food humans take is from species that we breed for desired traits and for which we provide nutrients before we harvest them. In many cases we work hard to eliminate their parasites, competitors, and predators.

In the sea, the vast majority of food humans take is from wild species that we don't breed, feed, or protect. We do, however, delude ourselves by using the same term for this catch of marine wildlife: we call it "harvest."

On land, people have to be licensed to hunt for large animals. Indeed, licenses for killing some species on federal lands, such as bighorn sheep, can run thousands of dollars. This provides money for habitat improvement for these species.

But in the sea, people view killing wildlife as a right, not a privilege. The commercial and sport-fishing industries have succeeded in preventing licensing for the killing of wildlife in areas under federal jurisdiction. What we prohibit or strictly regulate on land, we allow in the sea. Clearly this comes from different values we put on life on land and in the sea.

Where governments once encouraged killing of "vermin" because they sometimes kill "good"

From *Values at Sea: Ethics for the Marine Environment*, ed. Dorinda G. Dallmeyer, University of Georgia Press, 2003.

species such as deer and livestock, the growing recognition that predators play crucial roles in their ecosystems and that they are especially vulnerable because of their inherent rarity and slow reproduction, has led to protection for most species of large predators, from wolves to mountain lions and bald eagles.

You have probably seen old photos of proud men with big rifles with a foot on the head of a grizzly or a tiger. Notice I said old because you don't see such photos being taken now on land. But in the sea, the large predators—sharks, big tunas, swordfish, and marlin—are still eagerly sought by commercial and sportfishers as food and trophies.

You can see recent photos of men with big rods with a foot on the head of a giant bluefin tuna or tiger shark. You don't see many mounted cougar heads in homes and restaurants anymore, but mounted sailfishes are common. That difference comes from our different ethics.

On land, the federal government's USDA Forest Service permits clear-cut logging only in certain places under certain conditions, and charges loggers for doing so. But in the sea, the Department of Commerce's National Marine Fisheries Service allows fishers to trawl or dredge for fishes, scallops, and shrimp, an activity very similar in its effects on structure-forming species on the sea floor.

They can do it virtually anywhere they wish, and they don't have to compensate the taxpayers; it's absolutely free. Although the United States has complete regulatory control over economic activities such as fishing between the three-mile limit of state waters and the 200-mile limit of the Exclusive Economic Zone, far less than one percent of these submerged federal lands are off limits to the under-sea equivalent of clear-cutting. Why is there such a marked difference?

Our National Parks and National Forests are the gems of the American landscape and the safest places we have for protecting our wealth of biological diversity. The closest analogue in the sea, our National Marine Sanctuaries, are far less numerous, cover a far smaller area, and are even more starved for funds.

In the 1998 federal budget request, the administration asked for 121 times more money for our National Parks and 235 times more money for our National Forests than for our National Marine

Sanctuaries. If, indeed, we are "putting our money where our mouth is," then the sea is being short-changed. That, in turn, comes from an environmental ethic that fails to consider the sea.

On land, the Endangered Species Act has protected a fraction of the thousands of species that we have put at high risk of extinction. America still has bald eagles, whooping cranes, gray wolves, and American alligators because of the Endangered Species Act.

But marine fishes, invertebrates, and plants have been given almost no such protection. No truly marine U.S. fish or invertebrate species has ever been listed under the Endangered Species Act, although a number, such as white and green abalone in California, are gravely endangered. We just assume that the sea is huge and invulnerable, and marine life can withstand whatever we throw at them.

Here's another. You probably know that there are now strict regulations that prevent people from introducing alien species into our country, lest we loose still another kudzu. Indeed, when you fly into the United States, you have to declare whether you have any plants, seeds, or even soil in your luggage; if you fail, you will be arrested and fined severely.

But ships routinely come from other countries to the United States with ballast tanks filled with millions of gallons of seawater containing vast numbers of adult and larval stages of marine organisms that are not native to our estuaries and coastal waters. They discharge this water when they enter port, introducing a huge inoculum of alien species. And this is entirely legal.

The result is a growing list of alien species in our ports, species that can wreak havoc with native marine species. In the state of Washington where I live, the European green crab arrived in 1998, after having established itself in San Francisco Bay in 1990. It is expected to devastate the oyster farming industry and other aquaculture operations.

One last one: over the last two decades, the young science of conservation biology has been making major contributions to resolving conservation fights on land.

In the Pacific northwest, experts on forest ecology, landscape ecology, ecosystem ecology, community dynamics, population demography, and

genetics all made major contributions to slowing the logging of the last ancient forests that was fast eliminating spotted owls and a whole host of other species.

Scientists working together across the usual disciplinary lines helped to resolve this situation. But I had a strong suspicion that there wasn't anything like a comparable effort being devoted to marine conservation biology.

So I looked at papers published in the leading scientific journal in this field, *Conservation Biology*, and found that terrestrial papers outnumber marine papers 13 to 1. The scientific community had not yet awakened to the opportunities for research in marine conservation biology. Its marine environmental ethic hasn't been well developed.

My point with all these cases is not to say that our land ethic is good. It is not nearly strong enough. But I am saying that society's prevailing marine environmental ethic is even weaker than its land ethic.

By many measures, we are destroying our nation's marine environment even faster than we are destroying our land, and have far fewer measures for protecting life in the sea.

How can we change this? Where lies the root of change? It all starts with our ethics. If we see the sea as an inexhaustible cornucopia, or as a toilet

with infinite assimilative capacity, we will continue on our current course.

One of the reasons why people hold these erroneous beliefs is that we barely started to examine the sea's vulnerability and resilience. To me, an obvious solution is to encourage the growth of a new science of marine conservation biology as a means of generating the information that will raise awareness of the finiteness and fragility of the sea among decision makers and the general public.

Ignorance is the worst enemy of marine conservation. Knowing is essential to the evolution of a viable marine environmental ethic. Perhaps the clearest and most powerful statement of this is from the Senegalese ecologist Baba Dioum, who said in 1968: "In the end we will conserve only what we love; we will love only what we understand; and we will understand only what we are taught."

The odds against saving the living sea might seem impossible to many people. But what's at stake is so great that I believe it is worth every bit of money and every erg of effort we can devote to generate the understanding necessary to establish a deeper, more enduring marine environmental ethic, one that calls on people to live as integral part[s] of a diverse, functioning biosphere instead of destroying it.

28. Integration or Reduction: Two Approaches to Environmental Values

Bryan G. Norton

Introduction: The Role of Environmental Ethicists in Policy Process

Environmental ethics has been dominated in its first twenty years by questions of axiology, as practitioners have mainly searched for a small set of coherent principles to guide environmental action. In axiological studies, a premium is placed on the systematization of moral intuitions, which is

achieved when all moral judgments are shown to be derivable from a few central principles. The goal of these studies is to propose and defend a set of first principles that is (1) *complete* in the sense that this small set of principles can generate a single correct answer for every moral quandary and (2) *jointly justifiable* in the sense that, once the principles are warranted, then every particular moral directive derived from the principles must also be warranted.

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