

[Commentary by Michael H. Glantz on 19 January 2012:

Shell oil put out an ad about an 2000-word essay contest. the title was "Do we need Nature?" it made me so angry that i decided to write an essay, and i am not a fan of such contests. needless to say. i did not win BUT i had to vent and my venting was more a response to the fact that the question had to even be asked in the first place! it got me to thinking that when videos come out with a capability to bring to the viewer smells surrounding the images on the screen, we won't need live animals in the zoo because kids can experience the sight, sounds and smells of an elephant, for example. what were these corporate people thinking? clearly people are not part of nature to them and nature is theirs to exploit as we wish. sadly this seems an unintended outgrowth of Brundtland's "our common future" and the Millennium Ecosystem Assessment "ecosystems goods and services for human well being" but nothing about "human goods and services for ecosystems well being."]

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Do We Need Nature?

Do we need nature? Paraphrasing William Shakespeare, is nature to be or not to be? That is the question. It seems simple and straightforward. But is it?

Who, for example, makes up the "we"? Does the "we" refer to peasant farmers whose livelihoods depend on the productivity of local soils or the availability of water and other natural resources that they must exploit to survive? Does it refer to corporations whose operations and success depend on the use of various elements of the natural environment? How might one interpret the meaning of "need"? Is it a need related to one's well being, or is it a desired need, but not a necessity?

And then there is "nature": is nature an object that exists for humankind to exploit, to dominate, to live in harmony with or to modify at will? If purposely modified, can it still be considered natural? Some people argue that humans are part of nature and whatever they do to nature becomes a part of nature.

Each of the words in this provocative question --- Do we need nature? --- generates its own set of interpretations, each of which can lead to different views about the degree to which societies need nature.

Anthropologists have categorized human interactions with the natural environment as follows: humans over nature, humans subordinate to nature, and humans in harmony with nature. The humans-over-nature attitude stems from a belief that nature exists to serve humankind; it is there to exploit to any desired extent. Humans-subordinate-to-nature represents a fatalistic belief that societies lack either the means to protect itself fully from

the vagaries of the nature environment. Whatever hand nature deals to a society, it has to learn to accept it. Humans-in-harmony-with-nature represents an ideal; societies exploit nature in a sustainable way, allowing nature to replenish itself. With respect to this view, societies have accepted that they were at the limits of exploitation of their natural environments. Examples of each of these categories are found somewhere on the globe today. It seems though that the dominant view at the onset of the 21st century is that of humans over nature.

The experience of the Aral Sea after the 1950s provides us with an example of the prevailing attitude of humans seeking to dominate nature. While some people argued that the sea was a resource-generating body of water in the midst of deserts, others saw it as a large unused pool of evaporating water. It was not being used to green the Karakum and Kyzylkum deserts of Central Asia. In the days of the Soviet Union, the natural environment that was left idle was put in a category similar to that of an idle worker: an enemy of the state.

In the 1950s Soviet leaders sought to put the water to work by diverting it from rivers into the dry but fertile desert sands. The water was seen as a hundred times more valuable when used to grow cotton as opposed to keeping alive certain commercially exploited fish populations and a thriving fishing industry. As a result of such a crude benefit-cost assessment, the sea and its deltas disappeared in the span of less than four decades: the fishing industry collapsed; human and ecological health conditions slowly deteriorated; life expectancy at birth dropped like a stone; and an old downstream culture, that of the Karakalpak, was brought to the verge of destruction because of premature deaths and increasing out-migration. Sadly, many of these adverse changes were foreseen in the 1920s by Russian geographers who warned new Soviet leaders about the fate of the region if they did not respect the sea as an object of nature deserving to be carefully exploited.

American folk singer Bob Dylan once captured a societal reality in his musical lyrics, when he wrote that “we live in a political world”. This observation was not new but has been acknowledged by Machiavellian in the 1500s. Much earlier (around 200 AD), Tertellian wrote that the growth in numbers and in affluence of human populations puts tremendous strain on available resources, to the detriment of the health of both society and the natural environment.

There have always been competing, if not diametrically opposed, views about the “proper” relationship between nature and its exploitation by society. Even in everyday commerce, it is said that “you don’t get what you deserve, you get what you negotiate”. Similarly, the fate of the natural world depend on the outcome of negotiations that go on day in and day out to resolve conflicting views about whether, when or how a society ought to interact with its natural environment.

Make no mistake about it; there will be winners and losers at least in the short term, as environmental conditions are changed because of human activities. In truth, some environmental changes will be societally useful, even benign, transformations of nature.

Others, however, will eventually prove to have been environmentally degrading if not disastrous.

Today, conditions exist somewhere on the globe that expose the negative forces of change for just about every existing environmental problem of concern: air pollution, acid rain, greenhouse gas emissions, stratospheric ozone depletion, deforestation, soil erosion, water quality degradation, water quantity diminution, lake-level decline, sea-level rise, siltation of reservoirs, salinization of irrigated soils, salt water intrusion, mangrove destruction, wetland loss, and so forth. These environmental changes are at different stages of development in various locations. This is the bad news: the involvement of humans in environmental degradation is obvious and everywhere.

There is some good news, however. If a government decides today, for example, to pursue policies that allow for tropical deforestation (or for the rapid expansion of irrigation into arid areas), it can find examples of locations elsewhere on the globe where such activities have already been pursued without having taken proper precautions with regard to the long-term consequences for sustainable use of the affected environment. Such examples should serve as a lesson about the negative second- as well as first-order effects of inappropriate land-use practices. Such examples, when collected, can be used to educate and warn about the foreseeable consequences of similar activities if appropriate precautions are not undertaken.

Most environmental problems in which humans become involved are of the creeping kind in the sense that they are incremental, low-grade, almost imperceptible changes, but are cumulative over time. Today, for example, soil erosion is not much worse than it was yesterday and tomorrow it will not likely be much worse than it is today. Yet, after some years have passed, those incremental but cumulative changes in soil conditions will have turned a manageable problem into a soil-erosion crisis.

For most creeping environmental problems there are few obvious identifiable thresholds of change that can be spotted well enough in advance to serve as early warning to policy and other decision makers. Thus, potential thresholds need to be identified qualitatively, based on a notion borrowed from the law --- foreseeability. Foreseeability refers to the likelihood of an event. For example, it is foreseeable that a planned irrigation facility that does not allow for proper drainage of the soils will lead to salinized soils, a loss of soil fertility and to the eventual abandonment of the land.

The dilemma facing humanity is having to make decisions about the degree to which societies can exploit nature, in the absence of perfect information about how that exploitation might ultimately negatively affect the environment in the future. Some decision makers are risk-averse. They only take actions that might, with a very low impact, impinge on the health of the natural environment. In essence they have chosen to forego some level of satisfaction in order to avoid the foreseeable degradation of nature. There are the risk takers They are willing to put the environment (and ultimately society) at risk as a result of their decisions. Some risk takers are also risk makers, in the sense that their decisions can create risks, not for themselves but for others to face. A statement

by the king in the animated movie “Shrek” captures the sentiment of the risk maker: “Some of you may die, but it is a sacrifice I am willing to take!”

It is clear that we need nature. It is the life support system for individuals as well as societies, for flora as well as fauna, for governments as well as corporations. The challenge to civilization is to identify pathways for societies to exploit nature in a way that does not render it useless or harmful to future generations. The truth is that several generations of humans are alive at any given time. For example, a 15-year old today is tomorrow’s policy maker. She or he can engage in discussions with people who are now 30 years old, or 45, or 60, or 75 or even 90! She or he can engage in decisions related to human-nature interactions that affect the future state of the natural environment. Now, at the outset of the 21st century, is the right time to hold an intergenerational discussion about the environment. Today’s leaders can ask the leaders of the future about the kind of world they want to inherit.

I have always kept in mind an image that I saw in the center of Vienna, Austria: a solid concrete wall in the midst of which, several feet off the ground, was a small sapling, the seed of which had opportunistically taken root in a hostile human-built environment. Since then, I have been drawn to look for such examples everywhere: grass growing in the cracks of pavements, on the tops of mosques in desert regions, and so forth. These realities caused me to realize that nature will survive long after people have perished from the Earth’s surface. It should be obvious that nature does not need us. However, we, individuals as well as civilizations, cannot survive without the natural world.



A lone flower survives in a rocky section of the Zerafshan Mountains in Uzbekistan



Grass seeds have taken root in concrete pavement in Samarkand, Uzbekistan

Seeds blown by desert winds have taken hold on the top of an Uzbek mosque

