



Demographic Change : Urbanization

The Earth We Created

Only a quarter of the Earth looks as it did before mankind. If we want to enjoy our future, says Erle Ellis, we should stop dreaming about the untouched wild and start valuing the Earth we have created.



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"If you want to value nature, you have to value it in the way we shaped it, not just the wild nature." (Photo: Erle C. Ellis)

Would the Earth be better off without us?

In my opinion, that is a meaningless question. Earth does not have opinions, people do. And this negativity about humans is a huge barrier to managing the biosphere in a way that provides the most benefits to humans and other species.

Humans have reshaped ecosystems, not destroyed them. Are you living in an uninhabitable area? Instead of valuing only the wild nature "out there," we need to value the domesticated nature right around us. This is now what most of nature is, and our focus needs to adjust to this and make the best of it.

The least productive areas like deserts become more productive if humans manage them, and the most productive areas, like rain forests, become less productive. We tend to push everything to the middle. My colleagues and I are calling this "global levelling".

What do you mean by domesticated nature?

About 75 percent of Earth's ice-free land and about 90 percent of its primary productivity have been directly modified by human activities; and the rest is influenced indirectly by anthropogenic climate change.

As a result, ecological patterns like biodiversity or the types of vegetation growing in a particular area are now largely shaped by human activity. Most of "nature" is now within human systems like economics, politics, culture, etc.

At this point in history, the shape of nature is really due to the shape of

human systems, not the other way around. If you want to value nature, you have to value it in the way we shaped it, not just the wild nature. We are living in a world that we created, and we should value it for that.

Can you give us some examples of parts of the biosphere that look pristine, but have been altered by humans?

A large part of Brazil's rainforests were under cultivation 600 years ago. Smoky Mountain National Park in the U.S. was mostly logged by the 1920s. If you go there today, the trees are huge! And there are countless examples of tropical forest regrowth that are very hard to discern from the pristine. Even experts have been fooled. Or look at Australian coastal forests. They are the result of fire control by colonists. These areas had few trees under aboriginal management, which involved frequent burning to increase success in hunting.

But human-changed systems have less biodiversity than natural habitats and are less productive. Isn't this a disadvantage?

There are a couple of answers to this. We definitely change the biodiversity. There is no doubt that native and wild species are going to go down in diversity when humans have more influence on the landscape. With respect to total species diversity, if you include the species that humans bring with them, like ornamental species and domesticated crops, then it's not necessarily true.

In fact, some urban areas are much richer in biodiversity than the landscape without humans. This is especially true in areas that are naturally not very productive, such as arid areas like Phoenix, Arizona. The native situation there is just a few species of desert plants and animals, and then humans come in there and bring with them irrigation and species from all over the world, and it is much more diverse in areas where humans dwell.



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The same is true for primary productivity, which is another good measure of how things are working ecologically. In the desert areas productivity goes up because of irrigation, humans manage the water systems to create higher productivity. They also fertilize heavily. So that increases the productivity in areas that have very low biodiversity. In areas with the highest productivity and biodiversity, like tropical forests, we reduce the biodiversity and productivity.

If we want to preserve species that are not adapted to human-altered ecosystems, and we want them to be wild, we must develop and sustain wilderness preserves. But that does not mean that the species living in

our domesticated nature are any less valuable or that our “human nature” need be any less diverse than wild nature.

How can we better use nature without destroying the environment?

By concentrating populations in cities it is possible to manage energy and pollution more efficiently - for the same reason New Yorkers use less resources and cause less pollution than other North Americans. There are plenty of eco-disasters caused by overcrowding in cities, as in some African cities today, but this can be avoided with planning, both urban and rural.

Farming, in general, is better than wild harvests when you must sustain large human populations. If you produce trees, fish, and other species using highly productive, efficient, and environmentally-sound management practices, you can harvest smaller areas and populations of these. Then wild trees, fish, and other species can recover in areas that can be released from production, as long as we make this a priority.

Do you think this is possible with a world population of more than six billion people that is still growing?

My short answer is yes, but it depends on how we manage this situation. Many things we can do are ecologically sustainable. On the other hand, with fossil fuels and external inputs, you can sustain almost any crazy thing for some time in some place. You could argue that our society right now is way overextended in this way; it is not sustainable without huge inputs of fossil fuel. You take the fossil fuel away, what happens? People cannot eat. We wouldn't have the nitrogen fertilizers. We wouldn't have transportation.

The real question is: is it desirable to sustain a particular way of living over the long term? Right now, conditions in Bangladesh are about as difficult as they can get for people. It doesn't really matter whether it is possible to sustain this situation; nobody wants to sustain that sort of thing.

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Being overpopulated and creating conditions that are environmentally degraded – those are undesirable ways of managing our environment. That is the reason to do things differently, not whether or not we are able to sustain such a condition over the long term.

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