

The Realities of Collapse

As background understanding, it is important to recognize that ecosystems, like economies, can and do collapse. An historical example may provide a useful lesson for us today.

1. Easter Island is located some 2,000 miles west of Chile and 2,000 miles east of Tahiti. It is one of the most remote places on earth.ⁱ

- Polynesian settlers arrived sometime before 900 CE. When they did, they found a forested island with flora and fauna capable of supporting a limited, but sustainable culture.
- The forest trees were an essential resource for the Easter Islanders, providing not only food, but wood for housing and for fishing boats, and habitat for a variety of edible bird and plant species.
- Archeological evidence suggests that the population of Easter Island peaked about 1500 at 10-15,000. The island could not sustain that high a population.
- Islanders harvested forest trees faster than they could be replaced. Because living souls depended on the trees to live, islanders could not find a way to reduce the harvest, and there was nothing to replace it with. The island was totally deforested; not a single tree was left.
- With the demise of the forest, no more seeds were available, so the forest could not be replanted. Edible bird and plant species that depended on the forest for habitat vanished. Houses could no longer be built, and islanders could build no more rafts or canoes. They could no longer fish productively, and they could no longer escape.
- Jacob Roggeveen became the first European to find Easter Island. When he arrived in 1722, he found a great mystery: a small population of utterly impoverished natives on an island barren of trees (to this day the forest has not regrown), but with many large standing stone figures.ⁱⁱ Obviously they were the work of a significant culture. But where was it? ⁱⁱⁱ
- It is horrific to contemplate the collapse of the Easter Island culture. Did social organization break down into chaos? Did they fight over the little remaining food? Did they kill and cannibalize each other? Or did they starve slowly, staring out to sea, wishing they could cross it to other islands where life was still possible?

2. Easter Island faced a situation that is not unlike the situation we face today on Earth. Both are isolated islands surrounded by cold, dark, uncrossable distances. On both, life depends on the resources contained on the island. On both islands, if the ecosystem collapses, there is no way to replace it, and it will mean the end of us. But both islands have ecosystems that will support happy, healthy life, if only we don't overtax it.

3. None can say whether humans can or will cause a collapse of the global ecosystem. Signs of stress abound, however. The humans of Easter Island waited until the palm trees were gone, and then it was too late. We need to make sure that we don't do the same thing.

ⁱ National Geographic Co. (2004). *Atlas of the world, 8th edition*. Washington, D.C.: National Geographic.

ⁱⁱ This photo shows one of the stone figures and, behind it, the now empty landscape of Easter Island. It was downloaded from http://en.wikipedia.org/wiki/Image:Kneeled_moai_Easter_Island.jpg, and is used by permission.



ⁱⁱⁱ The history of the Easter Island collapse is recounted in several sources. See *Easter Island*, Wikipedia, http://en.wikipedia.org/wiki/Easter_island. See also Diamond, Jared. (2005). *Collapse: How societies choose to fail or succeed*. New York: Viking Penguin Group. See also Nersessian, Roy. (2007) *Energy for the 21st Century*. Armonk, NY: M.E. Sharpe.