Chopping Down the Last Tree

Easter Island is a mere 64 square-mile speck of land (think 8 miles by 8 miles) rising from the South Pacific. It lies over 1,000 miles from the nearest inhabited island, making it one of the most remote inhabited places on Earth.

Experts speculate that Easter Island was once a tropical paradise, with lush forests, abundant food, native species of plants and animals, and fresh water. For centuries, the Rapa Nui people successfully lived on the island, balancing human needs with island resources. Descendants of Polynesians, the Rapa Nui eventually created a thriving civilization that swelled to over 15,000 people. They are most famous for their large stone statues, the Moai, that populate the island.

However, when Europeans reached Easter Island in the 1700s, they encountered a population that was a fraction of its earlier size. The land was largely deforested, the soil was eroded, resources were depleted, and native animals were virtually extinct.

Something tragic had befallen the island.

At some point, the island's natural resources could no longer support the large population. Forests were cut, and land was cleared for food and shelter.

When the last large tree was chopped down on Easter Island, the people lost the ability to travel across the ocean, and to fish in the deep waters off the coast. They were isolated, and imprisoned on a largely barren piece of rock. Resources diminished, the population descended into chaos. Wars erupted, thousands of lives were lost, and the starving population may have even engaged in cannibalism.

Easter Island's past should serve as a wakeup call for our world today.

In 2011, the world population reached 7 billion. In less than 3 decades, we are expected to add another 2 billion people.

Virtually every expert predicts future water shortages around the world. Surface waters are already overused, with many rivers dammed and diverted for irrigation and human consumption.

In many parts of the world, large underground aquifers supply fresh water for farming and human use. However, aquifers are often slow to

replenish, and they are being depleted from overuse.

The amount of food harvested from the ocean has been in decline since the 1990s. In addition, we treat the ocean like both a food pantry and a toilet, as chemical runoff, pollution, and trash make their way to the ocean's waters.

Around the world, forests are being cut down for fuel, farmland, and human settlement. Rain forests are nicknamed the "lungs of the world" because of their ability to both clean the air of pollution, and provide fresh oxygen to the atmosphere. Once slashed, the subsequent cleared land is prone to soil erosion, rendering it poor land for farming.

The era of cheap fuel may also be nearing an end. Affordable carbon-based energy not only fueled the industrial revolution, but it has lifted hundreds of millions of people out of abject poverty.

Chopping down the last large tree on Easter Island could be considered a symbolic tipping point in the history of the island. Tragically, the islanders' lives and their civilization would never be the same.

Likewise, the Earth is facing a similar precarious predicament. Like the islanders, we have nowhere else to go. The world population continues to grow. Fresh water is becoming scarcer. Vast forests are slashed and cleared. The oceans can no longer supply us with the amount of food we need to survive. The era of cheap energy is nearing an end.

At what point will human needs surpass the finite resources of our planet? Will the Earth reach its tipping point? Will we also chop down the symbolic "last tree" and descend into chaos like Easter Island?

We have one advantage over the Rapa Nui: we can learn from their calamitous experience and prepare for future shortages. Hopefully, it is not already too late.

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