

How We've Managed to Ignore Ecological Collapse

Paradise for Sale: A Parable of Nature Carl N. McDaniel and John M. Gowdy
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by Curtis Runyan

In 1976, *National Geographic* magazine declared that Nauru, a country barely six times the size of New York's Central Park, was the world's richest island. Today, this remote volcanic island in the middle of the Pacific is a wasteland. For the past century, the high-quality phosphate deposits that once covered it have been strip-mined and shipped, largely to Australia, for fertilizer. Four-fifths of the island is now a dry desert of limestone pinnacles. These ancient coral spires, which for thousands of years provided refuge for migratory birds and their deposits of phosphorus-rich guano, stand as a ghostly reminder of the lush tropical forests that once grew above them.

Before the 20th century, the fish from local reefs and the fruits and sap of native coconut and pandanus trees sustained a vibrant culture for more than 100 generations. The annual rainfall on the island fluctuated sharply, from levels twice as heavy as the average annual deluges in Brazilian rainforests to the levels found in the deserts of the southwest United States. Because the island was wholly dependent on rain for its fresh water, Nauru was subject to frequent droughts. These constraints forced the Nauruans to develop strict customs that kept their population below 1,000 to avoid shortages and famine. Today the narrow coastal strip around Nauru is home to more than 10,000 people, and virtually everything — water included — is imported.

In their book *Paradise for Sale*, Carl McDaniel and John Gowdy undertake a remarkable exhumation of the biological, psychological, and economic factors that landed the Nauruans in the straits they are in today. And what they find is not a simple tale of an ancient culture forcibly colonized and left poorly equipped to deal with an encroaching global economy, but a worldwide phenomenon of human disconnect from nature's warning signals of ecological excess. Like archeologists unearthing the answer to an ancient puzzle, McDaniel and Gowdy sift through the remnants of fallen cultures around the world to try to answer a simple, but essential question: what is driving us to live beyond Earth's limits despite the compounding ecological and social warning signs?

Mathis Wackernagel, author of *Our Ecological Footprint*, estimates that we are burning through so much

oil, clearing so many forests, washing away so much top-soil, and paving over so many natural systems that it would take an additional planet to keep us living sustainably.

Researchers are now compiling an extensive body of data tracking where we get our resources from and where they end up when we discard them. Several new indicators, such as the "rucksack" and the "footprint," have been developed to

further clarify just how large an effect individuals, communities, and nations have. According to Wackernagel the average U.S. citizen uses about 10 hectares — 25 football fields worth of land and water — to support his or her lifestyle. The average Indian requires less than one hectare.

Much less energy, however, has been devoted to charting why this drive to consume such huge amounts has occurred. Through a series of anthropological investigations, *Paradise for Sale* tackles this question head-on.

After Nauru received independence in 1968, phosphate sales brought in tens of millions of dollars each year, helping the smallest nation in the world accumulate perhaps the largest per capita fortune. Only one-third of the island had been mined under Australian control, and the people of Nauru chose to press forward with the lucrative extraction. With this wealth, the island was catapulted into the lifestyle of televisions, washing machines, toaster ovens, and automobiles.

These changes came with a large price tag, though. High rates of obesity, diabetes, and traffic accidents give Nauru the lowest life expectancy in the Pacific — while there is just one road, an 18 kilometer loop circling the island, every family owns at least one car. And, as was bound to happen, supplies of phosphate have dwindled. Mining will only be viable for another five to 10 years.

Threats to the island's future are not just ecological in nature. Financial examinations show that the government has grossly neglected and mismanaged the billion-dollar fund that was supposed to secure the nation's future for generations. Prospects look dim for the Nauruans, who have squandered away most of the wealth of resources available to them.

But this is not the end of the story for Nauru.

Unlike their distant neighbors in the Pacific on Rapa Nui — Easter Island — whose culture and beliefs led them to decimate its rich forests and wildlife and leave in their stead a trail of ghostly statues, the Nauruans lived well for thousands of years, despite droughts. Their cultural practices reinforced long-term survival: they produced sheets of copra from coconuts for times of famine, maintained a small population to live within the island's limits, and protected biodiversity to maintain the island's ecological resiliency.

McDaniel and Gowdy use the Nauruan tale, together with their observations of Mangaia, Tikopia, and several other islands and regions, as the basis for pulling together an important piece of the ecological puzzle: cultures with greater constraints in their environment — sometimes scant water, short growing seasons, poor soil, etc. — have often developed more sustainable civilizations than their well-endowed counterparts. This seems counterintuitive at first. But living on the ecological edge leaves little room for error: wash away too much topsoil in a high mountain region with a short growing season, and next year your family doesn't eat. "The lag time between environmental abuse and negative feedback must have been short," write McDaniel and Gowdy, which "... enabled these cultures to respond in timely fashion to feedback from their fragile ecosystems."

Meanwhile, cultures living in ecologically resilient regions in many cases have not fared so well. The extensive forests, rich soils, numerous species of sea and

land birds, and other biological riches on Rapa Nui provided an ecological cushion that allowed the islanders to insulate themselves from nature's feedback. Evidently, religious concerns over the construction of the giant statues for which the island is known took precedence over long-term ecological monitoring. Forest clearing, biological invasions, population growth, and other eco-logical strains progressed slowly, but steadily, over generations. Throughout an individual's lifetime, the changes would not seem drastic. But by the time the alarms had sounded — the forests were completely cleared, most native species were wiped out, and the population had crept up to nearly 10,000 — it was too late.

Rapa Nui happens to be one of the most remote areas ever inhabited, and so did not have available another significant loophole that can allow people living in even the most biologically impoverished regions to ignore ecological feedback: trade. For most nations, it is possible to “borrow” from neighbors, allowing compromised ecosystems a new lease on life, so to speak. To underscore the point. McDaniel and Gowdy revisit the saga of Europe: “Much of the last 1,000 years most Europeans were under-nourished, disease-ridden peasants” As late as the 20th century the average height and lifespan of a European was less than that of their ancestors thousands of years earlier. The European model was in serious decline until the discovery of the New World, they note. “By exporting their excess population and importing materials from the rest of the world,” write the authors, “Europeans temporarily evaded the limits of their ecosystems”

So what will it take to persuade people to pay attention to the warning signals — the rising toll of extinctions, climate change, widespread hunger and poverty, declining fisheries, and degraded land? *Paradise for Sale*, thankfully, offers no simple solutions. Instead the authors sketch out a sober and intricately detailed picture of the initial steps that are needed to reorient a world economy that disregards the Earth that sustains it. And they hold no punches in their critique of the Western-economic worldview that has entrenched itself around the globe: “Our world civilization and its global economy are based on beliefs incompatible with enduring habitation of the earth: that everything has been put on earth for our use, that resources not used to meet our needs are wasted and resources are unlimited, that rewards must be related to economic production, that people are exclusively selfish and acquisitive, that scarcity and inequality are natural conditions, and that the biosphere is a subset of the economy”

Using their carefully crafted case studies as a microcosm of a worldwide malaise, McDaniel and Gowdy plot a revolutionary — but feasible — new course for humanity, one aimed at living within the Earth's means.

- They outline strategies for reconfiguring our economic system along the principles of “strong sustainability” — using renewable resources at rates that allow regeneration, keeping waste flows at a level that can be assimilated, and extracting nonrenewable resources only at a rate that allows substitutes to be found.
- They emphasize the power of recognizing that, as pervasive as it is, the Western economic worldview is simply one way of seeing the world. Solutions to many of our ecological dilemmas may be found in the diversity

of human thought. For example, the authors note that “among the Indians of eastern Canada a craving for material objects is considered a disease.” Just as we aim to protect biodiversity to ensure ecological resiliency, cultural diversity must be preserved and equity issues made a priority.

- And they propose setting aside a third to a half of the Earth’s landmass, together with numerous aquatic habitats, to begin to halt biodiversity loss.

McDaniel and Gowdy acknowledge that it will not be easy: “Perhaps we need some catastrophe to set us firmly on the path,” they fear. But it doesn’t have to work that way. “The world’s cultures are in a tumultuous period because the old myths of economic growth and never-ending material progress are no longer believable, but the new stories have not yet been culturally enshrined,” the authors conclude. This exceptional book takes us a giant step closer to making these stories of a secure future a reality.

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