

# Equality Isn't Just About the Economy

## Our Planet's Massive Biodiversity Loss Demands Economic Equality Too

by **GREGORY M. MIKKELSON**

**SEVERAL DECADES AGO** natural scientists realized that humans are causing the first mass extinction since a meteor destroyed the dinosaurs and most other forms of life 65 million years ago. My closest brush with this unfolding catastrophe came in the summer of 1990 when I visited Monteverde, Costa Rica as part of a course on tropical ecosystems. The beautiful golden toad (*Bufo periglenes*) had inhabited the cloud forests of Monteverde for who-knows-how-long before being discovered in 1966. But none had been witnessed since May 15 the previous year. Tragically, no more of this once common species have turned up in the ensuing 20 years either, despite concerted efforts to find them. The International Union for the Conservation of Nature (IUCN) therefore now considers it extinct.

### How are humans driving other species extinct?

The IUCN lists 11 main categories of threat posed to particular species. They include energy production and mining, agriculture and aquaculture, and transportation and service corridors. But what lies behind these specific threats? A full answer would require more space than this article has. Here, I focus on a factor that had not been explored until recently: economic inequality. Beginning in the 1970s, social scientists noticed that the gap between the rich and the poor was turning into something more like a gash – both within countries and between different countries. For example, from 1973 to 2007 the standard index of income inequality increased by around 20 percent in Canada. Here and elsewhere, epidemiologists discovered that inequality itself – not just the

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number of people in poverty as measured by absolute wealth or income – contributes to a host of health and social problems. Might it also exacerbate the proximal causes of biodiversity loss?

The evidence points to an answer of “yes.” Among both countries across the world, and states across the US (the country for which the most data are available), those societies with a larger gap between rich and poor also have more species headed toward extinction. This correlation holds true even after controlling for the most likely confounding variables – the number of species a given place started with, the number of endemic species (those inhabiting only that place), and its human population size and per-capita gross domestic product (GDP) or income. Analysis of changes over time further reveals that countries suffering the greatest rises in inequality also end up with more threatened species – again, after controlling for the most likely confounders.

### **Connecting economic inequality and biodiversity loss**

What might underlie this connection between economic inequality and biodiversity loss? Part of the reason may be that economists have been flat wrong to assume that the environment is a luxury good. Larry Summers – economist, former president of Harvard University, and a member of the Clinton and

Obama administrations – expressed this dogma in his infamous leaked memo arguing for exportation of pollution to poor countries. By definition, the rich spend a greater proportion of their incomes on a “luxury good” than do the poor. But “willingness to pay” (WTP) studies consistently show that the poor are willing to pay a greater proportion of their incomes on biodiversity conservation than are the rich, whether it be conservation of a single shrimp species in their neighborhood or entire tropical forests half a world away. As one’s income increases, one’s WTP does increase in absolute (rather than proportional) terms, but at an ever-diminishing rate. This suggests that redistributing income from the rich to the poor would, in absolute terms, increase the WTP of the formerly poor more than it would decrease the WTP of the formerly rich. The result would be more money overall for biodiversity protection.

However, if the equality-biodiversity relationship works at all like the equality-human-health link, then social-level mechanisms will prove more important than individualistic ones like the one just sketched. People trust each other more, and public institutions function better, in more equal societies.

Social cooperation is required for effective conservation, just as it is for good health or education programs.

If rough economic equality not only counts as a



basic requirement of distributive justice, but also promotes such fundamental values as human health and biological diversity, then how do we achieve it? Richard Wilkinson and Kate Pickett advocate a shift from investor-controlled firms to worker cooperatives. The gap between the wages of top management vs. everyone else in co-ops tends to be orders of magnitude

smaller than in corporations. If co-ops dominated the economy, it would thus obviate much of the need for re-distribution through progressive taxation. Furthermore, such a change would be more permanent than progressive tax rates, which can be weakened upon a simple change of administration, or change of tune by a government already in power – both of which have occurred many times in recent decades.

Co-ops – once they exist – actually tend to out-compete the average corporation. The problem is that far fewer co-ops have been created, because workers have generally lacked the capital and/or know-how to form them. The capital constraint means that achieving a co-op-dominated economy will require shifting resources away from the stock market, and toward more public avenues of finance. This brings taxes – or more radically, public ownership of banks, if not the means of production in general – back into the picture. Still, a shift to co-ops would involve more than just an adjustment of tax rates. It would also substantially re-organize the way people live their work lives. Thus, Wilkinson and Pickett seem right that it would have more staying power than progressive taxation alone.

Though economic inequality and biodiversity loss might seem on the surface to be quite disparate phenomena, they have close conceptual connections, in addition to the empirical link cited above. Standard

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FOR FURTHER READING

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measures of species diversity take into account not just the number of species, but also the evenness of population size or biomass between different species. And, just as economic inequality has worsened in most countries recently, so also has "ecological inequality" been worsening globally for quite some time. The World Wildlife Fund estimates that on average, non-human vertebrate populations have declined by more than 30 percent since 1970. Meanwhile, human population size ballooned by more than 80 percent over the same period, and our commensals – e.g., cattle, wheat, and rats – also experienced massive increase. This indicates that the gap between "us" and "them" (most of the other 10 million species on Earth) has widened considerably.

The two kinds of inequality can also be considered from a common moral point of view. Just as excessive inequality between humans results from unjust distribution of economic resources, so also does excessive inequality between species result from unjust distribution of ecological resources. Finally, economic and ecological inequality may have analogous consequences. So far, the connection between economic equality and human health has been far better studied than possible connections between ecological equality and ecosystem health. But preliminary

results indicate that species evenness may play an important role in maintaining various aspects of ecosystem function. Most fully explored to date has been the contribution of species richness (the sheer number of species) to desirable ecosystem processes and properties like carbon fixation, retention of soil nutrients, and stability.

How, then, to achieve a better distribution among species? Efforts to promote biodiversity through preservation or restoration of natural habitats, control of pollution, and other such measures have proven inadequate so far. Nonetheless, they have had demonstrably positive effects. For example, protection of nesting areas helped the Asian crested ibis (*Nipponia nippon*) climb from "critically endangered" status in 1994 to being simply "endangered" in 2000. In North America, the peregrine falcon (*Falco peregrinus*) and bald eagle (*Haliaeetus leucocephalus*) owe their recovery in the late twentieth century largely to the banning of DDT.

For reasons outlined above, such direct efforts to stem, and then reverse, the disastrous fall in numbers of most non-human organisms and species will likely succeed more fully when we also reverse the disturbing recent trends toward greater economic inequality. ■

