Learning to protect biodiversity

Losing one million species will massively affect these support systems and will drive us to the edge of a social catastrophe.

By Leah Gerber July 10, 2019

Biodiversity can be personal. I should know: Fourteen years ago, a dolphin in the Gulf of California was the first creature to tell me about my eldest daughter.

As a marine scientist, I was in the Gulf with a group of U.S. and Mexican undergraduates, studying the behavior and demography sea lions to understand why some colonies were declining and others were increasing. Stopping for a swim on our long boat ride back from Isla Lobos, we were approached by an unusually friendly dolphin who would not leave me alone. The Mexican fisherman who was driving our boat teased me that I was pregnant.

I had no idea — but he (and the dolphin) turned out to be right. And I wondered after: how did he know about what that dolphin knew?

Pregnancy detection, of course, isn't an essential service provided by nature. But everything that supports civilization — from agriculture to the delivery of adequate supplies of fresh water to clean air to huge swathes of our economies — depends on biodiversity and the full functioning of ecosystems. We're all as close to nature as that fisherman, even if we live in a crowded city.

That's why it's so alarming that around one million species worldwide face extinction within the next decades, according to a recent United Nations assessment that I coauthored on the global state of biodiversity and ecosystem services. Losing one million species will massively disrupt these support systems and lead us to the edge of social catastrophe. That's terrible news, not just for nature, but for my daughter and all of us.

There is still plenty of time, and plenty of opportunity, for us humans to work together to solve the problem. Reversing the downward spiral of nature and achieving sustainability will require massive societal changes. Not just corporations and finance, but consumers, small businesses, national and local governments, NGOs, and communities all have key roles to play. Here are three big shifts we make in the next decade to make a planetary course correction:

First, those among us who can afford it must re-think and downshift our consumption patterns to tread more lightly. That includes steps like consuming less meat and dairy; conserving water; reducing our use of paper;

using a refillable water bottle; and recycling, borrowing or fixing our perfectly good stuff rather than buying new.

While global and national-level action is crucial to address the challenges to species and ecosystems, we also need individuals to act en masse as well if we are to save the planet. We need a push from below as well as from the top to make the transformations essential to forge a sustainable Earth.

Second, local governments and small businesses must also contribute to the solution. Land-use decisions are one of the biggest drivers of species loss — and in many countries, those decisions are made at the state and local levels. Many laws, regulations, and policies established to mitigate habitat loss also operate at a local scale. Local zoning laws affect whether development sprawls or is concentrated and whether hydropower will choke off a river flow or allow that river to flow relatively freely. We need to move swiftly toward valuing the preservation of agricultural lands, adopting taxation measures and investment strategies that reward preservation instead of despoliation, and manage private forests in ways that keep them healthy into the distant future.

Third, the private sector is finally responding to the idea that sustainability is actually good for the bottom line, instead of opposed to it. Increasing numbers of corporations are acting swiftly and at scale to tackle global challenges such as climate change, non-point pollution and land degradation—because they see getting ahead of these problems as in their best interests as well as the interests of their customers and local stakeholders.

But the private sector isn't paying the same attention to the global biodiversity crisis. Corporate activities continue to redesign many critical biodiversity habitats — from the Amazon to Canada's Boreal Forest to open-ocean fishing grounds — in ways that betray a lack of understanding about their and our dependence on these irreplaceable natural resources. The global scientific community needs to do a better job of bringing our best data and analysis to the world. But we need business and finance to respond to nature as much of it is now doing to climate change.

I'm lucky: I get to study nature up close, and I've seen many of its wonders first-hand. But all of us and our families rely on nature first-hand, even if we'll never have a dolphin foretell a future family addition. When you eat dinner, when you drink a glass of water, when you take a breath of air: that's nature. That's your support system. And if we don't act to protect the planet's species and habitats, we'll cut off that support from ourselves and our families in ways no technology can fix.