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It's time to get real about conservation

To protect endangered species from extinction, the ecological community must become more politically involved, argues **Aaron M. Ellison**.

How can scientists protect biodiversity? In the wake of August's Great Elephant Census, which revealed a precipitous decline in numbers throughout Africa, there were the usual calls from researchers for more and better data. Only if we know where and how many of each species there are, this argument goes, can we hope to conserve them. This is nonsense.

Better data will not save elephants, rhinos or any other species. An enormous number of individuals, academic institutions, local, state and national governments, and multinational and non-governmental organizations have been collecting, assimilating and organizing such data for decades, essentially fiddling while our biological heritage burns.

Of course, biodiversity data can be important for conservation, to suggest priorities and to draw attention to threatened and endangered species. But biodiversity data rarely drive conservation decision-making. Rather, in the vast majority of cases, they are used to bolster decisions made for other reasons. The decisions last week by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) to tighten trade in endangered species of sharks, parrots and pangolins shows this. Fascination, charisma and plush toys captured the imagination of the delegates, and journalism, political pressure and social-media campaigns pushed the decisions.

This week's Global Scientific Meeting in South Africa's Kruger National Park of the International Long-term Ecological Research network (ILTER) demonstrates the problem. With its long and enviable track record in integrating social dynamics into the study of ecological systems and engaging with policy- and decision-makers to develop conservation policies, ILTER is meeting in the lengthening shadows of faceless elephants, dehorned rhinos, vanishing gorillas and the many other threatened and endangered endemic species of a continent besieged by Al-Qaeda, Al-Shabaab, ISIS and Boko Haram. Many nations are embroiled in civil conflict and some are ruled by corrupt kleptocrats more interested in using the government purse to renovate their estates than to lift their populations out of poverty, much less to conserve their biodiversity or even adequately staff their 'paper parks'.

In this light, do we really need more scientific sessions on nitrogen cycling or drivers of biodiversity across scales? Sure, if the goal is simply to publish more abstruse papers and more data sets that will be read only by our friends and colleagues. But we should not delude ourselves that these sessions, or the data and scientific syntheses they yield, will help decision-makers find the energy and backbone to stop elephant poaching in Africa, clearcutting and burning in Indonesia, fracking and fouling of water supplies in North America or eating anything that walks with its back to the sky in China.

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Rather, if biodiversity really matters for the planet, and is essential for humanity's well-being, we need to get real about what it will take to conserve it for future generations. I suggest three crucial actions that scientists can take, beginning right now.

First, stop referring to anything that isn't human as a 'natural resource'. Language matters, and this language suggests that the existence of other species is predicated on the benefits they provide for us. Natural historians and systematists have long asserted that we need to 'put names to faces' before we can care about non-human species. But even though we have already described and named millions of species, the precipitous decline of worldwide biodiversity makes it abundantly clear that naming species isn't enough.

Second, acknowledge that better data rarely lead to 'better' decisions (or at least to those decisions we think we would make if we were in charge). No amount of data can overcome visceral negative responses to bats, spiders or snakes, or positive ones to pandas, pangolins or baby seals. Decisions about which species to save — and which to triage to extinction — are based on raw emotion, the views of many different stakeholders and myriad political calculations. As the CITES process has demonstrated, data can be marshalled to support conservation decisions with broad-based support from a range of parties. But such consensuses are increasingly hard to come by, the resulting CITES decisions still do not provide airtight protection, and as conflicts rage around the world and rapid economic growth continues to be prioritized over conservation in both developing and developed countries, biodiversity will continue to decline.

Third, more scientists must get actively involved in the political process. Calling, e-mailing and writing to political leaders is a small but necessary first step. Showing up for seemingly endless political meetings is a larger but necessary follow-up. If we're not in the room, our voices won't be heard. Volunteering for local, regional, national or international groups directly involved in conservation decisions is a bigger commitment. But if not us, who? And running for elected office would logically follow. If not now, when?

Scientists studying ozone depletion and climate change have shown that getting involved directly in the decision-making process can give scientists a place at the global table and a voice to help effect political change. Scientists who both study biodiversity and want to see other species persist and thrive must follow their example. ■

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