The discussion on improving regulatory approval for domestic resource development is really a key issue that needs elaboration. The current morass of regulations and environmental zealotism in the United States, in the eyes of investors, has created a psychological and economic image of the United States that is somewhat akin to that of the worst of the third-world nations. The 2009/2010 version of the report produced by the Fraser Institute, a leading free-market think-tank, cites the United States as becoming even less favorable to mining investment, and hence less attractive as a target for development. The introductory letter in the report carries the headline "California Ranks with Bolivia, Lags Behind Kyrgyzstan," and states: "The worst-performing state was California, which placed 63rd, ranking among the bottom 10 jurisdictions worldwide, alongside regimes such as Bolivia, Mongolia, and Guatemala." Fred McMahon, coordinator of the survey and the institute's vice president of International Policy Research, goes on to comment: "California is staring at bankruptcy yet the state's policies on mining are so confused, difficult, and uncertain that mining investment, which could create much-needed jobs, economic growth, and tax revenue, is being driven away."

Is it time to ask ourselves whether we are interested in the global environment or just that of our locality? By driving mining away from countries such as the United States, where it can be monitored and held to a reasonable standard of accountability, we are forcing it into areas of the world with few rules and little control over the practices employed.

Imposing an environmental tariff on materials from such countries, as some have proposed, does not appear to be a practical solution, because it will lead to still further job losses in the United States. More industries will move offshore to take advantage of lower costs and the higher availability of raw materials. The magnesium-casting industry is a good example of what happens when a single-country tariff, in this case a protective tariff, is levied.

With such movement go not only jobs and tax base but critical technology developed in the United States. Today, offshore production bases are saying "Don't worry about the shortages of critical raw materials in the West. Just send us your orders and your best technology and we will build them for you." What they don't mention is the loss of the high-paying jobs in areas such as the alternative energy industry, a key component in the current administration's recovery program. In the defense industry the risk is even greater, putting our ability to ensure our way of life at risk.

I believe it is time we stepped back and took a realistic look at what we want from the mining industry and what the economic impact of a crippled domestic mining industry will be. Only then will we be in a position to determine our economic and political future.

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Transforming conservation

As Alejandro Camacho, Holly Doremus, Jason S. McLachlan, and Ben A. Minteer point out in "Reassessing Conservation Goals in a Changing Climate" (*Issues*, Summer 2010), a challenge now is how to continue to save species, ecosystem services, and "wild" ecosystems under current and anticipated global warming. Business-as-usual conservation biology, based on setting aside tracts of land to preserve nature as it was found at some past point in time, will not meet its goals when the climatic rug is pulled out from under our preserves.

We agree that the challenge of restructuring conservation biology is daunting, but it is tractable. A committee to "develop . . . a broad policy framework under the auspices of the National Academy of Sciences," as Camacho advocates, is an essential step. Focusing such a committee's mandate on unifying the conservation targets of U.S. governmental agencies can effectively jump-start a new era in conserving nature.

It can also provide a global model

because (1) the United States is large and geographically diverse, providing test cases for many biomes; (2) different land-management agencies encompass a wide range of sometimes conflicting goals, but are under one national jurisdiction; (3) America has long valued nature and has been a leader in global conservation; and (4) copious historic and prehistoric data document the natural ecological variability of vast tracts of our continent at time scales that range from tens to thousands of years or longer.

It is no longer appropriate or feasible to set the benchmark for successful conservation as managing for single species or holding an ecosystem to a historical condition. We know from the past that the normal ecological response to climate change is for species to dramatically change geographic distributions and abundances and assemble into new communities. Some species thrive when environments change, others suffer. A more realistic and indeed ecologically more sound overall philosophy is to ensure that species can traverse the landscape as needed in order to track their climate space, and where that is not possible, to help species move using sound science.

This overall philosophy requires developing new standards for land managers—standards based on ecosystem properties rather than the presence of individual species. As an example, in most western American terrestrial ecosystems, the rank-order abundance of individuals within genera of small mammals did not change much during the past several hundred thousand years of dramatically fluctuating climate, but the species within those genera did. Thus, it may not be of much concern if one species replaces another in the same genus, but it may be of great concern if the genus disappears. Likewise, it is already possible to model, using biogeographic principles, what overall species richness in a given climatic and physiographic setting should be. With changed climates, some reserves should see an increase in the number of species, and others should show a loss. Deviations from such expectations would indicate the need for management action.

It may be inevitable that managed relocation be implemented in such cases, and also where it is clear that endangered species simply cannot survive under the climatic regime in their existing preserves. That is a risky business, which has the potential of turning what are now reasonably natural ecosystems into elaborate, human-managed gardens and zoos. That is, saving species could destroy the wild part of nature that many regard as its key value.

For that reason, we suggest that the new conservation mandate needs to incorporate the explicit recognition of two separate-but-equal kinds of nature reserves. One—species reserves—would have the primary goal of saving species. Receiving endangered species brought in through managed relocation would be an integral part of the management arsenal. Such reserves would be most logical in places that already have many human impacts. The other—wildland reserves—would have the main goal of mimicking the ecological processes (not necessarily with today's species) that prevail in times or places where humans are not the landscape architects. Managed relocation simply to save a species would be less desirable there. Prioritization of ecosystem services would be the focus of other government lands.

Whatever strategies eventually are adopted to make conservation biology more compatible with the future, it is essential to initiate action now, given the rapid rate and probable magnitudes of human-caused global climate change.

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Alejandro Camacho et al. make a welcome contribution to a discussion of the difficult decisions ahead in attempting to conserve biodiversity in the face of rapid global climate change.