

**Making Humans Part of the
Solution: A Reply to Willers**

With some trepidation, I feel compelled to respond to Willers' (*Con-*

ervation Biology 6:605–607) call for the removal of humans and human impact from wilderness and natural systems. My trepidation comes from my belief that the best policy is ultimately formulated as a result of having extremely diverse viewpoints represented. Willers has taken an extreme viewpoint on the role of humans in natural systems. For the most part I agree with his assertion that we can learn a lot about nature by observing natural systems, and I think I share what I perceive to be his deep love and respect for nature. I reply because I feel his attack on those who seek to manage natural resources pragmatically is over-generalized, potentially impractical, and potentially imperialistic. My response will deal with two of his implicit assumptions: that by removing human impact we preserve natural systems and that it is possible to manage a natural resource without the cooperation of local peoples.

First, Willers implies that human impacts make natural systems less natural, and by definition, human impacts degrade a relatively pristine location. While humans have existed as a species for an infinitesimally short period of time, we have undeniably done our share to influence the ecology of Earth. However, I find fault with Willers for his over-generalized assertion that conservation policy should *always* try to remove human impact. While I would agree that excessively destructive uses should be eliminated or minimized in pristine areas, sustainable uses may not only maintain diversity but may be crucial for the immediate survival of focal species. An example may illustrate this point.

I've been working in Khunjerab National Park, a large, high alpine national park located in Northeastern Pakistan. Khunjerab has no permanent inhabitants and is said to have remarkably dense populations of snow leopards. Snow leopards are said to rely heavily on the livestock

grazed in the park during the summer. In the fall, shepherds drive their herds out of the park to winter in lower-elevation villages. Some snow leopards descend to the villages to eat the livestock and, if caught, are killed by the residents. Few snow leopards are said to be killed in the park. I suggest that snow leopard densities may have increased from a long history of livestock grazing in this area. Clearly, livestock grazing has a myriad of impacts on a natural system. However, in this case grazing may be consistent with a policy designed to sustain snow leopards. Snow leopards are found scattered throughout Central Asia. The loss of each additional population probably reduces the chances of the long-term survival of the species. In general, I feel that Willers's assertion that relatively pristine areas should have no human impact needs critical questioning prior to recommendation or implementation.

Second, Willers was concerned about the future of the Greater Yellowstone Ecosystem because conservationists (see *Conservation Biology* 5:3) called for "a determination of the Ecosystem's fate by local residents" (Willers 1992:605). Whether we like it or not, people living in an area exert great influence on the ability of conservation biologists to manage a natural resource in that area. Residents can and do fight unappealing legislation through legal and sometimes illegal means. Laws may be challenged in court, or simply violated following enactment. While I personally may take a more authoritarian role when dealing with a conservation problem in a developed country like the United States (particularly when "big business" is involved), I feel that on an international level, specifically when dealing with less developed countries, successful conservation biology can not be divorced from development, lest we, as well-meaning

conservationists, become conservation imperialists.

Development may be defined and implemented in many ways, but the essence of its effect is to raise the standard of living for people living in relatively impoverished conditions. It is too easy for those living in posh conditions to dismiss the needs, wants, and desires of the majority of people on Earth. The wise management of natural resources may be a viable and sustainable route for development. Many less-developed communities rely on natural resources for their very existence, and may only be destroying them for a quick influx of cash.

Participatory development, a current buzzword in international development, is designed to involve local communities in their own development. If natural resources are particularly unique, then a local ecotourism industry may be developed, and both residents and global citizens may share the resource. Less unique resources may be managed in a way that helps both the residents and protects the "organic evolution" that Willers advocates.

I feel that humans should be viewed as part of the solution and not as part of the problem. Wise management of natural resources should assess and address both the role of humans on resources and the desires of those living closest to resources.

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The following poem was written after a conversation with Gordon Orians who told of crocodiles being imported to Brazil to provide leather for the fashion industry.