

What is the future of conservation?

Daniel F. Doak¹, Victoria J. Bakker², Bruce Evan Goldstein^{1,3}, and Benjamin Hale^{1,4}

¹ Environmental Studies Program, University of Colorado, Boulder, CO, 80309, USA

² Department of Ecology, Montana State University, Bozeman, MT, 59717, USA

³ Environmental Design Program, University of Colorado, Boulder, CO, 80309, USA

⁴ Philosophy Department, University of Colorado, Boulder, CO, 80309, USA

In recent years, some conservation biologists and conservation organizations have sought to refocus the field of conservation biology by de-emphasizing the goal of protecting nature for its own sake in favor of protecting the environment for its benefits to humans. This ‘new conservation science’ (NCS) has inspired debate among academics and conservationists and motivated fundamental changes in the world’s largest conservation groups. Despite claims that NCS approaches are supported by biological and social science, NCS has limited support from either. Rather, the shift in motivations and goals associated with NCS appear to arise largely from a belief system holding that the needs and wants of humans should be prioritized over any intrinsic or inherent rights and values of nature.

Shaking up the motives and practices of conservation

Throughout its history, and across the globe, environmental conservation has been motivated by a wide range of ethical, utilitarian, aesthetic, and economic concerns. However, a recent and much publicized campaign, originating within the conservation community, marginalizes nature’s inherent value in favor of a primarily human-centered conservation ethic. Spearheaded by prominent advocates, this viewpoint has been advanced in both popular and scholarly outlets (see [1–3]) and has received considerable news coverage (e.g., recent articles in *Time*, *Slate*, and *The New York Times*). The message – that the moral imperative of environmental conservation (henceforth, ‘conservation’) should be to maximize the welfare of humans (see [1,2,4,5]) – is increasingly popular among academics and policy makers and dovetails with tactical shifts in the mission statements of many conservation organizations (Table S1 in the supplementary material online) [6–8]. This movement seeks not a subtle shift in the methods of conservation, but a stark change in its fundamental goals and methods: ‘Instead of pursuing the protection of biodiversity for biodiversity’s sake, a new conservation should seek to enhance those natural systems that benefit the widest number of people’ [1].

Corresponding author: Doak, D.F. (daniel.doak@colorado.edu).

Keywords: conservation NGOs; conservation policy; mission statements; new conservation science.

0169-5347/\$ – see front matter

© 2013 Elsevier Ltd. All rights reserved. <http://dx.doi.org/10.1016/j.tree.2013.10.013>



Here we examine the claims and assumptions of those advocating for NCS, a term we use because it has been adopted by some of the leading advocates of this position [2]. This analysis is important because NCS proponents have asserted that most current and past conservation is poorly done, wrongly motivated, and scientifically unsupported. Given that this position is directly affecting conservation practices, both the claimed failures of past efforts and the promises concerning their alternatives warrant careful scrutiny.

Central premises of the NCS argument

NCS advocates begin by suggesting that there are many flaws in traditional approaches to conservation. (i) Conservation emphasizes protection of biodiversity without regard for human welfare, resulting in regular harm to disadvantaged peoples and impediments to business and development (see [1,2]). (ii) Conservation rests on the myth of a pristine nature and its core purpose is to conserve and restore this state, which in fact never existed: ‘We create parks that are no less human constructions than Disneyland’ [1]. (iii) Conservationists wrongly assume that nature is inherently fragile and will sustain irreparable damage from human activities: ‘Nature is so resilient that it can recover rapidly from even the most powerful human disturbances’ [1]. (iv) Conservation has failed to protect biodiversity. Although we have created many protected areas, extinctions and ecosystem degradation continue: ‘Protecting biodiversity for its own sake has failed’ [1]. (v) Conservation is also failing socially, with dwindling support from a mostly affluent, white minority: ‘Conservationists are losing the battle to protect nature because they are failing to connect with the hearts, anxieties, and minds of a large segment of the American public’ [9].

Given these perceived ills, NCS advocates call for the following remedies. (i) The primary objective of conservation should be to protect, restore, and enhance the services that nature provides to people: ‘The ultimate goal is better management of nature for human benefit’ (P. Kareiva, quoted in [10]). (ii) To succeed, conservationists need to ally with corporations and other significant economic actors: ‘21st century conservation tries to maximize biodiversity without compromising development goals’ [11]. (iii) Conservationists should increase their focus on urban areas and on landscapes and species most useful to humans, because human benefits should drive conservation efforts: ‘Forward-looking conservation protects natural habitats where people live and extract resources and works with corporations to find mixes of economic and

conservation activities that blend development with a concern for nature' [1].

What's wrong with these claims and remedies?

Although we focus here on the principal shortcomings in NCS's central claims and remedies, we also note that many specific examples and points of evidence offered to bolster NCS positions are poorly supported or misleading (see [12–17], and Tables S2 and S3 in the supplementary material online).

Human well-being is already one of the core features of conservation policy and planning

Conservation's concern for biodiversity has always been accompanied by concern for human well-being and ecosystem services; these human-centered goals form one pillar of a diverse mix of motivations and strategies dating back at least a century to Gifford Pinchot and his predecessors [7,18–20]. Harkening back to Pinchot (e.g., 'The first principle of conservation is development, the use of the natural resources now existing on this continent for the benefit of the people who live here' [18]), efforts to understand and protect ecosystem services have long been an important plank in the conservationist's platform. More quantitatively, most federal lands in the USA that are in some sense managed for conservation are primarily devoted to the generation of ecosystem services (Figure 1). Emphasis on human use of natural areas is also typical of other countries; in the EU and the Russian Federation, <2% of all protected forest areas receive the most restrictive status of no active intervention [21]. Consideration of human well-being in conservation decisions does not require a radical departure from current practices. The NCS position, however, restricts the focus of conservation to the advancement of human well-being, which it frequently

conflates with narrow definitions of economic development (but see [11]), and thereby marginalizes efforts to preserve diverse and natural ecosystems or to protect nature for esthetic or other non-economic benefits to humans.

Conservation already takes a realistic view of nature's purity and fragility

The NCS argument caricatures the views of conservationists about pristine nature, while making the scientifically unsupportable claim that natural systems are almost infinitely resilient. There are still many relatively undisturbed areas across the globe [17] and although conservationists have long recognized that these areas are not pristine [22], they also recognize that such areas usually harbor far more biodiversity than do urban parks and plantations, a point NCS advocates only sometimes acknowledge [2]. Moreover, conservation scientists have focused at least as much on nature's resilience as its fragility (Table S2 in the supplemental material online). Although many environmental harms can indeed be ameliorated or reversed, others are virtually irreversible (e.g., extinction, climate change, mountaintop removal).

Past conservation has not been a failure

The NCS claim that contemporary conservation has failed is overly simplistic, if not directly misleading. First, it ignores how the creation of parks, innovative resource management regimens, and other conservation work has slowed the pace of biodiversity decline. Although it is difficult to quantify averted declines and extinctions, several recent studies have concluded that, if the conservation community had not been trying for decades to protect land and water resources and biodiversity, losses would have been far greater than they have been to date [23–26]. Second, it ignores the creation of legislation and public support for nature conservation that set the stage for arguments over conservation and development [27,28]; the need to weigh tradeoffs between conservation impacts and economic gains is a central legacy of the conservation movement.

NCS approaches are a dubious fix for conservation's shortcomings

NCS advocates argue that the failure of past conservation efforts to halt biodiversity decline and resource degradation supports a shift toward markedly more human-centered approaches to conservation. However, there is little basis for the assertion that a more narrow, anthropocentric conservation strategy would deliver better results, especially given the track record of poor management of natural resources in the past, including management of the parts of nature we economically value the most [29,30]. In addition, the NCS assertion that focusing on ecosystem services will save biodiversity as well ('the fate of nature and that of humans are deeply intertwined...many of the activities that harm biodiversity also harm human well-being' [5]) has essentially no rigorous scientific support [31,32]. Finally, the claim that NCS will be more effective than contemporary conservation relies on altering the primary goal of conservation from saving species and ecosystems to that of saving only those components of nature that

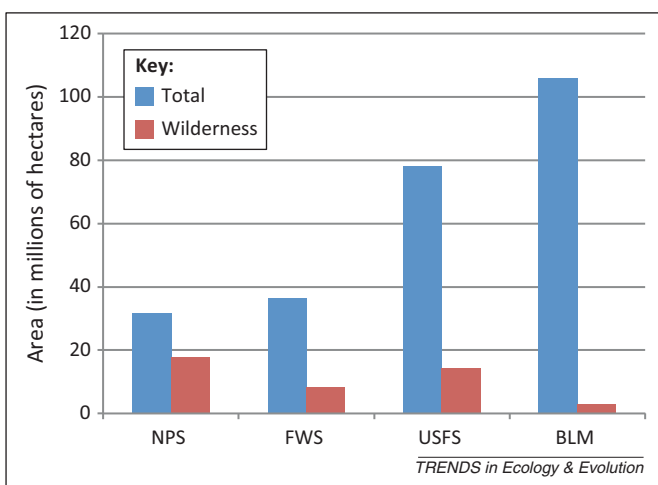


Figure 1. The areas of major US federal land holdings with some mandated conservation role, illustrating that generation of services for humans is already emphasized far more than biodiversity protection. Lands are arranged from those most devoted to biodiversity conservation (as well as tourism), under the jurisdiction of the National Park Service (NPS), to those least devoted to biodiversity and most to resource extraction and other human uses, under the Bureau of Land Management (BLM). In between are lands managed by the Fish and Wildlife Service (FWS) and the US Forest Service (USFS). Red bars show the acreage in designated wilderness areas, which account for 17% of all these lands. Wilderness is primarily managed for the protection of nature for its own sake, but also has considerable tourism value.

Download English Version:

<https://daneshyari.com/en/article/142591>

Download Persian Version:

<https://daneshyari.com/article/142591>

[Daneshyari.com](https://daneshyari.com)