

## Social Science Integration in US Wildlife Management

Manfredo and colleagues (2019) recently shared their viewpoint that there is a “philosophy in wildlife management that embraces science while simultaneously invalidating social science as a legitimate form thereof.” Contrary to this opinion, however, one only has to look into history and at current work being done to see that there has been and currently still is an active embracement and incorporation of social science in wildlife management. With a review of published literature, much can be found that describes this integration in research, debates, and empirical review (e.g., NRC 1970, Loker and Decker 1994, Sullivan 2019).

On the national level, US wildlife management, while not devoid of controversy, has long integrated social sciences into decision-making in varying capacities (NRC 1970, Riecken 1971, Raik et al. 2003). State wildlife management has followed a similar path, not because of what science dictated, but in response to the societal wildlife management goals of sustaining food, recreation and profit (NRC 1970, Bolen and Robinson 1999, Williamson 1998). Many state and city decision-makers continue to integrate wildlife management knowledge into policies in support of their communities.

Various nongovernmental organizations also have a long history of working in partnership with local communities, governments and land owners to successfully integrate wildlife management strategies with the local and regional social and economic structures (Princen and Finger 1994).

Rather than “rely on biology alone,” Manfredo and colleagues (2019) recommend that agencies allow social science to help in asking and answering questions regarding how the agencies envision their futures, how they can adapt to the changing social environment and how they can encourage stakeholders to participate in decision-making opportunities. These activities have already been occurring for some

time and are still occurring. There are, of course, wildlife management decisions made primarily for biological reasons (e.g., improving genetic diversity or population recovery); however, these cases are focused on biological and ecological outcomes and have to rely on biological information.

In higher education, the integration of social science into wildlife management has been previously discussed and is already in many higher education programs (Schoenfeld 1970, Peek 1989, Swedlow 2012). Indeed, my own field of work, conservation biology, was one such response to the need for a greater integration of social science with environmental management and is integrated into environmental management education in many higher educational institutions.

US wildlife management does not invalidate social science as a legitimate form. Rather, for decades, it has been discussed, researched, and incorporated into many activities and decisions. Rather than social science being “need[ed] now, even more in the past,” human society needs this integration to work better in multiple directions such that leaders, decision-makers, planners, physical and social scientists, educators, natural resource managers, and others better communicate and work together so that wildlife management decisions can be made and sustained in a healthy capacity now and for multiple future generations.

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doi:10.1093/biosci/biaa053

## Looking Forward, Not Backward in Considering the Needs for Social Science in Wildlife Management

Fish and wildlife management relies heavily on biological information in decision-making, which is inadequate for dealing with so many conservation issues that are rooted in competing social values. We argue that this situation begs for increased use of social science in wildlife management. Williams disagrees, arguing that social science has been well integrated into wildlife management for years and is adequately present in the university curricula that educates wildlife management professionals. We believe this argument reflects the same narrow view of social science we describe in our original article and fails to consider the full range of what the

diversity of social science disciplines can accomplish, how they can be more effectively employed, and why it is essential to do so.

If one were to survey the literature over the past several decades, it is true they would find a significant increase in scholarly activity that applies social science to analyses of wildlife management. Indeed, “despite calls for such inclusion dating back nearly half a century, there remains a deficit of social science in wildlife policy and practice” (Manfredo et al. 2019). With rare exception, agencies are dominated by professionals with biological training and a single human dimensions employee left to represent the social sciences. And in most cases, the studies conducted are political polling, not scientific studies that build understanding, explanation, and prediction of social phenomena.

As agencies lose traditional stakeholders in a changing society, they must strive to gain support from a broader public to deal with the challenges facing wildlife conservation. In an August 2019 meeting at Colorado State University, wildlife agency leaders and academics discussed the need for change in both academia and management organizations if they are

to remain relevant to conservation in the future. This requires moving beyond the utilitarian view expressed by Williams that wildlife is for “food, recreation, and profit” to one that recognizes wildlife’s critical contribution to human health and wellness, lifestyle and economy, and cultural values. Social science will be essential to inform such a paradigm shift and foster a generation of professionals that are more broadly trained, socially inclusive, and embracing of the diverse interests of the public.

Our most pressing issues—climate change, rapid loss of biodiversity, illegal wildlife trade, zoonotic spillover, eroding ecosystem services, etc.—all point to the need to affect human behavioral change and cultural practice. In contrast to Williams’s claim about social science representation in conservation, Bennett and colleagues (2017, p. 94) state “among many conservation scientists and practitioners, there remains a lack of awareness about the social sciences, including the different disciplines, objectives, methods and outputs” that may help us solve these challenges. If we are to meet the big challenges in conservation generally—and wildlife management specifically—we must call on social

science, in all its forms, now more than ever.

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