

UC San Diego

UC San Diego Previously Published Works

Title

Towards a more robust, inclusive and socially relevant ecology

Permalink

<https://escholarship.org/uc/item/1cd24124>

Journal

Ecological Solutions and Evidence, 5(1)

ISSN

2688-8319

Authors

Jones, Holly P

Cadotte, Marc W

Seo, Minhyuk

et al.

Publication Date

2024

DOI

10.1002/2688-8319.12309




Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed

EDITORIAL

Towards a more robust, inclusive and socially relevant ecology

Holly P. Jones^{1,2}  | Marc W. Cadotte³  | Minhyuk Seo⁴  | Philip Dooner⁴  |
Carolyn M. Kurle⁵ 

¹Department of Biological Sciences, Northern Illinois University, Illinois, DeKalb, USA

²Institute for the Study of the Environment, Sustainability, and Energy, Northern Illinois University, Illinois, DeKalb, USA

³Biological Sciences, University of Toronto, Toronto, Ontario, Canada

⁴British Ecological Society, Publications, London, UK

⁵Division of Biological Sciences, EBE Section, University of California San Diego, San Diego, California, USA

Correspondence

Holly P. Jones

Email: hjones@niu.edu

Keywords: activism, advocacy, diversity, ecology, equity, inclusive

In 1915, 2 years after the British Ecological Society (BES) was formed, ecologists in the United States followed suit and formed the Ecological Society of America (ESA). At the outset, there was unrest. One faction thought the Society should focus solely on research, while another thought activism to protect natural areas was important. In 1917, some in the activist wing formed the Committee on the Preservation of Natural Areas, but in 1946, the ESA disbanded the committee to focus solely on its research mission. The activists then launched the Ecologists' Union, an organization outside the ESA devoted to the protection of ecosystems, and in 1950, the Union was renamed The Nature Conservancy. And so it went that a giant in the field of nature protection was born out of a small number of activists who could not gain traction for their activism within their chosen professional home.

When our *Ecological Solutions and Evidence* (ESE) team brainstormed some big ideas in ecology we wanted to cover in this year's editorial, we discussed the real-world impacts achieved by the manuscripts published in ESE, ways in which our work could meaningfully engage communities to care about ecosystem well-being, and how we could increase stakeholder participation and promote other types of social engagement in solution-oriented ecological work. In the end, we realized that these topics are interconnected, and, a little over 100 years after the kerfuffle between pure-research and activist-minded scientists at ESA began, our team is still grappling with this question: What are the responsibilities of ecologists to society that extend beyond the merits of pure research?

The stark contrast between science and activism that birthed The Nature Conservancy is still ever-present but in some ways, barely a glimmer in ecology today. Some academic departments still do not recognize efforts to affect societal change as meritorious for tenure and promotion, and others implicitly or explicitly discourage faculty from engaging in those activities and may avoid hiring faculty who do (Djupe et al., 2017; Eliason, 2023; Friedline et al., 2023; Sdvizhkov et al., 2022; Uriarte et al., 2007). For example, just last year, two prominent Earth scientists were reprimanded by their academic organization (the American Geophysical Union, AGU) and one was subsequently fired from her US government job for their minute-long climate change protest at AGU's annual academic conference (Valero, 2023). While that may seem chilling to ecologists who feel we have a duty to speak out for change in the context of the twin biodiversity and climate crises, the landscape is changing for the better. Universities are increasingly encouraging and facilitating interaction with the general public to broaden education on ecological topics (Benneworth, 2012; Benneworth et al., 2008; McDowell, 2001), incorporating statements supporting this wider engagement into their missions (Beere et al., 2011; Torres-Harding et al., 2015; Velcoff & Ferrari, 2006), and scholars are increasingly focussed on how to best facilitate faculty social engagement on environmentally relevant issues (O'Meara & Jaeger, 2019; Rhoades, 2012; Surak & Pope, 2016). We thus contend that since the BES and ESA were formed, we have gone through Holling and Gunderson's adaptive cycle—wherein following the collapse of a system, the system is reorganized and

This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2024 The Authors. *Ecological Solutions and Evidence* published by John Wiley & Sons Ltd on behalf of British Ecological Society.



recognizing and integrating the knowledge and skills of Indigenous people into restoration science (Jones & Murphy, 2023). The presence and growing support for journals such as ESE—journals with mandates to publish management and conservation-relevant science—illustrate that many ecologists have moved beyond the realm of only producing science to actively applying their work to solving relevant global problems.

In many ways, academic journals have a parallel divide between what is published and the wider influence of those publications. Journals such as ESE seek to publish science that supports the management of species and ecosystems, with less concern about impact on author indices. For example, when we received our first impact factor this year (2.9), our editorial team was excited, but the conversation immediately turned to questions of the 'real' sway achieved by our published articles, meaning, did the articles published in ESE actually contribute to management and conservation solutions? To measure that, we polled authors who published in ESE between February 2022 and March 2023 to ask what the authors hoped their impact would be and what they perceived it actually was (Figure 1). Of the 17 lead authors who responded, 94% stated they hoped their research results would inform people beyond their academic peers including the public, policymakers, practitioners and local communities. Over half the authors (59%) said they wanted policymakers to use their results for better ecological outcomes, and over a third (35%) sought to change management practices of the species or ecosystems they studied.

In terms of what influence the work in ESE actually achieved, authors stated their work informed audiences beyond their academic peers (76%), policymakers using their research (35%), and said that management strategies of their study species or ecosystem changed as a result of their work (18%). Authors also stated that their ESE publications sparked conversations with managers, students and the public about their research topics, and inspired others to take similar management approaches. These are exactly the types of impacts we are excited about in that they extend beyond simply reporting the science and serve society by contributing meaningfully to better management of species and ecosystems in the face of extreme human pressures.

Despite the demonstration of meaningful output scientists can contribute beyond academia, there are legitimate concerns from science and society about scientist social engagement, which we define as activities beyond pure science along a spectrum that can include outreach and working with stakeholders for change, all the way up to true activism. Many scientists express uncertainty about how best to balance conducting science with promoting relevant social engagement. One way academics might overcome this is to use faculty governance to push for changing departmental, college- and university-level governing documents to value such work and/or ensure no repercussions for it. In terms of balancing science and social engagement, being honest and transparent about your point of view, values, and societal objectives to audiences and stakeholders can be a good first step. This can help researchers frame their research interests and questions transparently and ensure others understand their motivations. For example, we senior editors at ESE are all

motivated to pursue research that has direct applications for stemming biodiversity loss for ethical and pragmatic reasons. Recognizing that motivation as a driving force in our science does not preclude us from following the scientific method just as would any other scientist without those motivations, but it does improve stakeholder and public trust if we are transparent about our motivations from the start. Clearly stating project goals upfront is another important step. Often, there will be stated science goals and stated outreach/broader impacts goals; both should specifically declare the target audience for the research. It is critical that scientists engage all relevant stakeholders, and especially their target audience, early and often throughout their research. For example, too many scientists tout the importance of their work to ecosystem management without having talked to an ecosystem manager before, during or after their research. This can result in research that is disconnected from management needs and thus not applicable in the way the scientist had hoped. Although it can be difficult, ecologists who manage to successfully navigate the potentially tricky landscape and incorporate social engagement into their non-research activities find fulfillment and impact in their work.

Much of the shift to a more inclusive and socially responsive ecology is a product of necessity—as our climate warms at rates never before encountered and as we lose species faster than ever, who better than those studying these phenomena to raise the alarm to non-scientists? As anthropogenic pressures on Earth's social-ecological systems mount, many ecologists feel they no longer have the option of simply conducting excellent science. Instead, many are learning to work in multidisciplinary contexts to solve pressing environmental issues. They are training to effectively communicate to non-scientists and persuade the public. They are actively seeking out and/or building laboratories that pursue management-relevant science with immediate real-world applications. They are publishing in journals such as ESE that require the framing of research in a management context. We are excited to be part of this ongoing change in mindset; to meet this moment of Earth's dwindling resources and need for protection, we must raise our voices and advocate for a better future.

PEER REVIEW

The peer review history for this article is available at <https://www.webofscience.com/api/gateway/wos/peer-review/10.1002/2688-8319.12309>.

ORCID

Holly P. Jones  <https://orcid.org/0000-0002-5512-9958>

Marc W. Cadotte  <https://orcid.org/0000-0002-5816-7693>

Minhyuk Seo  <https://orcid.org/0000-0001-6211-7077>

Philip Dooner  <https://orcid.org/0000-0002-3710-874X>

Carolyn M. Kurlle  <https://orcid.org/0000-0003-1121-9924>

REFERENCES

- Beere, C. A., Votruba, J. C., & Wells, G. W. (2011). *Becoming an engaged campus: A practical guide for institutionalizing public engagement*. John Wiley & Sons.



- Benneworth, P. (2012). The relationship of regional engagement to universities' core purposes: Reflections from engagement efforts with socially excluded communities. In *Universities and regional development. A critical assessment of tensions and contradictions* (pp. 199–218). Routledge.
- Benneworth, P., Humphrey, L., Charles, D. R., & Hodgson, C. (2008). Excellence in community engagement by universities. Page excellence and diversity in higher education meanings, goals, and instruments. *21st Conference on Higher Education Research (CHER)*, 10–13 September.
- Djupe, P. A., Christie, L. D., O'Rourke, S. P., & Smith, E. S. (2017). Whose job is it anyway? The place of public engagement in the liberal arts college. *Journal of Higher Education Outreach and Engagement*, 21, 23–50.
- Eliason, M. J. (2023). Queer faculty in the academy: Is it getting better? *Journal of Homosexuality*, 29, 1–26.
- Friedline, T., Cross, F., Doyle, K., Lacombe-Duncan, A., & Schultz, K. (2023). Dismantling white supremacy and promoting antiracism in social work: Tensions, paradoxes, and a collective response. *Journal of the Society for Social Work and Research*, 14, 87–99.
- Holling, C. S., & Gunderson, L. H. (2002). Resilience and adaptive cycles. In C. S. Gunderson & C. S. Holling (Eds.), *Panarchy: Understanding transformations in human and natural systems* (pp. 25–62). Island Press.
- Jones, H. P., & Murphy, S. D. (2023). We asked and #GenerationRestoration delivered: The joint special feature between the British Ecological Society and the Society for Ecological Restoration. *Ecological Solutions and Evidence*, 4(4), e12268.
- McDowell, G. R. (2001). *Land-grant universities and extension into the 21st century: Renegotiating or abandoning a social contract*. ERIC.
- O'Meara, K., & Jaeger, A. J. (2019). Preparing future faculty for community engagement: Barriers, facilitators, models, and recommendations. In L. R. Sandmann & D. O. Jones (Eds.), *Building the field of higher education engagement* (pp. 111–131). Routledge.
- Rhoades, G. (2012). *Faculty engagement to enhance student attainment*. National Commission on Higher Education Attainment. <http://www.acenet.edu/news-room/Documents/Faculty-Engagement-to-EnhanceStudent-Attainment-Rhoades.pdf>
- Sdvizhkov, H., Van Zanen, K., Aravamudan, N., & Aurbach, E. L. (2022). A framework to understand and address barriers to community-engaged scholarship and public engagement in appointment, promotion, and tenure across higher education. *Journal of Higher Education Outreach and Engagement*, 26, 129–147.
- Surak, S., & Pope, A. (2016). Engaging the educators: Facilitating civic engagement through faculty development. *Journal of Higher Education Outreach and Engagement*, 20, 140–163.
- Torres-Harding, S. R., Diaz, E., Schamberger, A., & Carollo, O. (2015). Psychological sense of community and university mission as predictors of student social justice engagement. *Journal of Higher Education Outreach and Engagement*, 19, 89–112.
- Uriarte, M., Ewing, H. A., Eviner, V. T., & Weathers, K. C. (2007). Constructing a broader and more inclusive value system in science. *BioScience*, 57, 71–78.
- Valero, M. V. (2023). Outcry as scientists sanctioned for climate protest. *Nature*, 614, 604–605.
- Velcoff, J., & Ferrari, J. R. (2006). Perceptions of university mission statement by senior administrators: Relating to faculty engagement. *Christian Higher Education*, 5, 329–339.

