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EDITORIAL

Journal of Applied Ecology BRITISH ECOLOGICAL SOCIETY

How international journals can support ecology from the Global South

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Two years ago, we published an editorial demonstrating that submitted and published papers in *Journal of Applied Ecology* were heavily skewed towards English-speaking authors from the Global North, with nearly 80% of our submitted papers and more than 88% of our published papers coming from North America, Europe and Oceania. This contribution provoked a strong response on social media, and was followed by a number of studies further demonstrating that research outputs published in leading ecological and conservation journals remain primarily written by authors with affiliations in the Global North (Eichhorn et al., 2020; Hazlett et al., 2020; Melles et al., 2019). These biases are not new, but events this year have triggered further conversations within the scientific community about representation, representativeness and decolonisation as a much-needed process to improve diversity in disciplines such as applied ecology and conservation (see e.g. Antonelli, 2020; Telegraph, 2020). These discussions, as well as the informal interactions that followed the publication of our 2019 editorial, resonated with us and have motivated us to identify steps we could take as Senior Editors to address the uneven global distribution in *Journal of Applied Ecology's* authorship, readership and editorial processes.

With this editorial, we aim to discuss what decolonising science means, why decolonising applied ecology is important, and what we, as an international journal, can do to support this decolonisation process. We recognise that these issues are complex, go far beyond journals and transcend science itself. Our contribution does not claim to provide a comprehensive overview of the causes of Humanity's colonial past or its consequences for the practice of science; rather, it aims to provide relevant background information to support the decisions we have made about the way we operate as a journal. Our hope is that these changes will make scientists and research institutions from the Global North more aware of their role in shaping global inequalities in ecological science; support ecologists from the Global South; and promote the development of a more inclusive discipline of applied ecology.

1 | DECOLONISING APPLIED ECOLOGY

Decolonisation originally refers to the undoing of colonial rule over subordinate countries but the term has, over the years, taken on a wider meaning—which can be broadly summarised as the freeing of minds from colonial ideology and the dominance of discourses originating within influential groups. Dominance of discourses can occur at multiple levels because multiple spheres of influence coexist at different scales based, for example, on a region's, country's or province's wealth, ethnic origins or religion. Within academic research, decolonisation is about acknowledging that our assumptions about rationality and our approach to advancing general knowledge derive from a literature and a set of practices that developed at a particular time and in specific places (Griffiths, 2017; Raby, 2017; Radcliffe, 2017).

The way we practice ecology has been shaped predominantly by white European and North American values and ways of approaching problems. These origins have introduced biases in the questions asked, the language used to communicate ecological research, and how and where research is carried out, or with whom. These biases can result in significant blind spots, with relevant interest groups and important scientific problems being overlooked (Maas et al., 2019). The dominance of the Global North in ecological research has also shaped how we conceptualise nature, our relationship to it, and therefore how we think about studying it and designing global environmental policies (Ward, 2019).

One notable outcome of the inequalities existing between the Global North and Global South is that of 'helicopter research'

(sensu Minasny & Fiantis, 2018), whereby scientists from wealthier countries collect and analyse data from lower income countries with little or no involvement of local researchers. While funding for ecological research is highest in wealthy countries, the vast majority of the world's biodiversity—and contemporary threats—are found in the poorer tropical regions (see, e.g. Barlow et al., 2018), resulting in many researchers from the Global North carrying out research in the Global South (Hazlett et al., 2020). This, in itself, would not be a problem if the research was co-developed and collaborative. But, often, research priorities of those from the Global North are not aligned with the interests of these host countries, either in terms of the focus or the roles played by participants (Baker et al., 2019). Language can play a role in this misalignment, as researchers from the Global North and Global South often publish in different languages and different journals, with little crossover of information (see, e.g. Pitman et al., 2007). In addition, local scientists are often given limited opportunities to contribute intellectually to research conducted by scientists based far away. This can result in authorship invitations potentially becoming tokenistic, at the expense of true collaboration. These situations can promote mistrust between researchers from the Global North and Global South, as well as inadequate and/or inefficient research approaches and incorrect interpretations of scientific outputs. They can also precipitate resentment and even lead to factions among researchers with different areas of origin. Unequal research practices do not just reinforce existing inequalities; they also undermine the development of applied ecology in the regions and countries where it is most urgently needed.

Altogether, the colonial roots of the predominant scientific method, and the remaining differences in wealth and political influence between countries from the Global North and South, have led to systems of knowledge production that lack the diversity of perspectives needed to progress our global understanding of the natural world and therefore to address current global challenges successfully. This low level of recognition and integration of local knowledge and practices in applied ecology still likely hampers the discipline's ability to (a) generate a comprehensive evidence base to progress ecological theory; (b) design environmental solutions that deliver favourable outcomes for socio-ecological systems as a whole (Tengö et al., 2017; Wheeler et al., 2020); and (c) ensure that the results are disseminated locally, where they are most likely to make a difference (Toomey et al., 2019).

2 | FACILITATING CHANGE

Much has been written about how to boost diversity of both perspectives and people in science. Supporting capacity building in other countries; formally recognising the contributions of collaborators as equal partners in research; encouraging the development of research agendas based on the priorities of scientists outside the Global North; ensuring that data are stored on open access repositories; reflecting on how our own backgrounds shape the way we collect, interpret and describe data; and supporting long-term investment in research and development across the Global South are all ideas that have been put forward as possible ways to address the uneven global distribution of readership, submissions and publications in ecology (Eichhorn et al., 2020; Nuñez et al., 2019).

To encourage and hasten positive change, however, recommendations usually need to be translated into formal processes. This is where we believe publishing platforms such as *Journal of Applied Ecology* can help to make a difference. Peer-reviewed journals are fundamental to scientific knowledge production and exchange, and changes to the way they operate open important opportunities to address current power imbalances within the community. With this in mind, we have put together a list of actions and changes in the way we operate that we hope will support the emergence of a more diverse community of applied ecologists. We have structured this action plan around the communities that define our *modus operandi*, namely editors, reviewers, authors and readers. We welcome feedback on all these issues, and will set up a form, accessible via the journal's website (www.journalofappliedecology.org) that will be open throughout 2021. We will synthesise and share the feedback in 2022.

2.1 | Editors

The *Journal's* Senior Editors have been appointed through open recruitment for a long time, but appointment of Associate Editors has historically been by invitation only. Recognising that editorial board experience is usually a requirement for senior positions, in 2016 we conducted an open recruitment call for Associate Editors to offer a more equitable route onto our board. The success of this led to a wider roll out of open recruitment for Associate Editors across the British Ecological Society journals, which now takes place every 3 years. The open calls have allowed us to move beyond 'appointing who we know', resulting—in less than 5 years—in a 26% increase in geographic representation (from 23 countries in 2016 to 29 countries in 2020) and a 69% increase in the proportion of Associate Editors from the Global South (from 8.5% to 14.4%).

Although we are seeing some improvement in these figures, the proportion of editors from the Global South remains low. We have therefore decided to make changes to our Associate Editor Mentoring Opportunity, a scheme that provides a unique chance for early career researchers to access important editorial experience. The success of our mentoring scheme means that we now receive applications from far more people than the number of opportunities we can offer. Therefore, from 2021, this program will only recruit applicants based in the Global South, hopefully helping researchers from this part of the world to develop their research agenda by engaging with international networks. Researchers from the Global South with temporary research positions in the Global North will still

be eligible. Mentees will continue to be encouraged to apply to our open calls for Associate Editors and will continue to have priority for recruitment.

2.2 | Reviewers

Within *Journal of Applied Ecology*, reviewers are selected and invited by the Associate Editors. Because of this, the increase in editorial diversity outlined above has contributed to a diversification of our reviewer pool. When we compare 2012 (i.e. before the introduction of our open calls and mentoring scheme) and 2019, we can indeed see: a 37% increase in the number of countries from which reviewers were invited (from 43 to 59); a 25% increase in the number of countries from which we received completed reviews (from 36 to 45); and a 64% increase in the number of Global South reviewers invited to review for *Journal of Applied Ecology* (from 172 to 283).

Interestingly, our portfolio of contributions has also widened over the past few years with, for example, the introduction of our Practitioners' Perspective and Policy Direction articles. These contributions can encourage dialogue with and between poorly represented groups, and discuss issues relating to differences in perspectives and challenges associated, for example, with the integration of traditional and indigenous knowledge. Welcoming these contributions can help us reach out to different reviewers and connect with new communities. It also creates wider familiarity with the *Journal* and its expectations, helping to broaden the constituency of potential contributors.

The dominance of the English language in science is unequivocally benefitting people from the Global North (see, e.g. Ramírez-Castañeda, 2020, and references therein). Reviewers' comments on grammar, syntaxes and spelling are never a cause for rejection in *Journal of Applied Ecology*, but can cause unnecessary tension and stress to authors. To start addressing this issue, we have revised our guidelines to reviewers to make it clear that (a) comments to the authors should focus on the science or content of the article; (b) wording within the review comments that asks for native English speakers to revise the manuscript should be avoided; and (c) any concerns about the writing should be supported by examples, and raised by stating that the article needs further work to improve the language and clarity. We will regularly communicate these guidelines to our editorial board, encouraging them to inform the Senior Editors when review comments do not follow these guidelines.

2.3 | Authors

Like many journals in ecology and conservation, we regularly publish articles where the research is carried out in the Global South but the senior and/or lead author have affiliations in the Global North. To help avoid the potential negative outcomes associated with these situations, we want our lead and senior authors to consider carefully who should be a named author on the manuscript, providing a transparent rationale for decisions around the inclusion or exclusion of participants from the Global South. We already include an Authors' Contributions Statement in all articles but, from 2021, we will ask submitting authors to provide an authorship statement when the work is undertaken in another country or in a region with different ethnicity (e.g. on indigenous lands). There will be an option for this statement to appear in the printed version of their article, should the article be accepted. We believe this will help authors to pay increased attention to decisions they make about collaborative working, and to be more aware of the risks of helicopter research. We are also aware that our open data policies, while welcome from the perspective of scientific integrity, could disadvantage some researchers including those based in the Global South. Please do reach out to us if this applies to you: we are willing to discuss embargo times accordingly.

2.4 | Readers

Capacity building requires access to knowledge; access to knowledge is limited when scientific contributions are primarily written in English and sit behind paywalls. The number of authors choosing the gold Open Access option in our hybrid journal has been increasing over the past few years, but we recognise that subscription paywalls are a barrier to knowledge access while alternatives such as Open Access create barriers to scientific dissemination. These barriers are especially problematic for authors from the Global South, where institutional support for payment of open access fees and peer-reviewed journal subscription fees is often lacking. We are working towards reducing barriers whenever we can. Some of these barriers are reduced through participating in programs such as Research4life, which provides institutions in lower income countries with online access to academic and professional peer-reviewed content. In addition, all our subscription content becomes completely free to read 2 years after publication. Within the 2-year subscription window, all Practitioner's Perspectives articles are free to read. Within each issue, an Editor's Choice article is made free to read on a rolling basis. From 2021, we will be selecting a showcase of important new research that we feel needs to be accessed as soon as possible by all ecologists, irrespective of their location or affiliation. We will make it free to access in a new form of sample issue, to continue to improve access to barrier-free scientific reading.

We also know that language is a barrier to dissemination and dialogue between local scientific and practitioners' communities. We will continue to encourage authors to write abstracts in the local language where the research was undertaken and to provide the option of posting the entire manuscript in that language in the Supporting Information. We are also happy to publish

tweets, blogs and Facebook posts in any language to support the wider dissemination of the research we publish. Finally, although it goes beyond the publication time-scale, we would like to encourage authors to disseminate their research locally. These dissemination experiences can be shared via the Applied Ecologist Blog, which can be written in local languages https://appliedecologistsblog.com/.

3 | CONCLUSION

Our quantification of the dominance of the Global North in publishing (Nuñez et al., 2019) was alarming, but we believe that an ongoing commitment to doing things better can begin to address that situation. The actions we detail above are just the first steps—and we want to continue to develop our thinking. Specifically, we are aware that we are part of a privileged group and, consequently, might have overlooked other possible actions. We therefore welcome feedback and new ideas from the community to help us identify further actions that can ultimately support the diversification of the scientific landscape and the opening up of access to different perspectives and approaches.

In the wider context of decolonising applied ecology, we want to see more than the end of helicopter science and good statistics on geographic representation on editorial boards: our long-term vision is to help balance the geographic distribution of scientific recognition and opportunities, to promote the appreciation of all knowledge systems and to improve access to applied ecological research for all scientists and practitioners around the world. Although we will always strive to improve representation of the communities we serve, the composition of our editorial board and the pool of authors and the pool of reviewers will never be perfect: there will always be communities that are less represented than others; and it will never be as diverse as it could be, because each scientist and practitioner is simply unique. As we discussed these points during the writing of this editorial, we saw an analogy with the debate that is currently raging in applied ecology, namely the relative importance of composition versus functioning for decision-making in landscape management and conservation. We believe that journals always benefit from editorial boards and reviewers/authors pools being as diverse as possible. Although we can never reach perfection in composition, we can strive for excellence in functioning when it comes to the management of our journal. 'Perfect' functioning, in this case, is about serving your global community to the best of your abilities. This means daring to sit through uncomfortable discussions about diversity and how to address the lack of it; collecting, analysing and reporting journal data, even though they may not tell a flattering story; addressing issues and, in doing so, accepting the risk that you may get it wrong; and using all this experience to navigate the next iteration of that cycle in a wiser manner. Admittedly, there will always be a limit to what journals can achieve without wider societal action; but, as editors and journal managers, we are determined to do as much as we can, and for as long as it takes, to make our long-term vision a reality.

AUTHORS' CONTRIBUTIONS

N.P. led the writing of the article. All the authors contributed critically to the drafts.

DATA AVAILABILITY STATEMENT

All the figures that underlie the given percentages are provided within the text.

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