

Scientific Life

Recommendations
for making editorial
boards diverse and
inclusive

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Lack of diversity in editorial boards hinders multifaceted perspectives in fields such as ecology, evolution, and conservation. We outline ten key actions for editorial boards to promote equity, diversity, and inclusion, benefiting the journal in attracting a wider readership, enhancing diversity among authors, and overcoming biases in editorial decisions.

Diversity in editorial boards

The importance of promoting justice, equity, diversity, and inclusion (EDI) of minority groups in academia is currently the subject of renewed discussion in scientific fields such as ecology, evolution, and conservation [1,2], hereafter grouped under the term 'ecology.' Although recent studies have pointed out the under-representation of women, people of color, and researchers from low- and middle-income countries [Wellcome Trust (<https://wellcome.org/grant-funding/guidance/low-and-middle-income-countries>)] among top publishing ecologists [3], we need to improve our understanding of potentially related geographic bias in editorial boards of scientific journals [4]. The lack of representation and low diversity of perspectives in ecology affect not only the quality of the field itself but also its contribution to global challenges such as the climate and biodiversity crisis [2].

Editors decide which manuscripts should undergo peer review, select reviewers, and finally make the decision whether and for what reasons a manuscript is accepted, rejected, or revised [5]. Leading scientific journals have strong editorial filters and high rejection rates that correlate with their high impact factors [6], and they often build on academic networks in high-income countries. Through their decisions, editors influence which perspectives of the scientific community are represented in scientific journals. Accordingly, they bear great responsibility, especially with regard to addressing possible biases. Having a diverse editorial board with fairly balanced representation can add new and valuable perspectives to the journal because some issues and knowledge gaps in a given region are known only by local researchers. Therefore, they can diversify the pool of reviewers and highlight the importance of the study for the region, the field, and the journal.

Recent advances in EDI

There has been some effort to promote EDI through different initiatives, such as promoting gender equality in editorial boards (e.g., *Biological Conservation*) [4], increasing geographic diversity in editorial boards (e.g., *Journal of Applied Ecology*) [2], encouraging multilingual abstracts (e.g., *Functional Ecology*), inviting multilingual publication of full text (e.g., *Austral Ecology*), providing editorial assistance to non-native English speakers (e.g., *Journal of Biogeography*), creating special issues on EDI (e.g., *American Naturalist*), and providing waivers for article-processing charges.

Ten actions for equitable editorial boards

We provide ten actions (Figure 1) to guide editors in promoting EDI in scientific journals (Figure 2).

Action 1. Increasing diversity among editors

Consideration of the intersectionality of geography, gender, ethnicity, and other

identities when recruiting members of editorial boards is still lacking. For example, although gender equality in editorial boards has improved during the past decade [4], women from low- and middle-income countries are still very under-represented [7]. Instead of the traditional elitist appointment of editors, journals should conduct open calls for editor positions from among researchers meeting various backgrounds [8] and should evaluate researchers using the Declaration on Research Assessment, which relies on a more inclusive metric of career assessment and research outputs. A more geographically diverse editorial board could foster ecological research in under-represented areas and could ultimately reduce the practice of helicopter science [9].

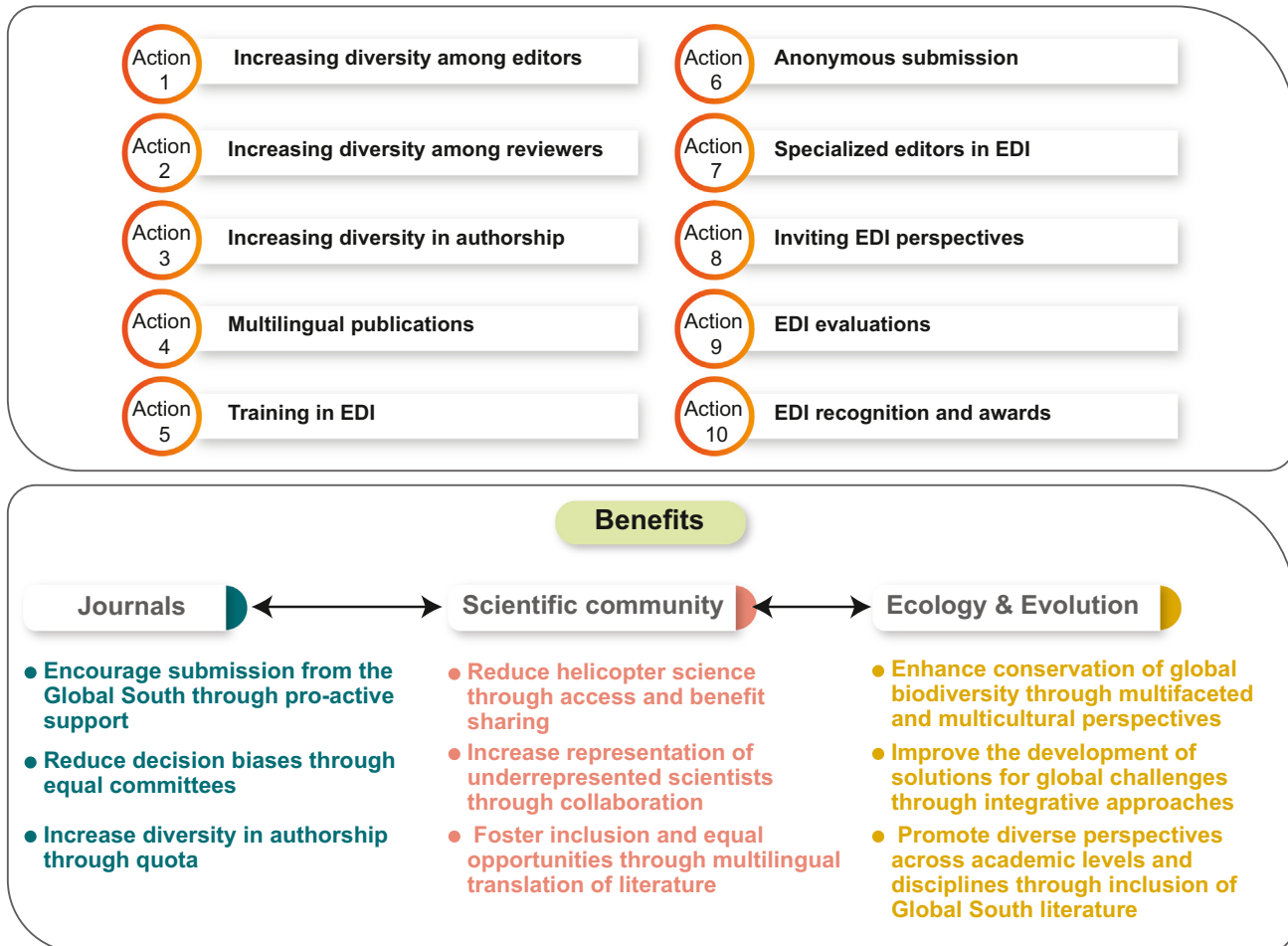
Action 2. Increasing diversity among reviewers

Editors should also promote diversity in the pool of reviewers, which could be facilitated by a diverse editorial board, to obtain a diversity of perspectives on submitted manuscripts. Even if the current pool of potential reviewers who fit the editor's criteria from low- and middle-income countries is smaller than that from high-income countries, reviewing is a 'learning by doing' activity; thus, inviting early career scientists with under-represented backgrounds as additional reviewers is one way to increase their reviewing skills and ultimately diversify the pool of reviewers. Such an increase in diversity might reduce implicit biases in decision making [10].

Action 3. Increasing diversity in authorship

Journals should provide a compilation of common mistakes that lead to the rejection of submissions of under-represented authors (e.g., non-English speakers) and should add to the author guidelines extensive tips and examples on acceptable writing styles. Creating regular special issues or virtual special issues that call for collaborative research between low- and

Ten actions to promote Justice, Equity, Diversity and Inclusion (EDI) in editorial boards



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Figure 1. Ten actions for promoting justice, diversity, equity, and inclusion in editorial boards and their benefits to the journal, scientific community, and the field of ecology and evolution.

middle-income country and high-income country teams will foster international exchange of knowledge, promote geographically diverse coauthorship, and encourage leadership roles of unrepresented groups [3]. This will also help the goal of the first two actions. Journals could also create categories of papers that accept key research from less privileged areas (e.g., *Ecology* added a new type of article – The Scientific Naturalist – to revive natural history).

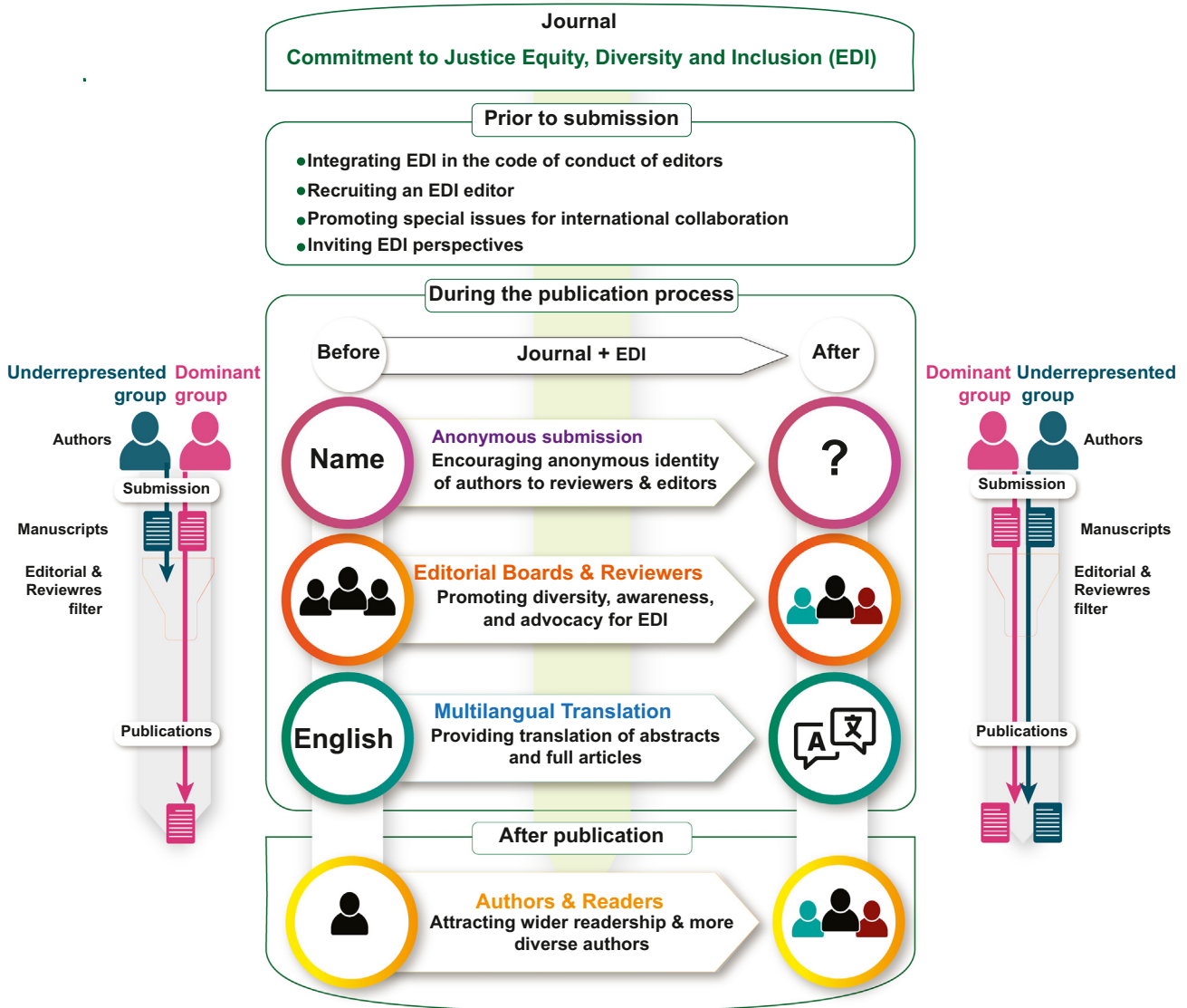
Action 4. Multilingual publications

Promoting multilingual translations of abstract and main text will increase the diversity of readers, including scientists, practitioners, and decision makers [11]. Integrating multilingual translations in online journals through machine learning technology should be readily feasible in the near future [12]. It might contribute to capacity building among under-represented researchers, promote diversity of reviewers and editors in the long term, and benefit

practitioners to apply science published in English. Journals could also foster initiatives that help non-English-speaking researchers to prepare manuscripts in English for submission (e.g., [13]).

Action 5. Training in EDI

Journals should integrate EDI into their code of conduct to reinforce their commitment to EDI. In addition, two types of training programs should be provided: (i) training of the current members to reduce



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Figure 2. Implementation of justice, diversity, equity, and inclusion actions in the editorial board and its impact on the publication process.

implicit bias and raise awareness about the importance of diversity and equity in science and (ii) training of future potential members from under-represented groups by organizing lectures, meetings, and workshops and assigning editorial tasks that can improve their ability to manage submissions and reviews. This will ensure the maintenance of high-quality editing and high publishing

standards after welcoming new editorial members.

Action 6. Anonymous submission

Because everyone has implicit biases, anonymous submission for not only reviewers but also editors should be warranted [10]. Hiding the authors' names could potentially reduce implicit gender biases. Although the affiliation could bias

the decision of the editors, it could also help them know if the study is conducted by less privileged researchers who may benefit from some extra mentorship by the editorial board (see Action 3).

Action 7. Specialized editors in EDI

Because discussions on EDI have only recently blossomed, members of editorial boards usually lack expertise in EDI-

related issues. Thus, journals should recruit an expert EDI editor who would give recommendations and lead initiatives that promote diversity and inclusion in different aspects of the journal's activities [14]. This editor could also be designated at the publisher level (e.g., Cell Press). The EDI editor could design training programs for current and future editors and advertise in the highlights section of the journal key papers and perspectives on EDI as an initiative for education and raising awareness.

Action 8. Inviting EDI perspectives

Many journals have published many papers on EDI in the past 3 years, raising awareness about EDI among readers and furthering their EDI agenda. Inviting submission of perspectives and research articles on EDI should be continued and generalized across journals. Creating an annual special issue or collection on EDI facilitates regular communication of new perspectives and ideas to promote a diverse and equitable scientific environment (e.g., Trends Voices: On Diversity & Inclusion; <https://www.cell.com/trends/voices/inclusion-and-diversity>).

Action 9. EDI evaluations

Changes should always be accompanied by measurable benchmarks, evaluations, and lessons to learn from [2]. Thus, a baseline evaluation of the EDI state of journals is necessary to measure progress and reach goals. Such evaluations on initiatives and accomplishments in diversity (e.g., representation in editorial boards, reviewers, authors, and submissions) should be published in annual reports. This could guide future developments of the journal's EDI targets.

Action 10. EDI recognition and awards

Journals should recognize and value efforts on EDI initiatives by researchers and editors by providing prizes and awards for such contributions. This could motivate the scientific community to be actively

committed to promoting EDI and solving existing inequities.

Limitations in achieving diversity

One hard fundamental question to answer is, What is an ideal representation in editorial boards? Imagine two scenarios. First, an editorial board including members with equal representation of males, females, ethnicity, sexual orientation, but all from the USA. Second, members are only men across different countries from low- and middle-income countries and high-income countries. Neither of the two scenarios is truly diverse, and an ideal representation is probably a fair intersection of the two scenarios. However, there are many intersectional categories to fit in an editorial board. In addition, even with an ideal representation in mind, editors will still meet difficulties in finding the expertise that fits certain groups not only when attempting to recruit editors but also when selecting reviewers.

Despite these limitations, efforts to meet EDI goals in editorial boards should continue, and our ten presented actions can help in achieving them. It should shift the current decision landscape from an equality mindset that perpetuates a narrow perspective in science to equitable decision making that promotes a diversity of opinions and perspectives in ecology. The benefits of this goal in terms of diversifying perspectives are invaluable and go beyond academia because they will place the global scientific community in a better position to face planetary challenges through integrative approaches [15].

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Declaration of interests

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