Integrate geographic scales in equity, diversity and inclusion

To the Editor — Many opinion pieces about equity, diversity and inclusion (EDI) have been published during the past few years[1,2]. These contributions have highlighted barriers that some groups of our society must meet to succeed in academia and have immensely improved our understanding of how to approach EDI and improve the academic environment. However, most of these perspectives are from the Global North, particularly from the USA, targeting issues that are local and thus unintentionally sustaining a view that is not inclusive of the global diversity of scientists.

As researchers in ecology and evolution, we are intimately familiar with the increase of biological diversity with area. For example, there are around 900 species of birds in North America, but 10,000 worldwide. We recognize that biodiversity is global and that trying to understand and protect it by focusing on a single area is inadequate. The same principles should also apply to EDI: the concepts should primarily be based on the global scale then adapted to the local scale.

Diversity is a powerful word that should be used judiciously because focusing on 'a diversity' means that we exclude other diversities. It is human nature to focus on local issues that are encountered in everyday life. This is why most issues related to EDI in the Global North revolve around discrimination. Yet scientists in the Global South view discrimination as one of many barriers that they deal with when trying to succeed in academia[3,4]. Language barriers, a lack of basic resources, infrastructure and expertise, and networking limitations are common for researchers in the Global South, but are less likely to be issues for most researchers in the Global North. The lack of awareness about these issues and the focus on other specific topics of discrimination could reinforce a sense of not belonging for groups of people who are already under-represented in science[5] and are rarely given the opportunity to voice their opinion.

A strong and inclusive definition of diversity is a crucial step towards 'true' equity and inclusion. We stress the need for integrating geographic scale in EDI discussions. Here we distinguish between microdiversities and macrodiversity in EDI (Fig. 1). We suggest that microdiversity could be defined as a group of people with different genders, skin colours, sexual orientations or disabilities sharing a similar academic environment, including language, infrastructure and curricula, and working in the same country or countries with similar cultural and socioeconomic backgrounds. Macrodiversity is the sum of such microdiversities across a larger, international scale, encompassing a wide range of institutions from different countries, ethnicities and cultural backgrounds, speaking different languages and experiencing different academic environments. Integrating these scales in diversity recognizes the existence of a large diversity that is greater than the one we encounter and interact with and will help to structure plans and solutions to address EDI issues at the local and global scale.

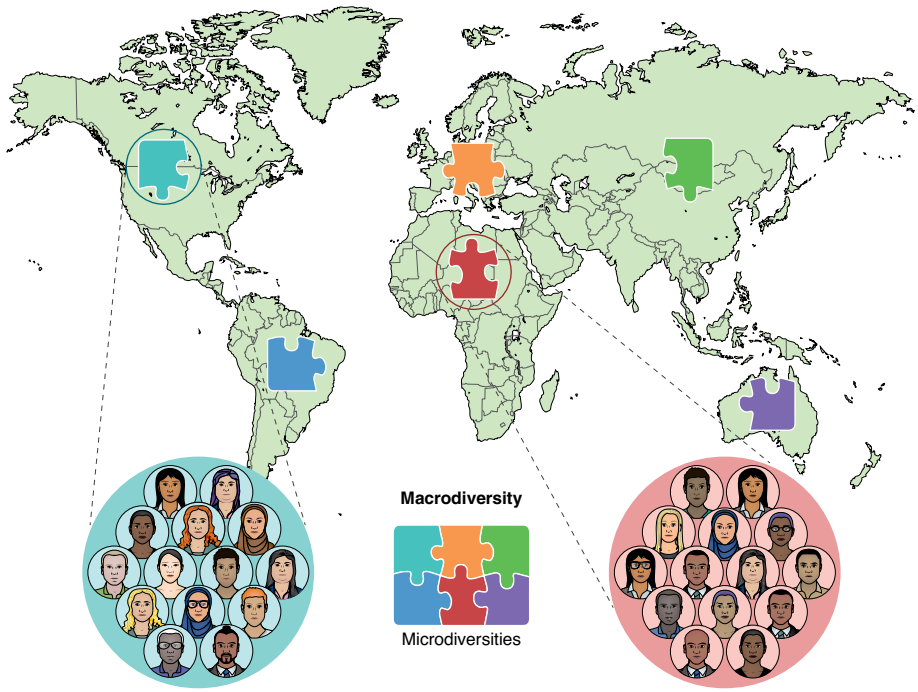

Fig. 1 | Integrating geographic scale to highlight the difference between local and global diversity issues. We refer to microdiveristy as diversity at the local scale, including people with different genders, skin colours, sexual orientations, disabilities and so on. Macrodiversity is the sum of all microdiversities of the world, including scientists from different countries/continents with different languages, ethnicity, cultural backgrounds and so on. Here we highlight that while access to certain privileges, including opportunity for scientific publishing, vary within microdiversities, they also vary across microdiversities.

Academia is a common space where all scientists across the world should be able to share their perspectives equally, but the occurrence of geographic variability in linguistic and socioeconomic privileges that facilitate publishing opportunities make some microdiversities, such as in North America, inherently more privileged than other microdiversities, such as Africa[6]. The scientific community recognizes that the majority of science is published by the Global North, especially in the top journals[5]. Students and researchers from the Global South encounter a much steeper landscape when trying to communicate their science and perspectives and they often need to open the 'gates' of Global North academia and seek local training. This imbalance of publishing opportunities between Global North and Global South, if maintained in EDI discussions, creates an imbalance of representation of the issues that are encountered by the Global South — and this extends to EDI discussions.

Better recognition of geographic scale will enable a more inclusive narrative of EDI. Recognizing the 'existence of the other'

is a sign of mutual respect. At the local scale, it will make international students and researchers feel more included in their host institutions during EDI discussions. More generally, it will strengthen the relationship between the Global South and Global North, which has historically been mainly unfair[7]. Such a strong link is crucial for addressing global environmental issues that require the collaboration of all of humanity. ❐

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References

1. McGill, B. M. et al. *Ecol. Evol.* **11**, 3636–3645 (2021).
2. Röβler, D. C., Lötters, S. & Da Fonte, L. F. M. *Nature* **584**, 525–525 (2020).
3. Nuñez, M. A. et al. *J. Appl. Ecol.* **56**, 4–9 (2019).
4. Nuñez, M. A., Chiuffo, M. C., Pauchard, A. & Zenni, R. D. *Trends Ecol. Evol.* **36**, 766–769 (2021).
5. Maas, B. et al. *Conserv. Lett.* **14**, e12797 (2021).
6. Khelifa, R., Mahdjoub, M., Baaloudj, A. & Chaib, S. *Facets* https://doi.org/10.1139/facets-2021-0073 (in press).
7. Haelewaters, D., Hofmann, T. A. & Romero-Olivares, A. L. *PLoS Comput. Biol.* **17**, e1009277 (2021).

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Competing interests

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