How to diminish the geographical bias in IPBES and related science?

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Abstract
To tackle the current global environmental crisis, operational science-policy interfaces are needed. The Intergovernmental Science-policy Platform on Biodiversity and Ecosystem Services (IPBES) provides governments with policy advice via its assessment reports. To expand the evidence-base and to support the uptake of IPBES products, participation needs to be balanced across the globe. We found imbalance in authors’ distribution at both the UN regional and country level. It is more pronounced for IPBES-related scientific papers than for the IPBES global assessment. The more detached from politics the decision of getting involved is, the more imbalanced the representation of the regions becomes. To improve the IPBES’ geographical balance, a strategy to increase the number of active member states is called for. We argued that without explicit efforts to reach the balance—for example, providing an attractive research environment for excellent researchers in their home country, improving cooperation among countries across the UN regions, and granting publication opportunity for all authors—the idea of geographic equality diminishes.

KEYWORDS
capacity building, ecosystem services, IPBES assessment authors, science–policy interface, scientific paper authors, UN geopolitical regions

1 | INTRODUCTION

IPBES, the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services, is a major body of global environmental policy (Jonsson, Báldi, & Lundquist, 2017). The aim of IPBES is to achieve significant policy impact through improved knowledge (Stevance et al., 2020). Therefore, the scientific community providing this knowledge is a key component of IPBES. Approximately 2,000 experts (mainly scientists) from a diverse set of scientific disciplines contributed to the first Work Programme (2014–2018).

One of the operating principles of the Platform is the balanced representation of the UN geopolitical regional groups (Figure 1) in its structure and work (Montana & Borie 2015). A balanced representation is essential, as it contributes to (a) global credibility, (b) proper representation of the diverse pattern of biodiversity at the regional and local level, and (c) achieving impact on government policy, who usually do not
welcome advice from other governments and international organizations.

The political wish of the Platform’s governments for a balanced geographic representation is clear. The rules for operation set by the Plenary of the Platform require the places in the Bureau and the Multidisciplinary Expert Panel (MEP)—the political and expert leading groups of IPBES, respectively—to be allocated equally among the five UN regions.

Apart from the Bureau and MEP, however, the balanced representation is not a rule, but an operating principle. One way of monitoring the performance of this principle is to analyze the geographical distributions of experts at the UN geopolitical and country level.

2 | WHERE ARE GLOBAL ASSESSMENT CONTRIBUTORS FROM?

The number of experts involved in the IPBES Global Assessment on Biodiversity and Ecosystem Services (GA) (IPBES 2019) was 463 (29 CLAs/coordinating lead authors, 92 Las/lead authors, 15 REDs/review editors, 310 Cas/contributing authors, and 17 FELLs/fellows) grouped by their affiliation into UN regions (see Methods in Supporting Information). The author structure revealed that the representation of the geopolitical regional groups is very different depending on the authors’ role. Fellows’ distribution is the most balanced with 23% being the maximum, and 18% the minimum share. The Cas’ distribution is the least balanced with more than three quarters of the authors belonging to WEOG states. Among the 136 experts selected by the MEP (CLA, LA, RED), the distribution of CLAs is the most imbalanced with 3% being the minimum, and 52% the maximum share, the LAs and REs have more balanced shares (Figure 2).

3 | WHERE ARE IPBES-RELATED SCIENTIFIC PAPER AUTHORS FROM?

Altogether 216 papers from WoS were included in our analysis (Table S1). The regional distribution of authors of IPBES-related scientific papers from WoS shows an even
more biased pattern either all authors or only lead authors (first and last or the single authors) are considered. Figures show that only 18–23% of authors are from Africa, Asia Pacific, Latin America and the Caribbean, and East Europe, all others are from WEOG (Figure S1).

4 | WHAT IS THE ROLE OF COUNTRIES?

A few active countries dominate both GA and WoS author lists within each region; GA is more balanced, while WoS papers display stronger asymmetry. In the African region South Africa, in both Asia Pacific and in Latin America and the Caribbean regions three dominant countries (China, India, Japan and Argentina, Brazil, Mexico, respectively) share about 75% of all authorships. The order is not so clear for Eastern European States, although Hungarian authors gave the most counts. The two lists of authors from Western European and Other States have considerable overlap in the countries, but in different order (Figure S2).

The ratio of active countries, that is from where researchers are involved in the GA and/or scientific papers, is higher in WEOG than in any other UN region (Figure S3).

5 | CONCLUSIONS

Global concerted action with a good geographic balance of experts and local relevance is essential for the conservation and restoration of biodiversity and ecosystem services (Kovács & Pataki, 2016; Ruckelshaus et al., 2020).

We found that the political wish and operating principle for balanced geographic distribution of experts in the IPBES shows different patterns across the first work programme. Among the experts of GA selected by the MEP (i.e., CLAs, LAs, and REDs), there is considerable imbalance with WEOG clearly dominating (35–52% of authors). Still, with two exceptions, all the other regions are visible, with representations between 10 and 20%, indicating the efforts of Bureau and MEP members, and assessment leaders. In the IPBES-related scientific papers, however, WEOG’s representation is 77–82%, and the other four regions have 2–7% only. It is interesting to see that the more detached from politics the decision of getting
involved is, the more imbalanced the representation of the regions becomes. This also means, however, that some subregions are not only politically (i.e., in the decision-making bodies) underrepresented but also that knowledge about the given area’s social, economic, and environmental context is lacking. So even with the best intentions to provide useful advice at the local scale, recommendations made without adequate background information may prove difficult to accomplish and finally, the goal of preserving biological diversity and ecosystem services will be compromised.

6 | RECOMMENDATIONS

- Allocate significant resources to improve capacities in the non-WEOG countries with special attention to the inactive subregions, and to promote the connections between regions. More co-operations are needed, for example, experts’ mobility (Xie, Zhang, & Lai, 2014). The IPBES stakeholder network can be a key component of capacity building work.
- New avenues to override barriers need to be developed and used. For example, dialogue workshops organized by the GA to bring in indigenous and local knowledge turned out to be an effective way of mobilizing knowledge and experts from underrepresented subregions (McElwee et al., 2020).
- Anti-brain drain schemes, where the best nationals are invited back to the home country, can improve the scientific communities in less developed countries (e.g., https://mta.hu/english/momentum-program-of-the-hungarian-academy-of-sciences-106052).
- To improve regional balance two major strategies can be adopted: to increase the activity of countries already heavily participating in IPBES work further, or to involve new countries from the given region. We propose the second strategy (i.e., to involve more countries into IPBES work) expecting activity to be more evenly distributed within each region (cf. Figure S3).
- Open access means that the author pays the cost of publication. Publishers should dedicate a significant part of their journals to publications with a waiver.

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AUTHOR CONTRIBUTIONS

András Báldi designed research, Brigitta Palotás collected data, and both authors wrote the manuscript.

ETHICS STATEMENT

The authors conducted no data collection or scientific inquiry which required ethics considerations. The manuscript complies with proper ethical scientific standards.

DATA ACCESSIBILITY STATEMENT

No primary data was collected for this manuscript. List of analyzed papers are available in the Supporting Information Material of this article.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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