



Paper Highlights

14. Balancing Earth science careers in an unequal world

By Sara Pasqualetto

Early-career Earth scientists around the world face vastly different professional landscapes. While some benefit from robust funding, strong mentorship, and institutional support, many others, especially those in low- and middle-income countries, struggle to access even the most basic resources. A recent global study published in Nature Reviews Earth & Environment based on survey data and conducted in-depth interviews with early-career Earth scientists from across the globe, sheds light on these disparities and proposes concrete steps toward a more inclusive and equitable scientific community. This work stems from a side event organized by the Young Earth System Scientists (YESS) community during the 2nd Open Science Conference of the World Climate Research Programme, held in Kigali, Rwanda in October 2023.

One of the clearest findings was the significant disparity in access to funding and infrastructure. Researchers from the Global South face significant barriers in publishing their work, including financial constraints, perceived biases in peer review, limited access to data, and personal discrimination, challenges that less affect their Global North counterparts. Similarly, Global South scientists struggle to access leadership roles in international organizations due to fewer institutional connections, inadequate funding, and limited time, often feeling excluded from what they describe as a "private club."

Mobility and international training opportunities also play a crucial role in career development, yet many early-career researchers face major barriers in accessing them. Visa restrictions, high travel costs, and lack of institutional support often prevent scientists, particularly those from the Global South, from participating in short-term visits, workshops, and international collaborations. These experiences are often seen as essential to building a global pro-

Unfavourable experiences Scientific publications "We often get our papers rejected because they are 'too rejonal' or 'not nevel enough' when you see the same (or even less quality paper) [from the GN]" Participation in international organizations Participation in international organizations "Wey difficult if we don't have connections as most organizations are like a private dub" Participation/organization in conferences and training courses Participation/organization in conferences and training courses Participation/organization in conferences and training courses Access to resources and data "I exclusively depend on financial support from the conference to be able to attend. Even if I have my own funding project, the fund won't be enough" Access to resources and data Access to resources and data Access to quality jobs positions To my institution, permanent positions are very difficult to get. So people go from postdoc to postdoc for several years before finding a permanent positions are very difficult to get. So people go from postdoc to postdoc for several years before finding a permanent positions are very difficult to get. So people go from postdoc to postdoc for several years before finding a permanent position' Biologia North 15

The seesaw graphic contrasts favorable (right side) and unfavorable (left side) experiences. Pie charts show the distribution of Global South, Global North, and mixed experiences by color (green, violet, orange), with quotes illustrating each side. A bar plot summarizes total reports by region and sentiment, using the same color code. *Country names are anonymized as "In my country."

file and forming research partnerships.

The disparities highlighted during the workshop on Global South-North inequalities underscore the urgent need for systemic change within the Earth science community. Persistent structural barriers are limiting the ability of Global South researchers to contribute fully to scientific knowledge and climate solutions, reinforcing global inequities and deepening climate injustice. Achieving a more just and sustainable future requires intentional action—from fairer publishing practices to more inclusive institutional support and collaboration. As a global scientific community, we must recognize our shared responsibility to dismantle these barriers and foster equity in knowledge creation and impact.

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