

# 7

## Participant Diversity

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### Overview

Diversity has become increasingly important as an analytic concept and organising principle in the general scientific community. Advancing diversity is seen to be even more essential in a global science–policy interface such as the Intergovernmental Panel on Climate Change (IPCC). Being able to claim to speak *from* a broad perspective of geographies, genders and experiences is considered to be important if the IPCC is to produce legitimate and authoritative climate knowledge *for* policy. This chapter applies a critical lens to examine the IPCC’s procedures and practices in selecting its authors with respect to securing a diverse base of expertise across gender, geography and experience. It then considers *how* diversity is important, identifying different logics – substantive and instrumental – that have guided the IPCC’s efforts to date. The chapter concludes by considering *why* diversity should matter and what possibilities are opened for global climate knowledge-making through enhanced capacity building.

### 7.1 Introduction

The IPCC has expressed a strong commitment to ensuring that the authors selected to contribute to the assessment reports reflect a ‘range of scientific, technical and socio-economic views and backgrounds’, and also ‘a balance of men and women, as well as between those experienced with working on IPCC reports and those new to the process, including younger scientists’ (IPCC, 2018b). This commitment is reflected in the formal procedures for selecting authors. These explicitly direct that gender, geography, experience and expertise be taken into account when selecting author teams (IPCC, 2019b). Ongoing debates within the research community at large (Medin & Lee, 2012; Anon, 2018) have also argued for the critical

importance of diversity, in terms of both the substantive validity and the external legitimacy of science. These questions are important for research practice in a broad sense, but are vital for science–policy interfaces such as the IPCC whose authority is derived from both the substantive legitimacy of its expertise and the representational legitimacy to speak for multiple voices, as well as from the means through which it negotiates between the two (Cash et al., 2002; Beck & Mahony, 2018a; see also Chapter 20).

Despite the IPCC's stated commitment to diversity, numerous scholars have highlighted the significant cultural, social and institutional barriers that many underrepresented groups face – particularly women, those from the Global South<sup>1</sup> and non-native English speakers. These barriers are twofold – first, in being represented within the IPCC and, second, in being able to actively participate in the assessment process. Women already face a number of significant barriers to participation in scientific work, including unequal access to funding and training, lower wages, fewer role models and greater family responsibilities (Liverman et al., 2022). It is not enough to simply be selected to participate. It is also a question of having the resources to attend meetings – including communication infrastructures for digital meetings – and then being given opportunities and a voice within the meetings (Gay-Antaki & Liverman, 2018; IPCC, 2019b). A number of scholars have also focused on the difficulties facing the IPCC to advance epistemic – including the recognition of indigenous knowledge systems – disciplinary and viewpoint diversity (Ford et al. 2016; Corbera et al., 2016, see also Chapters 12 and 13). A smaller body of critical literature has recognized the improvements made by the IPCC in diversifying author demographics, whilst also emphasising the still unequal representation within the IPCC's authors and what needs to improve (Standring & Lidskog, 2021).

This chapter comprises three main sections. The first provides a detailed outline of the selection process for contributors to assessment reports, accounting for formal and informal practices. It asks whether these attempts to create a more diverse authorship have worked. The second section develops a critical account of diversity within the IPCC, asking in what ways diversity is important to the organisation in the first place. What are the prevailing logics and justifications used to support increased diversity in the IPCC in relation to broader discussions on diversity in science/knowledge production? The third main section adopts a critical perspective on the implications of diversity for both the epistemic legitimacy of the IPCC and its continued policy relevance. It offers capacity building – a process of developing the expertise and experience of both the individual and the organisation – as an important alternative to the prevailing substantive and institutional logics of the IPCC.

## 7.2 Participant Selection

The institutional process of nominating and selecting experts across all author categories is elaborated in Appendix A, S.4.3 of the IPCC's *Principles for Governing IPCC Work* (IPCC, 2013a). Once the scoping of a new assessment report has been completed and the outline and structure decided, the IPCC Secretariat sends an open call for experts to all IPCC national focal points (NFP) and observer organisations (OO). NFP are national bodies that are responsible for disseminating the call among appropriate research networks. Interested experts then provide their motivation and curricula vitae to their respective NFP or OO who then – compliant with their own specific procedures – transmit the applications to the appropriate Working Groups (WGs)/Technical Support Units (TSUs). The extent to which NFPs conduct their own national selection, or transmit all applications directly to the IPCC, varies from country to country. This can be a site of political conflict. For example, different national institutions may lay claims to possessing authoritative climate expertise (private/public, energy/environment, university/government institute, and so on). In some cases questions may also arise about whether national experts are likely to align or not with government policy (Gustafsson & Lidskog, 2018a, discuss this process in the context of Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), but the principle remains the same).

The co-chairs of each Working Group, with the TSU's support, then select authors to fill the chapter writing teams. These include Coordinating Lead Authors (CLAs) with responsibility for managing contributions, Lead Authors (LAs) who draft contributions, and Review Editors (REs) who assess the quality of the process, ensuring inclusivity and appropriate responses to all review comments. The first criteria for selection are substantive and epistemic – appropriately knowledgeable experts must be identified to cover the topics required, ranging, for example, from 'the Changing State of the Climate System' to 'Climate Resilient Development Pathways'. Each WG co-chair and TSU has their own way of identifying experts, but each must consider the criteria laid out in the Principles. These aim to reflect:

- the range of scientific, technical and socio-economic views and expertise;
- geographical representation (ensuring appropriate representation of experts from developing and developed countries and countries with economies in transition); there should be at least one, and normally two or more, from developing countries;
- a mixture of experts with and without previous experience in IPCC;
- gender balance.

Recent studies have helped to shed light on the active role that TSUs and OOs play in 'filling in gaps' within chapter teams with experts from groups – typically

women and experts from the Global South (Standring & Lidskog, 2021: 9–11) – who might otherwise be marginalised or underrepresented in a competitive assessment process. The IPCC reports that, for the Fifth Assessment Report (AR5), a total of 831 experts were selected from 3,598 national and observer nominations (a 23 per cent success rate); for AR6, the figures were 721 experts from 2,858 (a 25 per cent success rate). The availability of these statistics is welcome. Nevertheless, a significant opacity remains in the IPCC's selection processes. It is difficult to understand the significance of the interplay between the formal institutional procedures for expert selection – including the leeway that they allow – and the informal practices – including the impact of national pre-selection procedures – that contribute to the final author teams.

Recent scholarship has shown that the diversity of chapter writing teams has improved over time across the dimensions of gender (IPCC, 2019b) and geographic distribution (Standring & Lidskog, 2021). But some significant caveats must be added to this assessment for a more accurate picture to emerge. The following discussion focuses exclusively on the issues of gender and geographical distribution; Chapter 8 focuses in more detail on questions relating to previous experience in IPCC, and Chapter 12 on disciplinary contributions.

Trends towards securing more diverse author groups started from an extremely low baseline, with AR1 (1990) overwhelmingly dominated by male authors from North America and Western Europe. While there have been improvements in female representation, women remain a minority within author groups – as well as within categories of authors with more responsibilities within chapters (Standring & Lidskog, 2021). This situation looks even worse when it is considered how and where different categories intersect. Barriers to representation for women from the Global South, or for those for whom English is not a native language, are higher still. Their participation in the IPCC is even more difficult (Gay-Antaki & Liverman, 2018; Gay-Antaki, 2021).

Second, as seen both in Figure 7.1 and in previous research (Ho-Lem et al., 2011; Corbera et al., 2016; Standring & Lidskog, 2021), the involvement of authors from the Global South – representing three quarters of the world's population – account for a little over a third of the authors selected to contribute to IPCC assessment reports (El-Hinnawi, 2011). The proportion has improved since the first assessment cycle, which can be attributed to a number of factors. These include a more active geopolitical lobbying for representation from countries such as Brazil, China and India,<sup>2</sup> as well as the rapid development of scientific infrastructures, not least aided by the IPCC's own capacity-building efforts (Chapter 8). In the broadest terms, the proportion of participants from developing countries has increased, but the gains are more modest when looking at the poorest countries alone. Those countries designated by the World Bank as

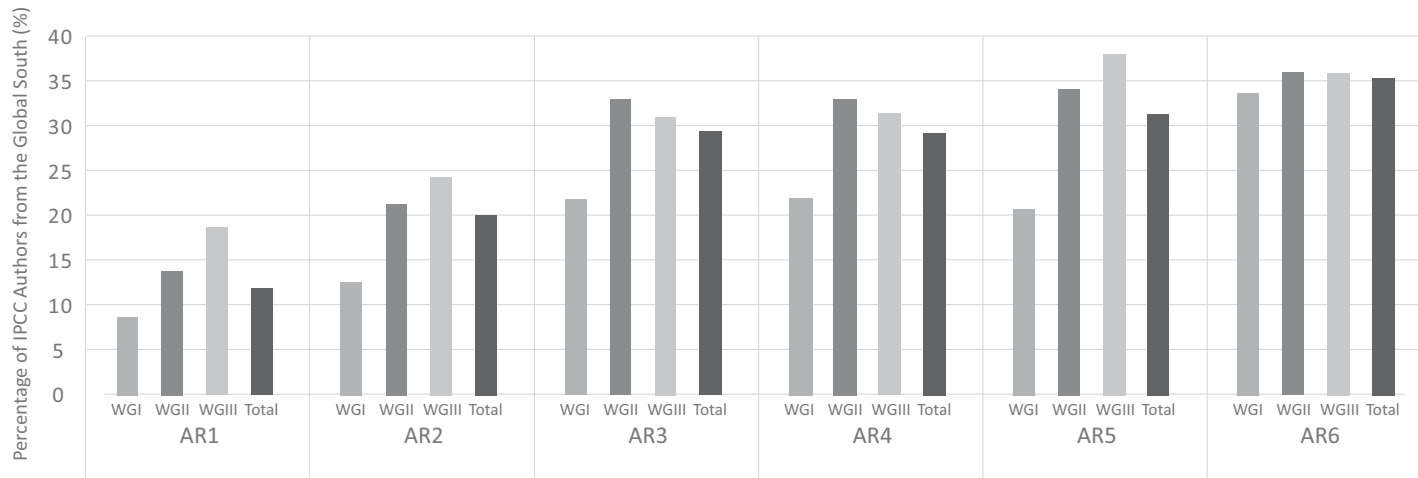


Figure 7.1 Proportion of IPCC authors from Global South countries, across the six assessment cycles (AR1 to AR6) and according to different Working Groups.

Source: data from Kari De Pryck (cf. Venturini et al., 2022) and the author's own

low or lower-middle income economies account for only 14 per cent of authors in the most recent assessment cycle.

### 7.3 The Importance of Diversity

The IPCC's approach to diversity and expertise emerges from an organisational structure and role that is geared towards providing a comprehensive knowledge base for international negotiations, agreements and treaties. Valuing epistemic neutrality/objectivity ('policy relevant not policy prescriptive') and consensus, the IPCC has been described on multiple occasions as 'providing the view from nowhere' (Borie et al., 2021). This 'science-driven' perspective of climate knowledge gives pre-eminence to universalistic perspectives on the nature of climate problems. Within such an epistemic framework, questions of diversity – of representation, experience and voice – are relegated as secondary concerns. Within the IPCC, this philosophy is most prominently visible in the way that, until recently, WGI has lagged well behind WGII and WGIII in terms of the representation of a range of identities (see Figure 7.1; also IPCC, 2019b; Standring & Lidskog, 2021). This is also the case with regards to the integration of different disciplinary and epistemic contributions (Ford et al., 2012; Stern & Dietz, 2015). A blindness, or strategic ignorance, to questions of identity and diversity helps to reproduce dominant attitudes and assumptions about how science is produced and who produces it. Recently, Miriam Gay-Antaki (2021: 4) has asked, 'what does a climate scientist look like?' On the IPCC's author database, for example, the placeholder avatar (Figure 7.2) for authors who have not provided a photograph is a greyed out yet clearly indicative image of how experts are typically perceived – male and white.

Debates within the wider research community have challenged the strong separation between independent and objective facts on the one hand, and values and subjective interpretation on the other – both for pure science and for science for decision-making (e.g. Funtowicz & Ravetz, 1993; Jasanoff, 2005). In this case, diversity is not simply to be considered an additional concern, intended to complement substantive or cognitive expertise. Rather, the argument is that '[a] more representative workforce is more likely to pursue questions and problems that go beyond the narrow slice of humanity that much of science . . . is currently set up to serve' (Anon, 2018). With an issue such as climate change, in which the effects are likely to be severe but unevenly distributed both within and between countries (Hulme et al., 2020), and in which existing power structures are likely to obscure this unevenness, diversity of expertise is all the more necessary.

The IPCC is not a purely scientific organisation. As a science–policy interface it inhabits (and constructs) the boundary between the spheres of science and policy (Beck & Mahony, 2018a). On the international policy stage, representation is



Figure 7.2 Placeholder avatar from the IPCC author database.

Source: IPCC website

extremely important for organisational legitimacy and to evade a critique of imposing a particular Western/Global North vision of science, knowledge and climate problems – a view expressed by a number of Global South participants (Biermann, 2001; Lahsen, 2009). In a telling quote (reported in Standing & Lidskog, 2021), one contributor to the IPCC concludes

if you want a good well written report on any aspect of climate change you could get half a dozen white European men to write it . . . It would have a fraction of the impact that an IPCC report does because it just wouldn't be seen as being representative of the global body scientific or relevant to the body politic.

The legitimacy and authority of the IPCC's outputs and its impact on global policy should therefore be considered as much a consequence of the acceptance of the reports by national governments (see **Chapter 20**) as it is because of the accuracy and quality of the knowledge that is synthesised and communicated. At least part of the willingness to accept the report is the belief that a range of views, particularly those of the Global South, are being represented within the body of expertise making up the IPCC.

Two particular logics of diversity within the IPCC emerge from this picture. On the one hand, the substantive view of expertise acknowledges the contextual nature

of scientific and social scientific knowledge. It understands that by adding a more diverse set of perspectives, experience and values, new and innovative ways of both viewing problems and developing solutions may emerge. On the other hand, an instrumental or strategic view of expertise focuses instead on the internal or external legitimacy that diversity bestows on both the institution and the products it produces. In this respect, diversity is primarily viewed as a goal for increasing institutional credibility (Standring & Lidskog, 2021).

#### 7.4 Consequences of Diversity

When instrumental logics of diversity become institutionalised at an organisational level, the quest for diversity risks becoming an exercise in box-ticking. The measures of diversity – parity for marginalised group identities – become simply a target, divorced from broader social, cultural or epistemic concerns that diversity addresses (Ahmed, 2012). As shown in the previous sections, the IPCC's formal selection criteria comprise features such as gender, geographical location and experience, which can be easily operationalised and measured. But as Corbera and colleagues (2016) show in their analysis of WGIII authorship patterns, such an exercise leads to a reductive view of diversity as well as to practices of 'gaming the system'. Authors ostensibly from the Global South are frequently products of academic and professional networks firmly grounded in the Global North, limiting true representation.

Box-ticking exercises can also limit or obscure the importance of addressing aspects of diversity that are less easy to measure, such as epistemic or viewpoint diversity. Ongoing debates about the disciplinary breadth of the IPCC (Stern & Dietz, 2015) have helped draw attention to the necessity and the value of inputs from a range of social scientific academic disciplines such as sociology, human geography, urban studies and economics (Corbera et al., 2016; see **Chapter 12**). Yet these studies often fail to address questions about the extent to which those participating in the IPCC share similar ontological or epistemological approaches to the climate issue – for example, the unity/divisibility of the human and natural is one such issue – let alone questions of methodological approaches such as quantitative versus qualitative research methods. Additionally, the extent to which critical voices within the IPCC – critical of the range of expertise that 'counts', as well as critical of the formal role of the organisation as a non-prescriptive intergovernmental body – are given space to raise their concerns remains limited. The communication of expert consensus remains a priority (Pearce et al., 2017a; see **Chapter 26**). These are organisational critiques that have been absorbed to some extent by subsequent science–policy interfaces, such as IPBES, which integrate expert diversity and disagreement more openly within their practices (Borie et al., 2021).



One means of transcending the binary logics of diversity in the IPCC – and even using the informal/formal processes to subvert them – is to situate diversity of expertise within the concept of capacity building. Diversity of experience, viewpoint and voice strengthens the institution and empowers the individual. For this reason, co-chairs and members of the TSU have pointed to the ways in which they use the selection of IPCC authors to develop the networks and capacity of experts from more marginalised groups. As one of them reports (Stranding & Lidskog, 2021: 12), ‘even if people don’t start out with the highest scientific qualifications or publications record it may help them to bring them into the process by doing it. So, I think the capacity building element of it shouldn’t be ignored’. This process of building networks, peer support and development, and introducing a more diverse group of expertise, is something that occurs regularly, but outside of the formal rules and procedures of the IPCC (Gay-Antaki & Liverman, 2018). This capacity building constitutes a particularly gendered form of labour – falling disproportionately on already marginalised groups who must use resources for self-organisation – that goes unrecognised and unrewarded at the organisational level despite offering significant institutional benefits.

### 7.5 Achievements and Challenges

Diversity of expertise within the IPCC has improved remarkably since AR1 was published in 1990, reflecting broader changes in societal norms and expectations. The question of diversity has been written into the formal processes of the IPCC, which now seek to ensure that a representative and balanced range of authors are selected according to gender, geographical distribution and experience. In practice, however, authors from countries in the Global South and female authors are still in a minority and the dominance of a few countries – and relatively few institutions within those countries – remains strong. Equally difficult to ensure is that a diverse set of disciplines, epistemic positions and viewpoints are represented and that they are provided with the skills and space with which to make a contribution. The 2019 Report from the IPCC Gender Task Force makes a number of concrete suggestions to improve diversity. These include regular monitoring and reporting, increasing the share of women in leadership roles, providing training on inclusive practices, and increased sensitivity to the barriers that travel imposes (Liverman et al., 2022).

The legitimacy and authority of the IPCC rests not solely on its capacity to produce relevant knowledge in the area of climate change. It rests also on its ability to do so in a way that makes all signatory countries feel represented by the published outcomes. This is indicative of a tension that emerges in all processes of knowledge production, but which are especially evident within those bodies, such

as the IPCC, that bridge the science–policy interface: how are calls for objective, reliable and reproducible scientific knowledge integrated with a demand for greater diversity and representation? In practice, the commitment to diversity is often reduced to a box-ticking exercise in which the benefits of diversity are left unreflected upon in favour of numerical targets or quotas.

One way to transcend this problem is to recognize that these goals are not necessarily mutually contradictory but are, rather, a product of particular social demands for ‘relevant knowledge’. As has been increasingly acknowledged, the global framing of climate change is no longer sufficient to understand the uneven and divergent responsibilities, impacts and capacities to respond to climate risks. Diversity of experience and voice – including those with different disciplinary, epistemic and value commitments – is more necessary than ever to understand climate change. The IPCC faces the challenge of responding to this need.

### Notes

- 1 The terms Global North/South are not unproblematic or uncontested within social science. They serve here as a blunt shorthand for what the United Nations Grouping of 77 (UN-77) has previously referred to as developed/developing countries.
- 2 The proportion of Brazil+China+India authors doubles between AR1 and AR6, up from 5.9 to 12.1 per cent of all authors.

### Three Key Readings

Corbera, E., Calvet-Mir, L., Hughes, H. and Paterson, M. (2016). Patterns of authorship in the IPCC Working Group III report. *Nature: Climate Change*, 6: 94–99. <http://doi.org/10.1038/nclimate2782>

This study provides a detailed analysis of the diversity of authors within a single IPCC Working Group, analysing the CVs of hundreds of experts.

Gay-Antaki, M. and Liverman, D. (2018). Climate for women in climate science: women scientists and the Intergovernmental Panel on Climate Change. *Proceedings of the National Academy of Sciences of the United States of America*, 115(9): 2060–2065. <http://doi.org/10.1073/pnas.1710271115>

One of the most important accounts of women’s access to and participation in the IPCC.

Standring, A. and Lidskog, R. (2021). (How) Does diversity still matter for the IPCC? Instrumental, substantive and co-productive logics of diversity in Global Environmental Assessments. *Climate*, 9(6): 99. <http://doi.org/10.3390/cli9060099>

This study attempts to compare diversity across multiple assessment cycles while providing a framework for analysis of why diversity is, and should be, important to the IPCC.