Reflections on the *Diverse Voices* speaker series

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Background

The impacts of extreme weather and climate change will, and are, affecting a diversity of people in many different and often unequal ways. People of colour, women and those from lower socio-economic backgrounds are particularly bearing the brunt (Enarson, 2006; Osman-Elasha, 2009; IPCC Working Group II, 2022; UNFCCC, 2022; Ashfaq *et al.*, 2023). Even within the UK, there are minority groups who are disproportionately affected: people of colour, for example, report experiencing worse impacts and feeling greater 'climate anxiety' than their White peers (McLoughlin *et al.*, 2024). Yet those lived experiences are underrepresented in the field, as well as in related discussions (de La Mare, 2021), which could have implications for societally important decisions. Science offers the foundation from which we can start to mitigate and adapt to these dramatic changes; when combined with community-specific knowledge, affected groups can be empowered to prepare in ways that suit them best.

It is therefore worth wondering why there is a certain demographic within the UK's weather and climate field, and how that could change for the benefit of everyone. For example, Royal Meteorological Society (RMetS) membership (RMetS, 2023) seems to be under-representative of the UK population: it is skewed to being older, White and male when compared to the 2021 England and Wales census (ONS, 2022), though the early career portion is more diverse than both (Figure 1). We believe, anecdotally, that the RMetS' own surveys reflect the wider state of weather and climate science in the UK, and that it is also reflective of a bigger question around who is allowed or able to access science. This may be in terms of career choices or as a general interest, including access to higher and further education in the UK more generally (Disabled Students UK, 2024; Dowey *et al.*, 2024; Institute of Student Employers, 2024; myGwork, 2024), as well as the global issue of 'gatekeeping' scientific knowledge (SCImago, n.d.; Tandon, 2021; Neylon *et al.*, 2022; Saraceni, 2024), which

may limit the ability of vulnerable groups to engage with and prepare for climate and environmental change.

Approach

In its simplest sense, diversity in weather and climate is about the presence or representation of a variety of thought, experience and perspective. To get that kind of diversity often means ensuring diversity of ethnicity, nationality, gender, sexuality, socio-economic status, neurodiversity, ability and so on. Equity considers individuals' circumstances to ensure an equal outcome, and inclusion is about making people from all these different groups, with different personal circumstances, feel welcome, safe and respected enough to contribute, so that the group can genuinely benefit from
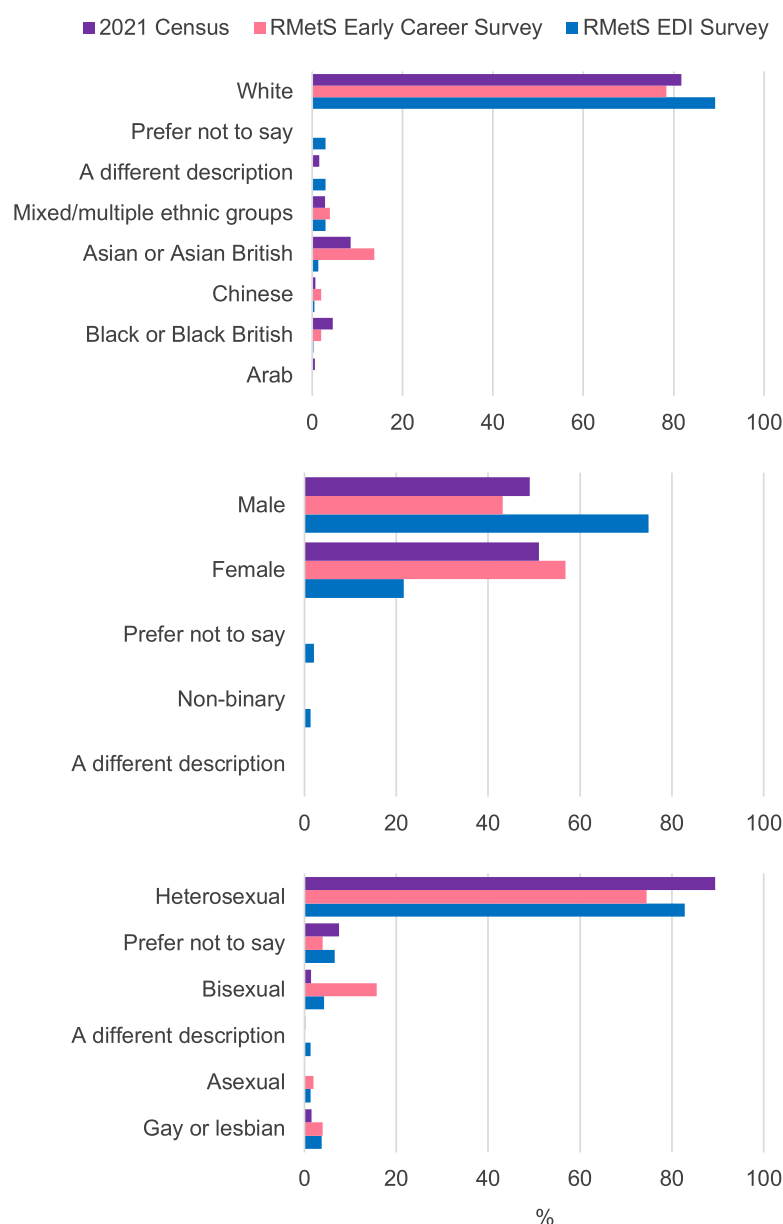

Figure 1. Results from the 2021 England and Wales census, RMetS EDI survey (filled out by ~10% of all RMetS members, corresponding to 380 people), and the RMetS Early Career survey (conducted at the 2023 Early Career & Student Conference, at which ~50% of the 100 attendees were interviewed). From top to bottom: proportion of respondents split by ethnicity, sex from the census and gender identity from the RMetS surveys and sexuality.

Figure 2. Diverse Voices speakers to date. Clockwise from top left: Regan Mudhar, Ashar Aslam, Anita Ganesan, Michael Lai, Charlie Williams, Chukwumerije Okereke, Marian Osei and Laila Gohar.

the diversity of its members. In this sense 'EDI' is something that is crucial for progress and innovation (Saxena, 2014; Galinsky *et al.*, 2015; Love *et al.*, 2022).

There can be a misconception from majority groups, in any field, that if minorities were truly interested or passionate about a subject, they would find a way to study it or pursue it as a career. However, there are numerous barriers to entry to education, and then a career, in a field such as ours, which tends to require well-educated, highly qualified people due to its technical nature. We believe that the lack of diversity in the UK's weather and climate field results from a lack of role models and support systems, both affecting recruitment and retention of under-represented groups. In other words, young people from certain backgrounds may not be entering the sciences or studying maths because they may not think it is 'for them'. It might be a cliché, but the adage 'you can't be what you can't see' touches on a truth; it may not even occur to some people to be a weather forecaster or climate scientist, for example, if they have never seen someone who looks like them doing it first. But even when under-represented groups start making their way in, how do we make sure they feel that this career is for them? Decades of entry barriers for ethnic minority groups, women and those from lower socio-economic backgrounds in particular may explain why we especially do not see diversity at the more senior levels. The issue is that we have been talking about 'trickle down' (or in this case, 'up') of diversity from early career to senior levels for decades too. It seems that a diverse range of people enter the field but there is some 'leaky pipeline' that means they end up leaving before they can, themselves, become role models at a senior level to further future generations of young people.

With a clear desire for role models and support systems emerging in 2023, especially among early career people of colour, RMetS supported the set-up of two new initiatives, which went live in 2024. One of these was the *Diverse Voices* speaker series (RMetS, 2024a). Open to all, these informal conversations celebrate the diversity of people working in and around the field of weather and climate. *Diverse Voices* provides an opportunity to showcase those early in their careers and their perspective, as well as for more senior people to share their experiences and advice directly with the audience – who can be anyone!

The first event was led by two PhD researchers – the authors of this article and co-hosts of the events so far – then Anita Ganesan, an associate professor at the University of Bristol, Laila Gohar and Michael Lai from the Met Office, Marian Osei and Chukwumerije Okereke, respectively from UKCEH and Bristol, and Charlie Williams, who has roles at both UCL and Bristol (Figure 2), with all talks available to watch back on the RMetS YouTube channel.[1] It is not only that we hear about the many different routes into the field, proving that there is no such thing as a 'standard' career path, but that the open (and unrecorded) Q&A at the end offers space for 'difficult' topics to be candidly discussed, with many of the events generating highly insightful conversation within and beyond the Q&A itself. Topics discussed include how the speakers' interest in the field developed, both positive experiences and barriers they have faced during their career, managing abrupt shifts in career trajectory, all the way to the importance of having supportive colleagues and managers who champion not just their work, but them as individuals. It

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[1] https://www.youtube.com/@rmets.

has been incredibly encouraging to see the openness of discussion between attendees and the speakers. One particular highlight has been hearing how to utilise existing skills as a means of both personal and professional development.

To have these kinds of conversation in isolation is important, but to hear these topics discussed among peers and with role models is legitimately encouraging. Feedback on the first *Diverse Voices* events were overwhelmingly positive. Not only did the speakers (and hosts!) enjoy themselves, greatly valuing the opportunity to be honest about their career paths, but the audience also left with much food for thought. A research fellow who attended the first event said '*I think the tone of that was perfect. [Regan and Ashar were] positive about your awesome experiences but definitely [showed] there is a lot of work to do!*', while a PhD student, who is themselves from an intersection of minority groups, said '*I think the Diverse Voices event was brilliant. … I personally don't have any role models that I can look up to in this instance… I think it's great that RMetS are approaching this issue head on by addressing the inequalities and also taking action to make a difference.*'

Outlook

We believe that over the last year we have seen the important role *Diverse Voices* can play in RMetS' EDI objectives (RMetS, 2024b), while also providing benefits to a wide range of individuals involved in the UK weather and climate community. The initial events primarily highlighted scientists with certain protected characteristics, as this was seen as a way to platform potential role models for under-represented groups in the field. Going forward, the series will shift focus onto more thematic areas, including research approaches and methodologies, 'hot topics', climate services and interdisciplinary partnerships. This shift will enable a greater breadth of topics to be discussed, showcase a wider variety of career paths and open the doors to a larger audience. There are many things we can all, not just minority groups, learn from each other! One of the strengths of *Diverse Voices* is that speakers have the space to show pride in both their successes and (relative) failures that ultimately shaped who and where they are now. Thus, visualising role models in this manner may prove to be particularly beneficial to early careers coming through today. If there is any key message from *Diverse Voices* so far, it is that there is no such thing as a 'standard' career – and that is okay!

We believe that diversity and inclusion can benefit everyone. Weather and climate is a science and career that should be for and should benefit everyone. It is well worth thinking about who we work with and who

our work stands to help. Simply educating, talking and being an ally can make a world of difference – not just to one person, but over time, to the field too. Through *Diverse Voices* we have been able to develop just one approach to having these important discussions, acting, we hope, as an initial stepping stone for the community to grow. Everyone is welcome to catch up on previous event recordings and attend our upcoming events – just keep an eye on the RMetS events page for announcements: https://rmets.org/events.

Author Contributions

Regan Mudhar: Conceptualization; writing – original draft; writing – review and editing. **Ashar A. Aslam:** Conceptualization; writing – original draft; writing – review and editing.

Data Availability Statement

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

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