# Recommendations for improving racial equality, diversity, and inclusion in the Department of Earth Sciences, University of Oxford

Ad hoc working group on BAME issues<sup>1</sup>

February 2020

#### Executive summary

This report intends to highlight areas where the Department of Earth Sciences at the University of Oxford ('the Department') might make changes or improvements to its existing structures and procedures to improve the recruitment and retention of Black, Asian, and minority ethnic students and staff.

Contained herein are 42 recommendations (concatenated for ease of reference in the Appendix), covering issues relating to school teaching and the effectiveness of outreach; admissions; the structure and design of the undergraduate course and its field trips; and the culture within the Department.

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<sup>&</sup>lt;sup>1</sup> Principal authorship: Benjamin Fernando and Gwen Antell. We wish to acknowledge the contributions of many additional members of the Department, including the participants of three workshop meetings. Roberta Wilkinson and J.D. Dianala assisted in revising this report. Ritwika Sengupta proposed valuable ideas and direction for early drafts.

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#### A. TERMINOLOGY

Academic – An employed researcher

AY – Academic Year

**BAME** – Black, Asian and Minority Ethnic

**DTP** – The NERC Doctoral Training Partnership PhD program

**HT** – Hilary Term (January – April)

**OUGS** – Oxford University Geology Society (the department's student club)

PG - Postgraduate students: PhD students studying for a degree by research

**Staff** – A member of the support or administrative teams

TT - Trinity Term (May - September)

**UG** – Undergraduate students, studying for a taught degree

UNIQ – Oxford's one-week summer school for underrepresented Year 12 pupils

**UNIQ**+ – The two-month equivalent for UGs looking to do PG study

#### B. STRUCTURE

Within these two sections, where recommendations are made, they are presented in the following format:

Consider/implement	Item	Timescale
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The first column indicates whether the authors are of the opinion that this item is one which should be actioned, or one which should be given consideration. The last column indicates the time by which we suggest the department should undertake an action (for 'implement'), or when a decision should have been made (for 'consider'). We expect the four possible responses to be: IN PROGRESS, ACCEPT, REJECT, and DEFER, with an explanation for each item as to the rationale behind the response.

Items are colour-coded for ease of reference. Those relating to UGs only are given in red, those relating to PGs only are in blue, and those relating to the department as a whole are in orange.

#### C. TIMELINE

After consultation with the department, the following timeline has been set:

Wednesday 12 February (week 4 HT): report released to department management Tuesday 18 February (week 5 HT): internal release to all department members Wednesday 8 April (week 12 HT (-2 TT)): department responses requested Wednesday 22 April (week 14 HT (0 TT)): report and responses released publicly

#### D. MOTIVATION

There is a clear need to improve the recruitment and retention of BAME people in geoscience. Recent studies suggest that there has been little to no progress in this

area over the last 40 years in the United States, where most research is focussed (Bernard and Cooperdock 2018; Dutt 2019). Unfortunately, there is a distinct lack of data from the UK.

The University of Oxford has improved the racial and ethnic diversity of its staff, academic and student membership in recent years. However, the representation of BAME students is still disproportionately low, as evidenced by the University of Oxford Annual Admissions Statistical Report, 2019.

This report demonstrates that the Department of Earth Sciences admits the lowest proportion of Black/non-Asian ethnic minorities UG students (4.7% of total admitted UK students between 2016 and 2018, roughly half that of the next-lowest department) of any of the 25 subjects for which statistics are reported. This is less than the proportion of BAME individuals within the UK population, and significantly lower than the proportion of non-white individuals in the 18-25 UK age group (the largest contributor to the 'home student' category).

Upon arrival of BAME students at higher education institutions around the country, their commonly reported concerns include racism, discrimination, and 'a pervading culture that struggles to welcome differences in race and ethnicity' (Campaign for Racial Awareness and Equality, 2014).

The rationale for undertaking this report is that there does not appear to be a clear route to addressing these issues, either within the wider geosciences community or within our department in Oxford. The suggestions have been made in good faith, and with the hope that the department will thoughtfully consider the actions which might be taken to increase the proportion of BAME academics, students, and staff within the department, and to better support them.

#### E. SCOPE

We consider recruitment to cover engagement and outreach activities, preinterview support, and the interviews themselves, at both UG and PG level. We consider inclusion to cover topics relating to the flourishing of BAME students as well as academics and staff within the department; we view inclusion as the precursor to retention.

Naturally, there is overlap between these categories, especially where inclusivity issues are known publicly and hence act as a barrier to recruitment. Affirmative measures taken on these topics will likely be of benefit to the entire community, not just BAME members of it (Powell, 2018).

Retention at PG level must first include retention at UG level, which will require considering long-term structural change. Thus, there are more recommendations in this report relating to the UG program as compared to the PG program.

Recruitment of staff and academics is not explicitly considered within this report, but we expect that the items relating to inclusion should create an atmosphere which is more inclusive and hence attractive to staff and academics from minority groups. This is not a topic within the expertise of any of the report's authors, but the department may wish to undertake an analysis similar to that below for staff/academic recruitment.

Should the department introduce taught PG programs in the future, it is likely that some of the recommendations currently in the UG section will also apply to at least some PG students.

This report is explicitly and deliberately qualitative rather than quantitative. In a department with so few BAME members, any individual data are immediately identifiable. Whilst this need for anonymity does make it challenging to ensure that the issues raised are representative of the concerns of the BAME community, the authors have taken steps informally to seek broad input. This has included focus group meetings, individual interviews, and discussions with experts in the topics of racial awareness and inclusion.

In addition to the named authors, a number of other individuals made valuable contributions to the recommendations included in the report. There are a variety of reasons why members of the department might not have wanted to be named as authors, however at least one contributor expressed a fear that this might affect their chances of internal career progression. Whilst this fear may have been unfounded, the department should ensure that a culture of openness and of constructive criticism about its policies exists such that no member of the department feels unable to speak out.

We do appreciate that whilst we have raised many concerns, we do not necessarily have the solutions to these problems; indeed, such solutions are likely to require input from the entire community and not just its BAME members.

This report neither carries nor seeks any official department endorsement or status, and has been undertaken by members of the department in their personal capacity. Nonetheless, we hope that both it and its recommendations will be taken in the good faith with which they have been compiled.

#### 1. STUDENT RECRUITMENT

#### 1.1 Teaching and recruitment

The prevalence of geology A-levels is not uniform across the UK, or indeed internationally. Students from wealthier schools often have a wider choice of available subjects and hence benefit from exposure to geoscience topics whilst in school, making these students more likely to apply to geoscience-related courses. This issue is particularly relevant to BAME school students, as certain ethnic minority groups experience higher levels of disadvantage and lower levels of school achievement than their white counterparts (Kirby and Cullinane, 2018)

1	IMPLEMENT	Ensure that the diverse pathways from school to a geoscience degree are well-highlighted on the department website, with clear case studies	AY 19- 20
		from current students where appropriate.	
2	IMPLEMENT	Ensure that the department is engaged with efforts to improve the teaching of geoscience-related subjects (e.g. geology, geography) undertaken by the UK's learned societies by establishing a designated point of contact, and sharing best practice.	AY 19- 20
3	CONSIDER	Encourage each of the department's research groups to produce a simple resource (talk, animation, video, slides, etc) on a topic of their choosing to showcase the diversity of research within geosciences, and link to this on the website under a 'resources for teachers' section.	AY 20- 21
4	CONSIDER	Implement a one-day taster sessions targeted at BAME school students from younger demographics than may be reached by UNIQ (e.g. Year 8).	AY 19- 20
5	CONSIDER	Assess whether the department can organise and resource day-long teacher information sessions, for school teachers interested in the geosciences and in a position to advertise the course to otherwise under-represented groups.	AY 20- 21
6	CONSIDER	Explore how best to expand efforts to attract sixth-form students interested in allied disciplines (mathematics, materials, physics) to consider geosciences as an undergraduate course of study.	AY 20- 21

#### 1.2 Familial/cultural expectations

Familial and cultural expectations exist for people of all backgrounds and the following suggestions will benefit all applicants. However, such expectations were highlighted as a particular barrier to entry into the geosciences by some of the students we interviewed. The reasons for this are discussed below.

Amongst members of some minority communities with historically low progression to higher education and with limited exposure to the geosciences, such a degree may seem to have several drawbacks as compared to a more common professional degree (e.g. medicine, law, engineering). Such minority communities might also have less exposure to 'outdoor' pursuits in a familial or vacation setting, and hence be intimidated by the course.

#### UG/PG/All

Common perceptions of Earth Sciences as a course include that it offers unclear pathways to a secure financial income, less formalised professional accreditation, and 'niche' rather than 'transferrable' academic skills may thus act as a barrier to participation, a perception which can in part be addressed through community engagement.

For some students from cultural or national backgrounds where natural resource extraction has historically been a source of environmental or societal injustice, the idea of studying a course in which this is a significant part may also be offputting. The perception that the career pathway from such a degree is predominantly oil and gas, or mining, focussed may be a further dissuading factor. Highlighting diverse paths out of the field, as well as into it, can counter this perception.

7	IMPLEMENT	Hold 'parents-only' and 'students-only' parallel	AY 19-
		sessions at the open day to ensure that both	20
		parties have a chance to freely ask questions	
		about an unfamiliar subject without fear of	
		embarrassment/conflict.	
8	IMPLEMENT	Produce an application guide for parents,	AY 19-
		addressing common questions about the degree	20
		and especially doing fieldwork. See also section	
		2.1, Fieldwork.	
9	CONSIDER	Consider the best way in which to showcase the	AY 20-
		diversity of careers (other than oil/gas and	21
		mining) and potential security of income	
		associated with a rigorous geosciences degree	
		when advertising the course.	
10	CONSIDER	Explore how to best advertise the course with	AY 20-
		the issues above in mind, seeking input from	21
		current BAME students and academics.	

#### 1.3 Cost

Given the prevalence of fieldwork within the geosciences, there appears to be a perception amongst prospective applicants (in discussions with them) that the degree is more expensive to undertake than other science degrees.

11	IMPLEMENT	Expand the section on the department website	AY 20-
		about fieldwork to give further details on	21
		funding for both UG travel (specifically the mapping project), including examples from past	
		years.	
12	IMPLEMENT	Give full support to internal University efforts	HT 20
		to abolish the graduate application fee.	

#### 1.4 Role models and outreach

Multiple surveys have documented lack of role-models as a leading deterrent to students from ethnic minorities entering higher education (UUK and NUS joint report, 2019).

13	IMPLEMENT	Encourage and nominate BAME members of	AY 19-
		the department for both showcase programs	20
		(e.g. the MPLS Beyond Boundaries initiative)	
		and recognition awards where appropriate.	
14	IMPLEMENT	Develop a PG-level outreach program designed	AY 20-
		to showcase students from ethnic minorities	21
		and encourage candidates from under-	
		represented backgrounds to apply.	
15	IMPLEMENT	Celebrate the diversity and successes of BAME	AY 19-
		department members specifically, for example	20
		during Black History Month (which may	
		include all BAME people).	
16	CONSIDER	Investigate how best to attract undergraduates	AY 20-
		from allied disciplines to consider geosciences as	21
		a postgraduate course of study.	
17	CONSIDER	Ensure that when planning outreach activities	AY 19-
		only open to/targeting one particular under-	20
		represented groups, the full spectrum of	
		potential intersectional issues is considered,	
		such that no unintended biases are introduced.	
		See also section 3.1, Intersectionality.	

# 1.5 Department marketing materials

Some of the older department marketing materials, especially for UGs, do not fully showcase the diversity of research or topics studied within the geosciences. Some appear to focus more on 'fun' field trips, often to locations in Europe or on skills which do not appear as transferrable (mapping versus coding for example).

18	IMPLEMENT	Extend the diversity of activities and fieldwork	AY 19-
		locations showcased in promotional materials to	20
		be more representative of both the topics and	
		locales of study within the department,	
		including computational or theoretical topics;	
		and fieldwork being done by academics in non-	
		European or developing countries.	
19	CONSIDER	Consider holding a specific PG open day and/or	AY 19-
		'PG application advice day', the latter targeted	20
		at students from non-geoscience UGs or	
		underrepresented backgrounds	

#### 1.6 Admissions

There is evidence of a 'significant unexplained gap' in Oxford's undergraduate admissions process (ADEX Report 09(17)) which favours white candidates in the Mathematical, Physical, and Life Sciences division within which the Earth Sciences Department sits. Detailed data are not available at postgraduate level.

20	IMPLEMENT	Build upon the commendable roll-out of	AY 19-
		unconscious/implicit bias training for all UG	20
		interviewers by also introducing specific racial	
		awareness training (available through the	
		University).	
21	IMPLEMENT	Build upon the DTP's introduction of	AY 19-
		unconscious bias training by mandating all PG	20
		interviewers to undertake it.	

#### 2 INCLUSION

### 2.1 Fieldwork and field trips

It is important to explain the purpose and structure of fieldwork to all prospective students. Some candidates may have fears about this aspect of the course (e.g. assuming it means no contact with home for weeks on end), or may not previously have experienced the ways it could further their own intellectual and personal development.

In many 'traditional' fieldwork areas (e.g. rural Europe) BAME students are the only people of colour in the community, and hence are in a more vulnerable or uncomfortable position. As raised in our focus group, a wider range of potential locations may serve to address this. Care should be taken to ensure that students are never excluded from potential fieldwork locations on the basis of ethnicity (in one recent example, a member of staff suggested in good faith a UG mapping project in an area where only white students would 'be able to go' [quote]).

Further, all of the department's undergraduate field trips are to 'field' locations — there are limited field trips involving applied geophysics, e.g. use of instrumental geophysical techniques. An urban setting or emphasis on applications may appeal to a broader spectrum of students who lack outdoor experience or with interdisciplinary interests.

Ī	22	IMPLEMENT	Ensure that new students have the opportunity	AY 19-
			to take part in an 'ask me anything' about	20
			fieldwork before their first field trip, guided by	

		older students and without staff present to	
	T. (D. E. (D. M.	discuss.	ATT 4.0
23	IMPLEMENT	Ensure that all students have the opportunity	AY 19-
		to take part in optional de-escalation training to	20
		deal with situations and/or experiences of	
		racism which may occur in fieldwork.	
24	IMPLEMENT	Ensure that there exists clear alternative	AY 20-
		provision for students unable or unwilling to	21
		undertake fieldwork for reasons of ethnicity or	
		race (in addition to other reasons for which	
		policies already exist); and that staff are aware	
		of racial concerns when suggesting potential	
		mapping project locations.	
25	CONSIDER	Explore whether the repertoire of field trips can	Next
20	CONSIDER	be expanded or modified to cover more diverse	course
		topics within the geosciences (e.g. relating more	review
		directly to natural hazards or populations), to	
		emphasise that geosciences are relevant to	
		modern, urbanised populations.	
26	CONSIDER	Ensure that when fieldwork is discussed in an	AY 20-
		outreach context, care is taken to leave	21
		potential students reassured about what is	
		required from them in terms of fieldwork.	

#### 2.2Alcohol

'Alcohol culture' is prevalent in the geosciences (Guertin 2019), and can hinder inclusion at conferences, networking events, field courses, and socialising opportunities for those who do not drink (Miller 2018). Religious and cultural norms are such that these individuals are often from BAME backgrounds.

Within our department, the only 'community service' activities which graduate students are expected to undertake are the organisation of the weekly happy hour and the Christmas Party.

The authors welcome the department's decision in 2019 to provide a non-alcoholic refreshment as well as prosecco for viva celebrations, which is a strong step forward in reducing the expectation that 'celebration' in the geosciences must include alcohol.

27	IMPLEMENT	Engage with the OUGS committee to discuss	AY 19-
		the inclusivity of their events, including the provision of non-alcoholic drinks and the existence of any kind of 'initiation', even an optional one, under pressure of alcohol consumption.	20
28	IMPLEMENT	Diversify the opportunities which PG students	AY 19-
		have for undertaking 'community service' to	

include events benefitting the wider community	
or events or events which do not include alcohol.	

# 2.3 Harassment support

The department has made a clear effort to ensure that a female demonstrator or member of staff/an academic is available both internally and on field trips to discuss any issues relating to gender or gender-based harassment, which we recognise is an important and positive step.

This could be built on by offering similar structures for BAME members of the department, such as a named point-of-contact for harassment related issues. Given the extremely small number of trained BAME harassment advisors within the university, this may be better served by identifying an individual willing to be trained.

29	IMPLEMENT	Seek a BAME member of staff or academic who	AY 19-
		is willing to receive training and be added to the	20
		list of department harassment advisors, or else	
		seek someone from a nearby department and	
		clearly advertise their contact details.	
30	IMPLEMENT	Expand the department's new UG peer support	AY 19-
		network to include PG students, and ensure if	20
		possible that at least one member at both PG	
		and UG levels is BAME.	

#### 2.4 Outreach support

Many students take part in access and widening participation activities within the department, with varying degrees of departmental support. Whilst this structure is flexible and is easy to manage, it does mean that oversight can be inconsistent.

31	IMPLEMENT	Enable members of the department to easily log	AY 19-
		outreach activities that they have taken part in,	20
		and provide department-sponsored recognition	
		for these efforts.	
32	IMPLEMENT	Create regular forums through which students	AY 20-
		and staff engaged in outreach and widening	21
		participation may come together to share ideas	
		and thoughts. Ensure that participants are	
		empowered to choose areas of greatest need and	
		activities of greatest effectiveness.	
33	IMPLEMENT	Include in long-term financial planning a	AY 20-
		strategy for paying students to take part in	21
		some (or all) department-sponsored outreach	
		activities, as is the case in other departments	
		(e.g. Physics).	

#### 2.5 Seminars

As the senior academic population in the geosciences is predominately white, it is unsurprising that the seminar series is delivered by mostly white individuals. The series could be developed to showcase issues relating to diversity and inclusion in addition to academic content, as well as efforts made to diversify the individuals invited to speak.

34	IMPLEMENT	Consider how the academics invited to deliver	AY 19-
		the seminar series can be diversified, for	20
		example by inviting younger academics who	
		tend to have better BAME representation; and	
		require the organisers to report back to the	
		department's Equality and Diversity	
		Committee on a termly basis outlining the steps	
		taken toward these aims.	
35	IMPLEMENT	Follow the lead of other departments in	AY 20-
		increasing the diversity of topics in the seminar	21
		series to include geoscience policy, societal	
		implications and diversity/inclusion.	

#### 2.6 Course structure and modules

Many BAME students identify curriculum design as a major contributor to ethnicity attainment gaps (UUK and NUS joint report, 2019). While humanities and social sciences subjects have begun to develop standard practices around decolonising curricula, many of these action points (e.g. including works from diverse authors in reading lists) may not translate easily into STEM subjects.

Diversification of the geosciences curriculum will therefore require introspection and consideration, perhaps drawing on work in allied fields (e.g. in archaeology; Croucher and Romer, 2007).

In regards to student course selection (and hence recruitment), the department might like to consider the way in which the current UG streams are perceived by prospective BAME applicants. While it is important not to play to stereotypes, there is still scope to allow the anticipated interests of potential students to influence course content and hence to attract the most diverse range of incoming students. This could include creating different streams within the UG degree (e.g. geophysics, planetary science, and natural hazards, etc.).

36	IMPLEMENT	Encourage lecturers to modify courses as	Next
		appropriate such that students are made more	course
		aware of the historical, social, or cultural	review
		contexts in which presented scientific	
		discoveries were found. This might include	

		discussion of the historical relationships between the geosciences and indigenous or	
		minority communities.	
37	IMPLEMENT	Ensure that modern, translatable skills (e.g.	Next
		coding) are as integrated into the UG degree as	course
		possible.	review
38	CONSIDER	Consider whether the creation of different	Next
		'streams' within the undergraduate degree	course
		might attract students with a more diverse	review
		range of backgrounds who might not consider a	
		course perceived to be pure 'geology'.	

## 2.7 Continuing action

In following up on these actions, the department should take care to ensure that initiatives are maintained and built upon in the coming years.

39	IMPLEMENT	Create a forum in which BAME members of the	AY 19-
		department are able to raise concerns and/or	20
		ideas, the setup of which can be decided by the	
		relevant members of the department.	
40	IMPLEMENT	Ensure that channels exist for regular	AY 19-
		engagement with groups working on diversity	20
		and inclusion both within and outside the	
		university, including student groups and	
		initiatives within Oxford (e.g. Oxford Afro-	
		Caribbean Society, Campaign for Racial Awareness	
		and Equality).	
41	IMPLEMENT	Ensure that appropriate resources are allocated	AY 19-
		to deal with the items within this report which	20
		the department chooses to address.	
42	IMPLEMENT	Commission an external review of issues	AY 21-
		relating to BAME representation and inclusion	22
		to follow up from this report after the	
		department has had sufficient opportunity to	
		respond.	

#### 3 GENERAL CONSIDERATIONS

#### 3.1 Intersectionality

This report focuses on racial and ethnic diversity in isolation in order to narrow the scope of suggestions to an area of diversity that has seldom been discussed in the department. However, many of the issues presented in this report may affect members of other marginalised groups as well. For instance, people with disabilities may have overlapping concerns with BAME students in regards to the perceived prominence of fieldwork in the course. The fact that barriers for separate minority groups overlap to some degree means that implementing the recommendations in this report could advance not only racial and ethnic diversity, but also diversity of gender, sexuality, socioeconomic status, religion, nationality, age, and disabled status.

It is also important to consider the ways that BAME people with multiple minority characteristics may face additional barriers to inclusion that have not been itemised in this report, a concept which is encapsulated in the idea of 'intersectionality'.

The intersection of gender and racial categories, for instance, leads to an especially strong exclusion of women of colour from professorships in the UK (Rollock, 2019). Therefore, when engaged with diversity and inclusion initiatives for any single minority group, such as Athena Swan for gender equality, we encourage an intersectional perspective of how members of that group might face additional obstacles if they belong to additional minority groups. Likewise, for general diversity initiatives (e.g. UNIQ), we recommend that evaluation consider the outcome for multiple minority groups (e.g. gender and race together), rather than focusing on one aspect of diversity for which the programme may be particularly successful (e.g. gender irrespective of race). This broader focus will allow assessors to notice aspects of diversity for which the initiative's contributions may be weak, and to strengthen the programme accordingly.

#### 3.2 Monitoring and assessment

An important and time-consuming component of diversity and equality agendas is the regular evaluation of each initiative's success. Choosing a metric of 'success' may be straightforward for some types of actions (e.g. tracking the application rate of BAME students in response to recruitment actions).

However, some aspects of inclusion, such as a feeling of belonging, may be difficult to quantify, and the number of BAME students in the department is currently so small that qualitative feedback might be identifiable. It would be good practice to monitor the outcomes of recommendations implemented from this report, but assessment may not be necessary for every recommendation.

#### 3.3 Resource allocation

We suggest that the department undertake a prioritisation exercise on itself upon receipt of this report, to decide upon a timeline for progression in relation to these actions.

Alternatively or in addition, it might be helpful for the initiatives to select a subset of recommendations that span the categories in this report. Regardless of the order in which the department pursues recommendations in this report, it is essential to develop a long-term commitment and strategy to fulfilling in-progress changes

and initiating new actions. A standing item in the Workplace and Equality Committee could be one way to ensure accountability to this agenda.

Any action will require some form of resource input, such as financial support or staff time. The authors recognise that in some cases, the thorough pursuit of racial and ethnic equality may seem to come at the cost of research, outreach, or engagement activities. We remain willing to assist with the work relating to the actions in this report, though it is crucial that the share of equality and diversity work being done by graduate students within the department does not increase substantially.

Recruiting and supporting students and staff from diverse backgrounds, including under-represented racial and ethnic groups, is indispensable to the mission of the department to advance the Earth Sciences. Given the current state of racial and ethnic diversity in geosciences (see 'Motivation'), it is paramount to prioritise diversity and equality actions in the departmental agenda.

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#### 5 APPENDIX

A full list of suggested action items is given in the Appendix as a spreadsheet. This format allows the sorting of actions according to category, advised completion date, or group (UG, PG, or all department members). The spreadsheet could also be used as a base template for tracking in-progress and completed actions.