

**Low ethnic diversity among university applicants in marine and environmental science in the
United Kingdom**

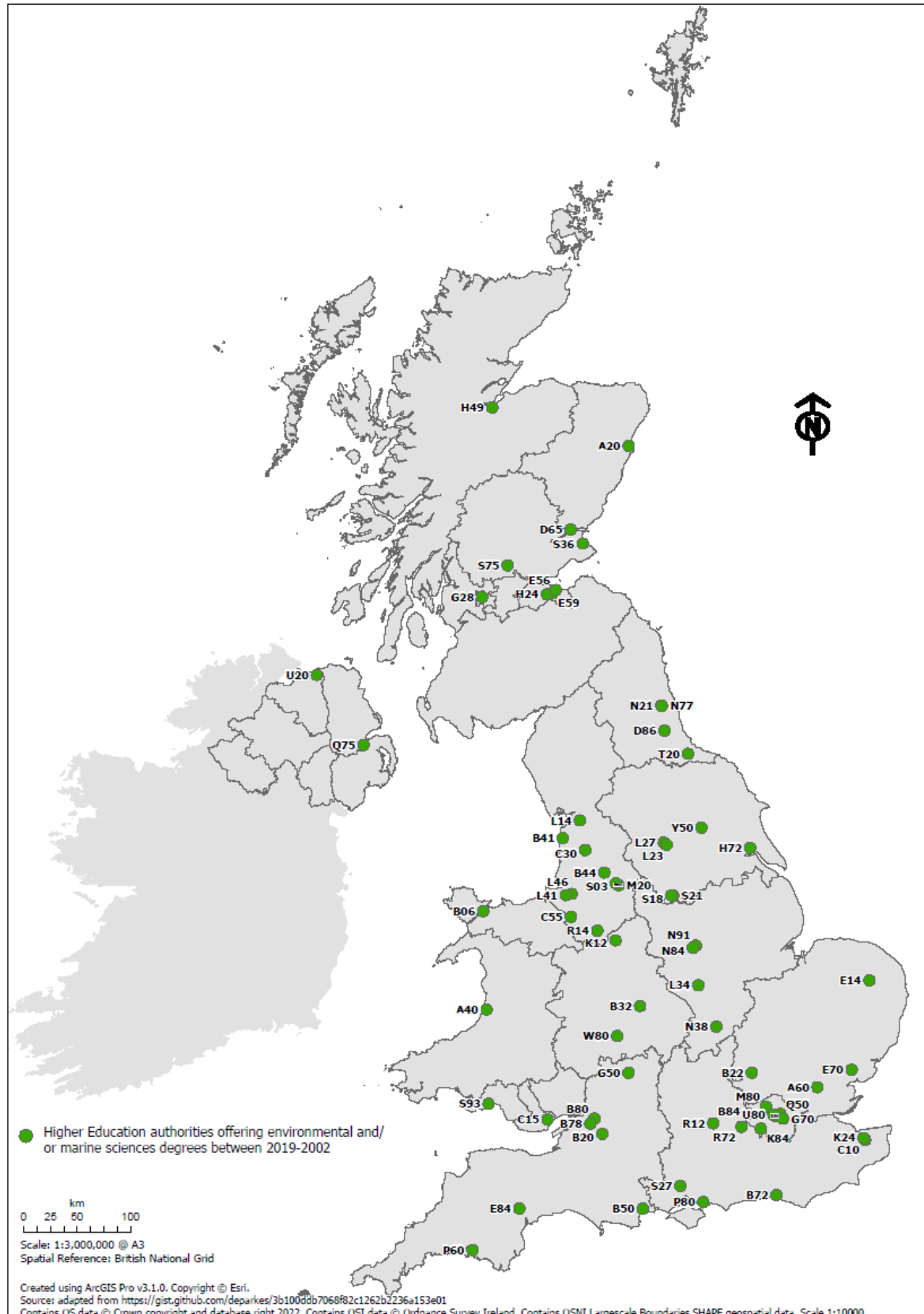
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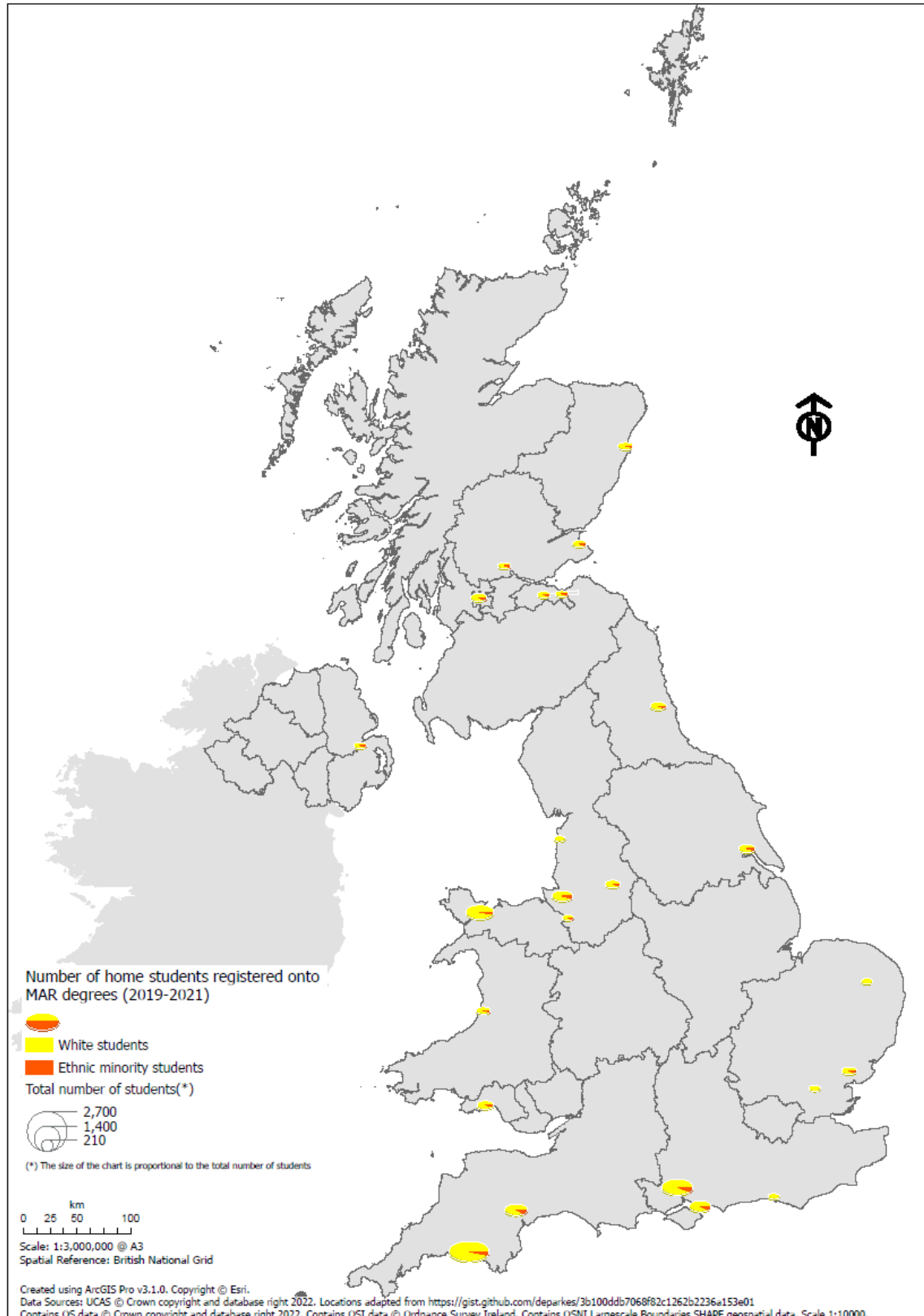
Supplementary Figure 1: Location of Higher Education institutions in the United Kingdom that offer degrees in marine and environmental sciences

Supplementary Table 1: Codes to Higher Educational institutes presented in Supplementary Figure

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CODE	High Education authority
A20	University of Aberdeen
A40	Aberystwyth University
A60	Anglia Ruskin University
B06	Bangor University
B20	Bath Spa University
B22	University of Bedfordshire
B32	University of Birmingham
B41	Blackpool and the Fylde College
B44	University of Bolton
B50	Bournemouth University
B72	University of Brighton
B78	University of Bristol
B80	Bristol, University of the West of England
B84	Brunel University London
C10	Canterbury Christ Church University
C15	Cardiff University
C30	University of Central Lancashire
C55	University of Chester
D65	University of Dundee
D86	Durham University
E14	University of East Anglia UEA
E56	University of Edinburgh
E59	Edinburgh Napier University
E70	University of Essex
E84	University of Exeter
G28	University of Glasgow
G50	University of Gloucestershire
G70	University of Greenwich
H24	Heriot-Watt University
H49	University of the Highlands and Islands (UHI)
H72	University of Hull
K12	Keele University
K24	University of Kent
K60	King's College London, University of London
K84	Kingston University
L14	Lancaster University
L23	University of Leeds
L27	Leeds Beckett University
L34	University of Leicester
L41	University of Liverpool
L46	Liverpool Hope University
M20	University of Manchester
M40	Manchester Metropolitan University

M80	Middlesex University
N21	Newcastle University
N38	University of Northampton
N77	Northumbria University, Newcastle
N84	University of Nottingham
N91	Nottingham Trent University
P60	University of Plymouth
P80	University of Portsmouth
Q50	Queen Mary University of London
Q75	Queen's University Belfast
R12	University of Reading
R14	University Centre Reaseheath
R72	Royal Holloway, University of London
S03	University of Salford
S18	University of Sheffield
S21	Sheffield Hallam University
S27	University of Southampton
S36	University of St Andrews
S75	University of Stirling
S93	Swansea University
T20	Teesside University, Middlesbrough
U20	Ulster University
U80	UCL (University College London)
W80	University of Worcester
Y50	University of York



Supplementary Figure 2: Proportion of white vs ethnic minority students registered onto marine science degrees at higher education authorities in the UK between 2019-2021.

Supplementary Table 2: Number of applications and acceptance rate across marine sciences courses

Row Labels	Sum of Number of Unique Applicants	Sum of Number of Acceptances	% Acceptances	
Asian	145	85	58.6	The chi-square statistic is 0.0006. The p-value is .981081. The result is not significant at $p < .05$.
Black	60	35	58.3	The chi-square statistic is 0.0001. The p-value is .993862. The result is not significant at $p < .05$.
Mixed	355	195	54.9	The chi-square statistic is 0.4591. The p-value is .498057. The result is not significant at $p < .05$.
Not applicable	1505	635	42.2	
Other	40	25	62.5	The chi-square statistic is 0.0694. The p-value is .792185. The result is not significant at $p < .05$.
Unknown	65	35	53.8	The chi-square statistic is 0.1506. The p-value is .697939. The result is not significant at $p < .05$.
White	7385	4315	58.4	
Grand Total	9555	5325	55.7	

Supplementary Table 3: Number of applications and acceptance rate across marine and environmental sciences courses

Row Labels	Sum of Number of Unique Applicants	Sum of Number of Acceptances	% Acceptances	
Asian	560	255	45.5	The chi-square statistic is 15.2309. The p-value is .000095. The result is significant at $p < .05$.
Black	240	125	52.1	The chi-square statistic is 0.2263. The p-value is .634316. The result is not significant at $p < .05$.
Mixed	630	335	53.2	The chi-square statistic is 0.2162. The p-value is .641943. The result is not significant at $p < .05$.
Not applicable	3665	1275	34.8	
Other	100	55	55.0	The chi-square statistic is 0.0001. The p-value is .992712. The result is not significant at $p < .05$.
Unknown	130	75	57.7	The chi-square statistic is 0.1145. The p-value is .735053. The result is not significant at $p < .05$.
White	12410	6815	54.9	
Grand Total	17735	8935	50.4	

Supplementary Table 4: Quantitative responses from course and module leaders for the question:
Where do you believe the difficulty to recruit ethnic minority students arises from?

Category	Number	Percentage
Unsure/Don't Know	14	31.1%
There is no targeted recruitment/Recruitment is too generalised	2	4.4%
Limited Number of Visible Role Models in Marine Science/ Within the Academic Team	5	11.1%
Potentially Unfavourable Opinions about Career Prospects and Future Income	9	20%
Geographical Accessibility	3	6.7%
Unconscious Bias in Recruitment	1	2.2%
Perception by Course Leader that there is a difficulty recruiting Ethnic Minority Students in STEM	2	4.4%
Conflation of Ethnic Minority Students with Working Class Students	2	4.4%
Low Number of Interested Students	3	6.7%
Lack of Information at the School Level	1	2.2%
Other	3	6.7%
Total	45	100%

Supplementary Table 5: Quantitative responses from course and module leaders for the question:
Can you give your thoughts on what steps you would like your HE Institute to take?

Category	Number	Percentage
Targeted Recruitment (such as focussed marketing)	2	4.4%
Direct Incentives such as Scholarships and Widening Participation Activities	4	8.9%
Speaking Directly to Ethnic Minority Students to See what would appeal to them	2	4.4%
Unsure	1	2.2%
Did not respond	11	24.4%
Recruitment and Activities at the School Level - In Areas with higher Number of Ethnic Minority Students	7	15.6%
Broaden Appeal of the Course by Elaborating on the Career Prospects	3	6.7%
Other	1	2.2%
Reduce Unconscious Bias at the University Level	1	2.2%
Outreach in areas with little access to the ocean	1	2.2%
Increase diverse staff and representation at a University Level	11	24.4%
Showcase international impact of Marine Science Research	1	2.2%
Total	45	100%

