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RESEARCH ARTICLE

Key opinion shapers' perceptions of climate migration: Why and how to put climate justice at the centre of climate change education.

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Maria Sakellari

School of Art & Media, University of Brighton, Brighton, England, BN2 0JY, UK

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Abstract

The domain of climate justice has yet to receive sufficient attention in the realm of research on climate change education. This paper seeks to address the significant issue of migration as a result of climate change, which is widely regarded as a major injustice. Specifically, it aims to examine how journalists, NGOs, and policy makers conceptualise climate migration and the related concept of climate justice. These actors play a critical role in shaping individuals' understanding of climate change and their ability to make informed decisions about it. The study utilises its generated results to propose a structure for prioritising climate justice in climate change education, with the aim of facilitating the societal revaluation of climate change.

Keywords

climate change education, environmental education, climate justice, climate migration

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Any reports and responses or comments on the article can be found at the end of the article.



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Corresponding author: Maria Sakellari (sakellari@gmail.com)

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Introduction

The significance of education in tackling the present climate crisis has been emphasised by the United Nations Sustainable Development Goals and United Nations Framework Convention for Climate Change. These include UNFCCC 1992, UNESCO 2009 and 2010, and UNESCO & UNFCCC 2016. Consequently, there has been a growing interest among scholars in the field of environmental and climate change education regarding the attainment of the climate change education objective, as stated by Kagawa and Selby (2010):

> "*The learning moment can be seized to think about what really and profoundly matters, to collectively envision a better future, and then to become practical visionaries in realizing that future*." (p.4)

According to Kagawa and Selby's (2010) perspective, the provision of climate change education that is both ethical and sufficiently responsive is contingent upon the inclusion of global climate justice education.

> "*Missing from most climate change education, especially in wealthier societies, is an appreciation that the metaphorical North of the planet is primarily responsible for carbon buildup but that its effects are coming thickest and fastest to the peoples and societies of the South*." (p. 242)

Climate change presents a significant injustice whereby the nations that will experience the most severe and immediate consequences are those that have made the smallest contributions to global carbon emissions (Cox & Pezzullo, 2016). This injustice is particularly evident in the displacement of individuals who possess limited capacity to safeguard themselves (El-Hinnawi, 1985). The intersection of climate change, migration,and injustice has been frequently observed in developing countries, including Pacific Island nations (McNamara & Gibson, 2009), South Asian countries (Islam Rezaul & Shamsuddoha, 2017), and African countries (Kniveton *et al.*, 2011).

Despite the identification of climate change's impact on human migration almost three decades ago (IPCC, 1990), the discourse surrounding climate change and migration in the public sphere is primarily centred around security concerns, risk management, and emergency response, rather than policy and institutional initiatives aimed at mitigating social vulnerability to the effects of climate change. The phenomenon of climate migration is currently being portrayed as a potential crisis in both policy and media spheres. This narrative is often accompanied by depictions of large-scale floods of individuals displaced by climate-related factors, particularly from regions in the southern hemisphere (Bettini, 2013; Bettini, 2014; Sakellari, 2021).

Over the past few years, there has been a shift in the migration discourse from security and emergency management to development. According to international policy documents and academic literature, it is recommended to view migration as a climate change adaptation strategy rather than a problem. This involves facilitating the voluntary migration of affected individuals to less vulnerable regions, where they can seek employment and contribute to the resilience of their community. Although migration narratives that depict adaptation can counteract fear-mongering discourses, they also represent a regressive approach that deviates from the notion of a fundamental injustice underlying climate change and the corresponding obligation to act. This is one of the factors that contribute to the problematization of climate change in the context of social justice, as noted by Bettini *et al.* (2017).

Given the ongoing debate surrounding the correlation between climate change and migration, it is imperative to consider how to advance a novel climate justice-oriented discourse pertaining to migration triggered by climate change. This discourse should underscore the fundamental entitlements of individuals impacted by climate change. What educational strategies are necessary to enhance the understanding of stakeholders such as policy makers, institutions, and the general public regarding the significance of the matter at hand?

The value of climate change education has been acknowledged not only in formal education but also in non-formal and informal education (Monroe *et al.*, 2017). This paper aims to enhance climate change education research by examining how journalists, NGOs, and policy makers conceptualise climate migration and climate justice. These actors are crucial in the context of non-formal and informal environmental learning (e.g., Blum, 2009; Hausknost *et al.*, 2018; Skanavis & Sakellari, 2008; Walls *et al.*, 2008). Following to the results attained, the paper offers suggestions on how educational approaches to climate change could engender novel modes of analytical reasoning and communal involvement in the pursuit of climate equity. The present study addresses a significant void in the existing body of literature, as the domain of climate justice has received inadequate attention in the realm of research on climate change education (Stapleton, 2019). For this purpose, the paper focuses on the United Kingdom (UK), a traditional host country for migrants and refugees and a country where climate justice remains neglected in dominant discourses about the social nature of climate change (Sakellari, 2021).

Climate justice and migration

The issue of climate change is a complex and extensive problem that requires attention to be directed towards not only the physical mechanisms that are driving climate change, but also towards the social, political, and economic processes that must be altered to address its effects in terms of causation, mitigation, and potential adaptation (Gonzalez-Gaudiano & Meira-Cartea, 2010). The concept of climate justice, as posited by Moore and Russell (2011), underscores the interplay between social structures of inequality and oppression and the exacerbation of climate change. According to Faber and Schlegel (2017), climate-related injustices can be observed in various forms. Firstly, there are socioeconomic injustices that are unfairly imposed by those in power, such as capital and the state, on the most vulnerable members of society. Secondly,

there are international injustices where richer countries in the Northern hemisphere disproportionately impose the negative effects of climate change on the global South. Lastly, there are intergenerational injustices where present generations unfairly burden future generations who are unable to voice their concerns.

Climate migration is considered one of the most significant manifestations of climate injustices. The impact of poverty on climate-induced disaster risk and subsequent migration is significant. This is because individuals who are impoverished and lack power are often left with no choice but to reside in regions that are more prone to disasters and susceptible to climate-related pressures. These areas are often characterised by cheaper and more abundant land (Faber & Schlegel, 2017). The susceptibility to the effects of climate change in climate migration hotspots located in the global south has been intensified by a prolonged history of colonialism and disregard by nations in the northern hemisphere (Cameron, 2012).

The issue of climate justice encompasses multiple facets, including the disproportionate allocation of consequences and accountability, as well as the allocation of expenses and advantages associated with policies and measures aimed at addressing climate change (Preston *et al.*, 2014). The issue of climate migration encompasses various injustices, such as the predicament of trapped populations who aspire to relocate but are unable to do so, the disproportionate impact on disadvantaged regions both as sources and hosts of migration, and the absence of adequate international legal safeguards for affected individuals (Thornton, 2018). The insufficiency of acknowledgement and incorporation in political deliberations, as well as the protection of the human rights of individuals impacted by climate change-induced statelessness, are also areas of apprehension.

The discourse surrounding climate justice has been a topic of academic and policy discussions, with a particular emphasis on the various interpretations and implementations of justice. However, a separate discourse has emerged from grassroots movements. The concept of climate justice, as articulated in various social movements, centres on the examination of the localised impacts and experiences of climate change, the identification of inequitable vulnerabilities, the recognition of the significance of community voice, the assertion of demands for community sovereignty and functioning, and the pursuit of a just transition towards a post-carbon economy (Schlosberg & Collins, 2014).

The salient aspect to note is that the configuration of rights and responsibilities in the realm of climate change serves as an indicator of how inequalities are comprehended and operationalized. The process of securitizing migration caused by climate change tends to negate the Western world's involvement in the broader social, political, and economic factors that contribute to such migration (White, 2011). Conversely, the categorization of individuals impacted by climate change into two discrete groups, namely 'climate migrants' and 'climate refugees', may have implications for their legal rights and ability to obtain humanitarian aid.

As time progresses, it becomes increasingly apparent that prevailing public discourses surrounding migration induced by climate change are regressive in their approach to addressing issues of justice. Specifically, these discourses fail to adequately consider why certain individuals and communities are more susceptible to the impacts of climate change, and why those who contribute significantly to pollution bear a responsibility to provide restitution to affected parties (Bettini, 2013; Bettini, 2014; Sakellari, 2022). During a recent Guardian event, John Kerry, the former US Secretary of State, cautioned Europe about the potential for migration chaos if prompt measures are not taken to adequately tackle climate change (Wintour, 2018). However, such a scenario could potentially result in policy formulations that may not cater to the needs of individuals who require relocation, or worse, impede their ability to do so. Climate security discourses tend to racialize Muslim and African migrant populations as being susceptible to terrorism or radicalization (Telford, 2018),

Considering the uneven distribution of climate change effects and the resulting implications, as evidenced by the intersection of climate change and migration, it is imperative to adopt a strong and equitable approach to facilitate collaborative efforts aimed at mitigating climate change and promoting adaptation in the regions that are most severely impacted. Numerous scholars have observed that the process of transformation invariably necessitates a concentration on education (Anderson, 2012; Hägglund & Samuelsson, 2009; Sharma, 2012). As emphasised by Kagawa and Selby (2010):

> "*education has a role in challenging and rolling back climate change injustice.*" (p. 242)

Climate change education for climate justice

Education for Sustainable Development (ESD) incorporates climate change education as a fundamental component. The notion of ESD has emerged from the field of Environmental Education (EE). The main aim of Environmental Education (EE) is to encourage environmental action within the framework of environmental issues, as stated by Chawla and Cushing (2007) and Jensen (2004). ESD was established as a comprehensive educational framework by UNESCO during the 1997 International Conference on EE in Thessaloniki in response to the growing complexity of environmental issues and sustainability challenges. This framework highlights the importance of incorporating environmental, social, economic, and political dimensions and was further reinforced by the United Nations Decade of ESD (2005–2014). In the years that followed, climate change education became a key theme of the programme (Waldron *et al.*, 2019).

However, as Westheimer and Kahne (2004) assert, EE and ESD prioritise individual action over collective action and political involvement. This exclusive emphasis on individual actions, without considering the actions of others, presents a limited understanding of the interplay between climate change and

the wider structural, financial, and cultural framework within which greenhouse gases are released. This perspective fails to acknowledge that numerous influential climate actions are determined by policy and market sector actors at the state and corporate levels, who are under direct influence from advocacy coalitions and other social groups (Jorgeson *et al.*, 2019; Waldron *et al.*, 2019). The emphasis on individual actions not only serves to mitigate the impact of wider economic, social, and political factors, but also reinforces the inactivity of influential stakeholders and diminishes the significance of their obligation to address this predicament (Huckle & Wals, 2015; Schild, 2016). This may potentially perpetuate the existing situation and promote conventional growth patterns, rather than facilitating a transformative shift. It is improbable that either of these approaches would pose a challenge to prevailing ideologies and promote involvement with matters of justice. This rudimentary understanding of education serves to obscure the ways in which climate change and the environment are perceived, particularly in relation to colonialism. The extraction and exploitation of natural resources from colonies and their inhabitants played a significant role in the economic advancement of the colonisers.

Despite the limited number of empirical studies in climate change education research that concentrate on the social aspect of climate change (Monroe *et al.*, 2017), current empirical research presents compelling proof of the necessity for the fields of EE and ESD to adopt a more engaged approach, as proposed by Adlong (2012), that incorporates knowledge concerning social movements associated with climate change into their policies and programmes. Waldron *et al.*, (2019) showed that individuals within the educational system in Ireland exhibited a restricted comprehension of the ramifications of climate change on individuals, particularly those from impoverished communities who have made the least contribution to climate change. Additionally, the concept of climate justice was unfamiliar to these individuals. In their 2012 study, Kenis and Mathijs conducted qualitative research on a cohort of 12 young adult environmentalists in Belgium. The study revealed that the participants' adoption of individual behaviour change was not motivated by its perceived effectiveness in mitigating climate change. Rather, the participants felt constrained from engaging in collective social actions, which they deemed essential. According to Howell and Allen's (2019) study, a sample of 85 adults who were engaged in climate change mitigation and education in the UK exhibited a greater inclination towards social and political motivations as opposed to environmental motivations when undertaking their actions. The study conducted by Fisher (2016) examined the life cycle of commitment to climate activism among a sample of 17 young individuals hailing from 14 different countries. The findings of the study revealed that the participants' commitment to climate activism was closely associated with their concern for social justice. Stapleton (2019) conducted a qualitative investigation on climate-engaged students in the United States. The study revealed that incorporating climate justice as a focal point in climate change education can provide a compelling impetus for individuals to engage in action.

Empirical research also points out the importance of non-formal and informal educational processes to promote engagement with climate change (e.g., Geiger *et al.*, 2017; Sellmann & Bogner, 2012). At this point, it is worth noting that several scholars argue that it is difficult to differentiate non-formal and informal learning, and for this reason, these educational processes are both termed as informal or free-choice learning (e.g., Ballantyne & Packer, 2006; Falk & Dierking, 2002; Falk *et al.*, 2007). Free-choice learning occurs outside school settings, at home and through social interactions, at sites including national parks, nature centres, natural history museums, zoos and aquariums, a wide range of community-based organizations and NGOs and by print and digital news media and social media (Falk, 2005; Kola-Olusanya, 2005). As such, in general, in the literature the potential of free-choice environmental learning towards fostering engagement with environmental issues has been mainly explored in the context of adult education (e.g., DeGregoria Kelly *et al.*, 2014; Skanavis *et al.*, 2005; Skanavis & Sakellari, 2012). However, integrating free-choice and formal environmental learning experiences can encourage learners to engage in environmental behaviours throughout their lifespans (Ballantyne & Packer, 2005). As Kola-Olusanya (2005) points out:

> "*significant environmental learning will best occur based on a child's constructive engagement with the opportunities presented in free-choice contexts and sectors*" (p. 304).

This study endeavours to investigate the perspectives of journalists, non-governmental organisations (NGOs), and local policy-makers regarding climate change-induced migration. These actors are crucial in facilitating voluntary climate change education experiences. The study aims to gain insights into their perceptions of obstacles that hinder the framing of climate justice in the context of climate-induced human mobility. Subsequently, the paper utilises the generated findings to facilitate the formulation of climate change education tactics aimed at enhancing the public and policy comprehension of climate justice.

The research context

Between October 17th, 2018, and March 31st, 2019, an online survey was conducted among journalists, NGOs, and policy-makers in the UK. The purpose of the survey was to investigate their perspectives on climate migration and climate justice. The recruitment of participants was conducted through various channels, including e-mail, mailing lists, and Twitter. E-mails were sent to (i) journalists who were identified as being employed by online, local, and national news media organisations, (ii) personnel of local, national, and international NGOs who were identified as working on environmental and/or humanitarian initiatives, and (iii) public officials and members of local councils who were identified as being involved in migrant and refugee integration and/or environmental initiatives. Various organisations, such as news media establishments and groups focused on humanitarian, environmental, and climate change initiatives, were requested to disseminate the survey to their respective memberships.

Methods

According to Kahan (2014), the examination of intricate subjects, such as climate change, reveals a strong correlation between belief and opinion with culture and social affiliation. Individuals are inclined to accept or reject evidence based on their allegiance to self-defining cultures, values, and social group membership. Consequently, inquiring about a disputed matter such as migration caused by climate change may elicit deceitful responses from participants who seek to comply with established societal standards, thereby introducing a bias known as social desirability (Fisher, 1993). The survey questions were formulated based on the theory of planned behaviour (Ajzen, 1991), which is widely recognised as the most used predictive model of environmental behaviour. The objective was not to gather self-reported opinions on climate migration and climate justice, but rather to elicit data on individuals' attitudes, preferences, and intentions to address the injustice associated with climate-induced forced migration. It is noteworthy that the theory of planned behaviour centres on individual behaviour and has predominantly been employed in scholarly works to comprehend individual-level behavioural modifications, such as recycling or the adoption of sustainable practises (Park & Ha, 2014; Sakellari *et al*., 2016). The model has been utilised as a framework to investigate factors that influence involvement in environmental decision-making procedures (Sakellari & Skanavis, 2013) and group environmental activism (Fielding *et al.*, 2008; Fox-Cardamone *et al.*, 2000).

The theory of planned behaviour posits that human behaviour is influenced by three types of beliefs: behavioural beliefs, normative beliefs, and control beliefs. Behavioural beliefs are based on the perceived outcomes of a given behaviour, while normative beliefs stem from social expectations. Control beliefs, on the other hand, are related to practical or logistical factors that may facilitate or hinder the performance of a behaviour. According to Ajzen (1991), a stronger intention towards a particular behaviour increases the likelihood of an individual engaging in that behaviour. The model posits that an individual's intention to engage in a behaviour at a particular time and place can be explained. Accordingly, a behaviour was selected to constitute each target group scenario in every questionnaire. Each behaviour was selected based on its potential to yield substantial benefits in terms of increasing public awareness and inspiring policy changes aimed at addressing the inequities associated with climate change-induced migration. These changes would necessitate individuals modifying their behaviour to some extent and participating in collective social actions. The aforementioned items were:

i. Coverage and publication of the injustice of climate change induced migration by journalists. Journalists are not always afforded the liberty of selecting the narratives they are tasked with covering. The present scenario was devised under the premise that the participants, who are journalists employed by online news media outlets, possess the autonomy to determine the substance of the stories they are tasked with creating or revising. It is noteworthy to mention that contemporary online media platforms are altering the manners in which audiences engage with and consume news. The primary feature of the contemporary digital media landscape is the significant expansion of public access to both the consumption and production of information.

ii. Engage in, support or lead a project or a campaign by NGOs staff members to raise public and policy awareness about the injustice of climate change induced migration.

iii. Campaign or lead a local campaign by local public officers/council members to raise public and policy awareness about the injustice of climate change induced migration.

Each questionnaire included closed questions about attitudes (behavioural beliefs), social norms (normative beliefs) and perception of barriers (control beliefs), as well as behavioural intentions. Questions for each social group are provided in Table 1–Table 4.

In order to build the survey sample, publicly available e-mails of journalists working in online news media from all over the UK, public officers and members of local councils across the UK and NGOs staff involved in environmental or/and humanitarian project were picked and a database of 835 journalists e-mail addresses, 250 e-mail addresses of public officers and members of local councils across the UK and 85 e-mail addresses was developed. The JISC Online Surveys, an online survey development cloud-based software and University of Brighton's research services provider, was used to collect responses anonymously and prevent tracking of respondents' IP addresses. Selected participants received an e-mail invitation to participate in the survey on mid-October with a link to the survey. Three further reminders were sent by e-mail and surveys that were fully completed were taken forward to be used in the final analysis. The survey was closed at 12:00 (GMT) on 31 of March 2019.

At this point, it is important to note that questions about gender identity can be hard to answer in the social sciences. (Sakellari & Skanavis, 2013). A person's way of identifying or showing their gender does not have to be the same as the gender they were given at birth. Also, studies show that the gender identity of participants may not be the best way to predict several different attitudes or behaviours. Lindqvist *et al*. (2018) found that a person's interest in gender problems may be a better predictor of how they feel about sexism than their gender identity. So, as a categorical variable, gender identity may not be a good enough predictor of some views or behaviours. For example, previous study (Sakellari & Skanavis, 2013) found that women care more about the environment than men do. However, Strapko *et al.* (2016) found that environmental concern is affected by how people feel about social roles, not by social roles themselves. They also found that caring about other people makes a person care more about the world, and that this effect is the same for both men and women. So,

Table 1. Behavioural beliefs questions for each social group.

Social group	Journalists	NGOs staff members	Local public officers and policy-makers
Behavioural beliefs	Do you think that more immigrants to the UK are making crime situation better, worse or not having much effect?	In your role as an active citizen/NGO professional, do you work, or have you ever worked on an environmental project?	Please tell me whether you strongly favor, favor, oppose or strongly oppose the following proposal: A full commitment and collaboration of all stakeholders (local authorities, national government, etc) is needed to set out policies and programmes to respond to climate change induced migration and provide full support and rights protection to people affected.
	Please tell me whether you strongly favor, favor, oppose or strongly oppose the following proposal: People forced to migrate due to climate change impacts (e.g., sea level rise, weather extremes) should be granted asylum and allowed to live in the UK.	Please tell me whether you strongly favor, favor, oppose or strongly oppose the following proposal: People forced to migrate due to climate change impacts (e.g., sea level rise, weather extremes) should be granted asylum and allowed to live in the UK.	Please tell me whether you strongly favor, favor, oppose or strongly oppose the following proposal: People forced to migrate due to climate change impacts (e.g., sea level rise, weather extremes) should be granted asylum and allowed to live in the UK.
	Do you think that there are people and communities in the UK who will eventually be forced to relocate due to climate change impacts (e.g., sea level rise, weather extremes)?	Please tell me whether you strongly favor, favor, oppose or strongly oppose the following proposal: The UK, one of the world's top emmitters of carbon dioxide, owes redress to those who will eventually be forced to migrate due to climate change impacts (e.g., sea level rise, weather extremes)?	Please tell me whether you strongly favor, favor, oppose or strongly oppose the following proposal: The UK, one of the world's top emmitters of carbon dioxide, owes redress to those who will eventually be forced to migrate due to climate change impacts (e.g., sea level rise, weather extremes)?

Table 2. Normative beliefs questions for each social group.

Social group	Journalists	NGOs staff members	Local public officers and policy-makers
Normative beliefs	If you were asked to produce or edit content on climate migration, what do you think would be the response of your colleagues/friends and family?	If you were to contribute to the implementation of/lead a project/campaign on climate change induced migration, what do you think it would be the reaction of your colleagues/friends and family?	If you were to support/participate in a local initiative on climate change induced migration, what do you think it would be the reaction of your colleagues/friends and family?
	Do you consider climate change induced migration a newsworthy topic?	In your opinion, how will audiences/local community react to a campaign on climate change induced migration?	In your opinion, how will local communities react to a campaign on climate change induced migration?
	Do you think that a climate justice angle (poor people and countries, who did the least to cause climate change, would be the first in the line of fire) would spice up/increase readership of a climate change story?	Do you think that a climate justice angle (poor people in the UK, as well as in other countries, who did the least to cause climate change, would be the first in the line of fire) would be a good idea to engage the interest and involvement of the public to respond best to climate change impacts?	Do you think that a climate justice angle (poor people in the UK, as well as in other countries, who did the least to cause climate change, would be the first in the line of fire) would be a good idea to engage the interest and involvement of local communities best to respond to climate change impacts?

this survey did not ask the participants about their gender identity. Instead, it asked them about their concern for climate migrants and how they saw social norms.

Last, but not least, the overall goal of this study is to gain a broad perspective of a certain phenomenon to inform climate change education strategies. Thus, as suggested by Malmqvist *et al.* (2019), this kind of an exploratory survey does not require the elaboration of a pilot study.

Results

In total, a complete set of responses to the survey was provided by 56 individuals. The study sample comprises 24 journalists, 10 staff members from NGOs, and 22 public officers and local

Table 3. Control beliefs questions for each social group.

Social group	Journalists	NGOs staff members	Local public officers and policy-makers
Control beliefsa	If you were asked to produce or edit content on climate migration, how confident would you feel to undertake this task (consider knowledge of the issue, access and range of information, sources)?	If you were asked to contribute to the implementation of/lead a project on climate change induced migration, how confident would you feel to undertake this task (consider knowledge of the issue, access, and range of information, sources)?	If you were asked to support a local initiative on climate change induced migration, how confident would you feel to be the initiative's advocate within the local authorities/local council (consider knowledge of the issue, access, and range of information, sources)?
	If you were asked to produce or edit content on climate change migration, do you think that it will receive less attention from readers compared to other climate change related topics such as energy (e.g., windfarms) or climate policy issues (e.g., United Nations climate talks)?	A project/campaign on climate change induced migration will receive much more attention from potential funders/ supporters compared to other climate change related topics such as energy (e.g., windfarms) or carbon emissions.	A local initiative/campaign on climate change induced migration will receive much more attention from the local community compared to other climate change related topics such as energy (e.g., windfarms) or carbon emissions.

Table 4. Behavioural intention questions for each social group.

Social group	Journalists	NGOs staff members	Local public officers and policy-makers
Behavioural intention	If you could decide about the content of the stories you produce or edit, would you choose to cover climate migration in the future?	Would you engage in/support/lead a project/campaign on climate change induced migration?	Would you campaign/lead a local campaign on climate change induced migration?

council members. The relatively modest number of survey respondents at the national level may suggest that climate migration is not a prominent concern among the general populace in the UK and may not enjoy widespread popularity among key stakeholders such as audiences, voters, funders, and supporters. For instance, only a handful of environmental and humanitarian NGOs in the UK campaign about climate migration (Sakellari, 2022). This observation may elucidate the fact that solely those journalists who have reported on or have prior experience in environmental matters have taken part in the survey. Furthermore, most of the personnel affiliated with NGOs, specifically seven out of ten participants, had previously engaged in an environmental initiative. Based on the survey objectives, a summary of quantitative data and statistical analysis (descriptive analysis, aggregated data) was conducted by the author for each social group that was surveyed using the JISC Online Surveys relevant software. The findings are as follows:

Attitudes towards climate migration and climate justice

i. Most journalists who were surveyed hold the belief that immigration to the UK has a negligible impact on the country's crime situation, with 62% (n=15) expressing this view. Nevertheless, a portion of the participants hold the belief that immigration is exacerbating the state of crime (21%, n=5). According to the survey results, a significant proportion of the participants (83%, n=20) expressed their belief that individuals compelled to migrate as a result of climate change effects should be provided with asylum and permitted to reside in the UK. The respondents also demonstrate recognition (79%, n=19) of the fact that climate change will have repercussions on individuals and communities in the UK, necessitating their relocation as a result of the impacts of climate change.

ii. According to the survey conducted among the staff members of NGOs, a significant proportion of respondents (80%, n=8) hold the view that individuals compelled to migrate as a result of the impacts of climate change should be granted asylum and permitted to reside in the UK. The respondents unanimously endorse the notion that the UK, being among the leading carbon dioxide emitters globally, bears a

responsibility to provide compensation to those who may be compelled to relocate in the future as a result of the consequences of climate change.

iii. Most local public officials and council members who were surveyed (86%, n=19) hold the view that addressing climate change-induced migration and ensuring the protection of affected individuals' rights requires a comprehensive commitment and collaboration among all stakeholders, including local authorities and national government, to establish policies and programmes. Nonetheless, despite being in the majority, a reduced number of respondents (n=14, 64%) maintain the belief that the UK has an obligation to provide compensation to individuals who will be compelled to migrate as a result of the effects of climate change. Additionally, a significant proportion of participants (n=15, 68%) advocate for granting asylum and permitting individuals who are displaced due to climate change impacts to reside in the UK.

Social norms

I. The survey reveals a lack of consensus among journalists regarding the response of their acquaintances and relatives if they were tasked with creating or revising content pertaining to climate-induced migration. Approximately 46% of the respondents (n=11) hold the belief that their friends and family will react positively to the situation, whereas an equal proportion of participants (46%, n=11) maintain that the response of their acquaintances will be neutral. A significant proportion of the participants (79%, n=19) perceive climate migration as a subject of interest for news coverage. However, a minority of the respondents (29%, n=7) expressed the belief that incorporating a climate justice perspective would enhance the readership of a climate change narrative.

II. Most of the personnel (60%, n=6) employed by NGOs hold the belief that in the event of being requested to partake, spearhead or execute a climate migration campaign, their acquaintances, peers and relatives would react favourably. It is noteworthy to mention that three of the participants hold the belief that they would receive an unfavourable response from their colleagues, acquaintances, and kin. Conversely, it is noteworthy that merely one of the participants holds the belief that the target audience will respond favourably to a climate migration campaign. Most of the respondents (80%, n=8) hold the view that a climate migration campaign is likely to elicit unfavourable reactions from audiences. The findings indicate that a significant proportion of participants (60%, n=6) hold the view that incorporating a climate justice perspective would be an effective approach to effectively mobilise the public in response to the impacts of climate change.

III. Most local public officials and council members who were surveyed (73%, n=16) expressed confidence in receiving a favourable response from their colleagues, friends, and family if they were to take part in or spearhead a local initiative focused on climate migration. However, it is noteworthy that merely two of the participants hold the belief that the regional populace will respond favourably to the endeavour. Many of the participants (55%, n=12) expressed their disapproval of utilising a climate justice approach as the most effective means of engaging local communities in responding to the impacts of climate change.

Perception of barriers

I. According to the survey results, only 50% (n=12) of the participating journalists expressed confidence in their ability to cover climate migration issues, considering their knowledge of the subject matter, access to information, and the range of available sources. However, a minority of the participants (26%, n=6) hold the belief that a climate migration narrative would garner less attention from viewers in comparison to other climate change-related narratives such as the United Nations climate talks.

II. Most of the respondents from NGOs who took part in the survey (60%, n=6) expressed confidence in their ability to address climate migration issues, including their knowledge of the subject matter, access to relevant information sources, and scope of coverage. Merely two participants hold the view that a narrative concerning climate migration would garner a greater degree of interest from potential financiers and advocates in comparison to other subjects related to climate change, such as energy and carbon emissions.

III. A mere minority of the public officers and council members who took part in the survey (41%, n=9) expressed confidence in endorsing and promoting an initiative on climate migration within the local authorities/council, citing their familiarity with the subject matter and the availability of diverse information sources. Likewise, a mere fraction of the participants (36%, n=8) holds the view that a regional campaign or initiative concerning climate migration will garner significantly greater interest from the local populace in comparison to other subjects related to climate change, such as energy and carbon emissions.

Behavioural intention

I. According to the survey results, a significant proportion of journalists (62%, n=15) expressed their preference for covering climate migration in their future journalistic endeavours, provided they have the autonomy to decide on the content of their stories.

II. Most of the NGOs staff members that participated in the survey (70%, n=7) of the surveyed staff members

from NGOs expressed their willingness to participate in a climate migration campaign.

III. Only a few of the surveyed local public officials and council members (27%, n=6) expressed willingness to advocate for climate migration as part of their political platform.

Discussion

The findings of the survey reveal that a significant proportion of the respondents possess knowledge regarding the inequitable nature of the consequences of climate change and recognise the obligation of major polluters to compensate those who have made the least contribution to climate change. According to the survey, individuals working in the fields of journalism, NGOs, and local government officials and council members hold the belief that climate migrants should be afforded asylum and permitted to reside within the UK. It is noteworthy to mention that the concept of providing asylum to individuals compelled to migrate as a result of climate change garnered the least amount of support from local public officials and council members, as compared to the other two social groups. The shared responsibility for migrant integration in the UK also falls upon local authorities and devolved administrations, which hold the responsibility of determining local priorities and implementing integration strategies at the local level.

It is noteworthy that the concept of providing refuge to individuals compelled to relocate as a result of climate change garnered the most elevated rating among the trio of societal cohorts as evaluated by journalists. The statement reiterates the outcomes that have been previously documented in scholarly works, which indicate that journalists consider the socio-economic implications as the primary concern associated with climate change (Engesser & Bruggemann, 2016). Vossen *et al.* (2018) have identified disparities between the perspectives of journalists regarding the most significant aspect of a given issue and the frames that are incorporated into their news articles. There is empirical evidence that media coverage of the social consequences of climate change is limited compared to energy or policy issues (Gurwitt *et al.*, 2017).

According to the survey, journalists consider climate migration to be a topic of significant news value. Notwithstanding, their opinion is that incorporating a climate justice perspective would not augment the readership of a narrative on climate change. The present statement corroborates prior research indicating the infrequency of justice framing in media representations of climate change, as documented by Dreher and Voyer (2015) and Schäfer *et al.* (2016). While the process of framing utilised by journalists is multifaceted, research suggests that the media's portrayal of the impact of climate change on human populations is significantly influenced by the prevalence of xenophobic practises in the press (Sakellari, 2021). The existing body of literature on climate migration discourses in Western media highlights the portrayal of individuals crossing borders in the context of climate change as either victims of a changing climate or potential sources of threat (Farbotko, 2005; Farbotko, 2012; Ransan-Cooper *et al.*, 2015). The portrayal of migrating individuals as either victims or threats serves to construct them as a homogenous and powerless group lacking autonomy, thereby rendering them unpredictable and warranting extreme measures, as argued by Bettini (2014). There is comparable discourse regarding the relationship between media and migration in a broader sense. Chouliaraki and Zaborowski (2017) conducted a content analysis on news coverage pertaining to the 2015 refugee crisis in eight European countries, including the UK. Their findings indicate that the voices of refugees were strategically managed in a manner that excluded them from the scope of "our" communities of belonging. At this point, it is worth noting the embrace of xenophobia in the public sphere in the UK, which proved decisive in leading to the Brexit decision in the 2016 referendum (Meleady *et al.*, 2017). As an exemplar, a small group of journalists that participated in the survey believe that immigration fuels crime rise, even though there is not enough empirical evidence to indicate that more immigration leads to more crime (Adelman *et al.*, 2017).

Likewise, local officials and council members hold the view that climate justice is not a viable approach to incentivize communities to tackle the ramifications of climate change. This observation highlights the inherent political dimension of the discourse surrounding the issue of climate change. Social contradictions have been sidelined by the domains of engineering and economics (Ciplet & Roberts 2017; Felli, 2013; Sovacool *et al.*, 2016). In the current global context, where migration and refugee policies are progressively restrictive, the intersection of climate change and migration is often discussed in conjunction with state security, rather than with issues of power imbalances and infringements on rights (Baldwin, 2014).

The prevalence of xenophobic sentiments in the public discourse surrounding immigration in the UK may account for the perception among surveyed NGO personnel, local public officials, and council members that a campaign focused on climate migration would be met with unfavourable reactions from the public. There is evidence that the UK public is more concerned by and opposed to migration than the public in Europe and North America (Blinder, 2015).

In summary, the survey respondents lack confidence in their ability to address issues related to climate-induced migration. Empirical evidence suggests that formal educators also experience a lack of self-confidence when it comes to addressing the complex issue of climate change (Monroe *et al.*, 2013; Plutzer *et al.*, 2016; Prokopy *et al.*, 2015). Journalists and staff members of NGOs demonstrate a willingness to involve the general public in novel approaches to comprehending migration that is brought about by climate change. Local public officials and council members exhibit a lower inclination to campaign on climate migration, despite holding the belief that such a stance would garner favourable reception from their peers, acquaintances, and kin. The reluctance exhibited by individuals is suggestiveof the extent to which the focus on the security dimension of climate-induced migration has influenced

the reprioritization of climate change policy formulation. Additionally, it highlights the inadequate representation of the priorities of vulnerable communities in climate politics, as posited by Suliman *et al.* (2019).

Implications for environmental and climate change education

Qualitative research has shown that learning about climate change usually takes place in informal settings (Falk *et al.*, 2007). Therefore, it is imperative to examine the influence of "otherness," xenophobic attitudes in the public domain, and climate policies on the acquisition of knowledge and decision-making related to environmental and climate change issues.

Specifically, the discourse surrounding climate migration in the public sphere is founded upon the stigmatisation and categorization of immigration based on race, as well as the differentiation between "us" and "them," or the developed Northern hemisphere and the underdeveloped Southern hemisphere. The narratives in question fail to adequately tackle the underlying concerns of social inequality that contribute to heightened susceptibility to the effects of climate change. Rather, they have the potential to escalate the likelihood of xenophobic attitudes and authoritarian measures, (Bettini, 2013; Hartmann, 2010).

The present study reveals that while the surveyed individuals who hold significant influence over public opinion recognise the significance of climate-induced displacement and the inherent unfairness of such a phenomenon, they seem hesitant to unilaterally promote its acceptance within society. This suggests that the recognition of climate migration as a climate injustice issue may not be widespread. The present observation bears resemblance to the research conducted by Stapleton (2019), which suggests that the discourse and pedagogy surrounding climate change tend to prioritise scientific and environmental aspects, while potentially overlooking concerns related to social equity and justice. The statement posits a challenge for educators in the field of climate change to critically evaluate the sources that have influenced the development of narratives, research, and curricula, while also acknowledging the voices that have been marginalised and underrepresented in this discourse (Stapleton, 2020). As Kenis and Mathijs (2012) assert:

> "*closing the 'gap' between knowledge and action does not in the first place—at least not in the case of environmentally aware citizens—require a further raising of people's knowledge of the environmental problem as such. What seems to be needed, is the knowledge of root causes, visions on alternatives and especially strategies to reach these.*" (p.58)

The extant literature on climate change education and communication research posits that emphasising personally relevant information, local events, people, or places is a viable strategy for enhancing the salience of climate change (Endres & DuPont, 2016; Monroe *et al.*, 2017; Vongalis-Macrow, 2010). According to Stapleton (2019), the impact of climate change on individuals and locations can be a persuasive topic for viewers, even if they are geographically distant, provided that the viewers have a personal and significant connection to them. Scholars in the field of climate change communication have underscored the significance of redefining the issue, constructing fresh storylines regarding climate change, and directing alternative perspectives towards collaborative efforts to engage with the audience, thereby enhancing our capacity to bring about change and pursue mitigation (Moser, 2016; Sakellari, 2015).

The analysis posits that effective educational approaches must be employed to foster a shared sense of identity and recognition of fundamental entitlements such as social equity, impartiality, and human rights for all. This approach will serve to dismantle the divisive 'us versus them' mentality and cultivate a collective consciousness of unity and compassion. As Stapleton (2020) asserts:

> "*Recognizing common aims and goals that meet the needs of many people from varying standpoints is yet another step toward more critical EE research and practice*."

The educational strategies pertaining to climate change in this context are faced with the task of establishing an environment that is inclusive of a wide range of viewpoints on climate justice, while simultaneously debunking false beliefs about the societal consequences of climate change, which are often reinforced by prejudice and discrimination. Climate justice encompasses various fundamental concepts, such as the responsibility of high polluters, the protection of vulnerable populations, the entitlement to be free from harm, and the interdependence between culture and ecological functioning. The primary aim is to promote the democratisation of discourse surrounding the societal implications of climate change. This will involve advancing and disseminating conceptual and policy viewpoints that are better suited to protecting the interests of affected individuals and communities across various levels of governance.

Finally, it is imperative for climate change education scholars and practitioners to recognise and confront the fundamental role of racism and colonialism in the issue of climate change. This involves acknowledging the historical exclusion of indigenous and vulnerable communities in the global south from the category of "human" by the colonial West, as discussed by Wynter and McKittrick (2015). Additionally, the fact that countries of the colonial West are now experiencing the effects of ecosystem transformation that began over five centuries ago, as noted by Whyte (2017), underscores the urgency of addressing these issues. Incorporating discussions from anti-racist and anti-colonial education into the field of climate change education is necessary. As Mclean (2013) points out:

> *"…many environmental education programs problematically centre ecology in a frame that focuses on the effects of environmental destruction, which depoliticizes and silences primary causes such as colonialism, capitalism, and white supremacy*." (p.357).

The incorporation of anti-colonialism education is imperative in order to contest the negation of colonial aggression, environmental instability, and our interconnected state, while also acknowledging the advantages and constraints of any efforts to address climate change (Stein, 2019).

Conclusions

To date, environmental and climate change education has provided scant attention to the concept of climate justice. This study examines the attitudes, preferences, and behavioural intentions of key opinion shapers regarding the issue of climate migration injustice. The findings suggest that prioritising social movements in climate change education and promoting interdisciplinary connections and perspectives are crucial for addressing this issue. Due to the inherent limitation of surveys in capturing data at a specific moment, accurately assessing changes in the population necessitates the implementation of many surveys conducted at distinct time intervals, while also considering the progression of the climate crisis. Moreover, the limited sample size of survey participants on a national scale poses a barrier to extrapolating the findings and necessitates additional study to advance the field of climate change education.

Still, despite its limitations, the results of this study validate prior research on climate justice education, indicating that there exists a specific timeframe during which it is possible to inspire groups towards collaborative efforts. Failure to seize the opportunity may result in the perpetuation of existing susceptibilities to climate change and the inability to tackle the fundamental causes of the climate emergency.

Ethics and consent

The study was favourably reviewed by the Tier 1 School Research Ethics Committee for Arts and Humanities at the University of Brighton (Ref. Ares(2017)4571162 - 19/09/2017). All participants were fully informed about the project (e.g. purposes of the research, who is organising and funding the research, information about what will happen to the results of the research etc.) and their involvement in it. They were made aware that their participation was voluntary and were asked to give their consent to take part in the research. Participants were required to agree to a consent statement before they took the survey and respondents were prevented from taking the survey if they did not give that consent. All participants were also made aware that they could withdraw at any time without giving a reason.

Data availability

Underlying data

This study complied with the UK Data Protection Act 1998 (DPA), EU Data Protection Directive (Directive 95/46/EC) and the changes introduced by revisions to the Directive, with the new EU Directive 2016/680, with the new General Data Protection Regulation No 2016/679 and with the Article 29 Working Party Documentation as well as University of Brighton's Research Ethics Policy for research conduct. Due to the small number and genuine profile of the participants (e.g. environmental journalists, environmental and humanitarian NGOs staff) and to avoid any links to conclusions of the survey and, thus, ensure participants' anonymity, data is not openly available. However, aggregated data are provided to ensure transparency and reproducibility by other researchers.

EUDAT: Key Climate Change Communicators' Perceptions of Climate Migration in the UK. https://doi.org/10.23728/b2share.3cc2c884c84845218472d81609e991d1

This project contains the following underlying data:

- Aggregated data

Data are available under the terms of the Creative Commons Attribution 4.0 International license (CC-BY 4.0).

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✔ **Laurie Parsons**
Royal Holloway University of London, Egham, England, UK

Many thanks for the opportunity to review this thorough and important paper. It raises a number of important issues and makes cogent arguments around the need to centre justice in discussions of climate migration.

Given the importance of the topic, I am of the view that the overall framing of the premise could be adjusted slightly to include a wider context. It may be true that climate justice has been underplayed in formal education, but youth and students have played such a major role in the recent resurgence of public concern around climate change that I feel there is a need to recognise this.

There are also some other contentions about narrative that I am unsure of. For example “over the past few years, there has been a shift in the migration discourse from security and emergency management to development”. This may be true through an academic lens, but in terms of wider discourse much less so. This wider context should be recognised or ideally referenced – especially given that the paper focuses on the UK, where the kind of “climate barbarians at the gate” discourse is alive and well at the highest level.

More broadly, the article contends that a “rudimentary understanding of education serves to obscure the ways in which climate change and the environment are perceived, particularly in relation to colonialism.”
However, I feel that this point could be taken further. Given that the structures shaping climate change are the same structures shaping educational hegemony, it is far from incidental that the former are underplayed in climate education.

On a practical level, I wonder also if it might be possible to recognise the dynamism of the situation in the UK (and wider media). The survey on which the article was based was conducted in 2018-2019, a crucial point in climate discourse, when Fridays for Future and Extinction Rebellion, amongst others, began to made a huge impact on public discourse. The last 6 years have been a time of huge discursive change – including a substantial pivot towards justice – and this should be

recognised in the discussion.
At the same time, migration has been pushed to the forefront of policy discourse in recent years, with increasing scrutiny of net migration numbers following a large increase following the pandemic. Although the vast majority of this number are regular migrants, discourse in the intervening years has focused on “small boats” and asylum claims, which has further skewed public opinion on the issue.

In a broad sense, then, whilst I very much support the arguments made here, a wider sense of the politics of those arguments would enhance the paper further. The media, as the author knows after some excellent work on the topic, are not a neutral resource, so some sense of this differentiated and contested landscape would help the paper reach its broadest possible audience and have the wider impact it deserves to achieve.

Is the work clearly and accurately presented and does it engage with the current literature?
Yes

Is the study design appropriate and is the work technically sound?
Yes

Are sufficient details of methods and analysis provided to allow replication by others?
Yes

Are all the source data and materials underlying the results available?
Yes

If applicable, is the statistical analysis and its interpretation appropriate?
Yes

Are the conclusions drawn adequately supported by the results?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Climate change, migration, sustainability and the global economy.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.