American perceptions and attitudes about domestic climate migrants and migration

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ABSTRACT

Domestic climate migration is likely to increase in the future, but we know little about public perceptions and attitudes about climate migrants and migration. Understanding how perceptions and attitudes are formed is a critical task in assessing public support for assistance policies and developing effective messaging campaigns. In this paper, we aim to better understand how the U.S. public perceives domestic climate migrants. We use novel survey data to identify the relationship between climate change risk perceptions and awareness of 'climate migrants', belief that domestic climate migration is currently happening in the U.S., perceived voluntariness of domestic climate migrant relocation, and support for the development of assistance programs for domestic climate migrants. We utilize a large, nationally representative panel of U.S. adults (N = 4,074) collected over three waves in 2022. We find that climate change risk perceptions and perceptions of whether migration is voluntary are key drivers of perceptions and attitudes toward domestic climate migrants. We provide key suggestions to policy and decision-makers to improve outcomes for host and migrant communities.

SIGNIFICANCE STATEMENT

This study illuminates factors that influence the how the public forms perceptions and attitudes about domestic climate migrants in the U.S. For the first time, we offer insight into the drivers of public opinion toward domestic climate migrants and migration. Our results indicate that the various perceptions of climate migrants are largely driven by pre-existing climate change risk perceptions and respondent characteristics. Our findings create a new connection with the existing literature on climate change risk perceptions and offer an opportunity for decision and policy makers to create effective messaging campaigns on topics related to domestic climate migration in the U.S.

1. Introduction

Climate change impacts like long-term environmental changes and acute extreme weather events are altering historical patterns of human migration (Burson et al. 2018; Burzynski et al. 20**22**; Kaczan and Orgill-Meyer 2019). Researchers project that individuals will migrate domestically in response to climate change impacts (Robinson et al. 2020; Hauer et al. 2016). In the U.S., 3.4 million residents reported that they were temporarily or permanently displaced from their homes due to extreme weather events in 2022 (U.S. Census Bureau

2023). We define the term 'domestic climate migrant' as those displaced from their homes or those who voluntarily relocate due to climate change impacts, within their country of origin. Climate migration is one way to adapt to climate change impacts by reducing exposure to risks and improving livelihoods (McLeman and Smit 2006; Bardsley and Hugo 2010; Black et al. 2011). Although domestic climate migration is projected to increase in the future, research on public perceptions and attitudes about climate migration is limited (Kolstad et al. 2019; Lujala et al. 2020). Public perceptions and attitudes are critical in democratic societies like the U.S., as they play an important role in informing the success of potential policies (Buttice and Highton 2013).

Although climate migrants have yet to be formally defined or aided (Wilkinson et al. 2016), a growing national policy interest recognizes this societal challenge (Nishimura 2015; Wilkinson et al. 2016). In 2021, President Biden signed an executive order, "Rebuilding and Enhancing Programs to Resettle Refugees and Planning for the Impact of Climate Change on Migration" (Biden 2021). This report outlined the relationship between climate change impacts and migratory responses and emphasized the commitment of the U.S. government to assisting and protecting climate migrants. The report asserts that existing legal frameworks are vital assets necessary to protect those displaced by climate change impacts across and within national borders (The White House 2021). This action signals the possibility of the development of policies addressing climate migration. However, the implementation and success of these initiatives will be dependent on public opinions and attitudes toward climate migrants and migration. Policy implementation (or the lack thereof) has the potential to influence the adaptive capacity of impacted populations (McLeman and Hunter 2010).

In this paper, we provide novel insight into how the U.S. public perceives domestic climate migrants and migration. This study is theoretically grounded in research on climate change risk perceptions and literature on attitudes toward immigrants and immigration. Specifically, we anticipate that individuals will rely on their existing climate change opinions and risk perceptions to form opinions about climate migrants and migration. We utilize data from a nationally representative panel to identify the predictors of awareness of the term 'climate migrants', the belief that climate migration is happening in the U.S., perceived voluntariness of climate migrant relocation, and support for assistance programs for domestic climate migrants. This study provides one of the first investigations of drivers of opinions and perceptions on climate migrants in the U.S. Understanding perceptions about climate

migrants and migration will equip decision and policymakers with the insight necessary to gauge public support for policy initiatives.

2. Background

Despite a recent growth in academic interest in the impact of climate change on migration (Mullins and Bharadwaj 2021), existing literature on perceptions and attitudes toward climate migrants is limited (Lujala et al. 2020; Kolstad et al. 2019), especially in the context of domestic climate migration Spilker et al. (2020). Existing studies primarily investigate the role of migrant attributes and the conditions under which host populations are willing to accept them. Cross-nationally, researchers find that respondents hold more favorable views of climate migrants compared to economic migrants (Helbling 2020; Arias and Blair 2021; Hedegaard 2022). This effect is consistent among German, U.S., and Danish respondents (Helbling 2020; Arias and Blair 2021; Hedegaard 2022). Although not explicitly measured, Arias and Blair (2021) suspect that varying degrees of perceived voluntariness play some role in the differences in attitudes. In contrast, Spilker et al. 2020 found that respondents from Vietnam and Kenya perceived climate change impacts to be legitimate reasons for relocating; however, respondents did not prefer climate migrants over economic migrants. These variations suggest that sociopolitical context may also play a role in driving attitudes and perceptions about climate migrants. Other circumstantial factors like the type of extreme weather driving relocation do not appear to guide respondents' preferences for one type of migrant over another (Spilker et al. 2020; Arias and Blair 2021).

a. Conceptual framework

To situate our research, we pose several arguments, then contextualize our arguments within the existing literature. First, we anticipate that most individuals are unaware of the term 'climate migrant' and will rely on existing beliefs about climate change and climate change risk perceptions to form attitudes and perceptions about climate migrants and migration. Climate migration may be a topic about which the public has limited knowledge and awareness (Hedegaard 2022). In line with Hedegaard's work (2022), we posit that individuals rely on pre-existing beliefs like climate change risk perceptions to form attitudes about climate migration. This hypothesis is based on the theoretical concept of preference construction. Preference construction refers to the cognitive process used by individuals when presented with an unfamiliar topic (Lichtenstein and Slovic 2006; Pidgeon et al. 2012).

104 According to the preference construction conceptual framework, individuals draw on their
105 existing beliefs and values, instant affective responses, and a range of inferences related to
106 the survey item (Pidgeon et al. 2012). Following this framework, we hypothesize perceptions
107 about domestic climate migrants and migration will be associated with attitudes and
108 perceptions about domestic climate migrants and migration.

109 This hypothesis is further bolstered by the theory of motivated reasoning: individuals are
110 more likely to engage with information that supports their existing beliefs (Druckman and
111 McGrath 2019). Individuals who are concerned about climate change may seek information
112 related to climate change and climate-related migration. Exposure to climate migrant and
113 migration information in the media or alternative informational outlets may be associated
114 with attitudes and perceptions about climate change more generally. Additionally, Arias and
115 Blair (2021) provide evidence of a relationship between the belief that climate change is
116 happening and opinions toward climate migrants. Among U.S. respondents, the belief that
117 climate change is happening is modestly related to opinions toward climate migrants (Arias
118 and Blair 2021).

119 Second, it may be difficult for the public to perceive climate change impacts as legitimate
120 drivers of domestic relocation if they have not directly experienced climate change impacts.
121 For example, although most Americans believe that climate change is happening, most
122 Americans conceptualize climate change as a psychologically distant phenomenon, situated
123 in the future and taking place in geographically distant locales (Leiserowitz et al. 2022;
124 Leiserowitz 2005; Spence et al. 2012; Brügger et al. 2015; McDonald et al. 2015). This
125 misperception may, in part, be attributed to the fact that individuals are limited to their own
126 local experiences and cannot directly experience global climate change (Howe et al. 2019).
127 Construal level theory provides one explanation for this phenomenon: because individuals are
128 limited to experiences in the here and now, mental construals are cognitive tools used to
129 represent psychologically distant events (Trope and Liberman 2010). For example, as
130 psychological distance increases (e.g., time or space), mental construals become more
131 abstract. However, as psychological distance decreases, individuals develop more concrete
132 construals (Spence et al. 2012; Brügger et al. 2015). In turn, individuals are better equipped
133 to make decisions and behavioral changes when threats are psychologically more proximate
134 (Trope and Liberman 2003; Singh et al. 2017). Those who deny that climate change is
135 happening, and undervalue the climate change risks may experience difficulty attributing

patterns of domestic relocation to climate change impacts. To evaluate the potential effect of the psychological distance of climate change on perceptions and attitudes about climate migrants, we include a measure of personal extreme weather experience in the past year, which is a predictor in our analyses.

Third, climate migration is the result of a myriad of complex push and pull factors. Attributing climate change impacts as the sole push factor of relocation can be difficult, even for researchers. Therefore, the public may discount the effect of climate change impacts like extreme weather events on domestic relocation. Climate and environmental changes often manifest *indirectly* through other economic, social, political, and economic systems (Geddes et al. 2012; Piguet 2013), and *directly* via acute onset disasters that result in displacement. The indirect effects of climate change make attributing causality as a sole driver difficult, considering the simultaneous impacts on social institutions that influence migration (Piguet 2013). Consequently, respondents may not believe that domestic climate migration is currently happening in the U.S.

Fourth, perceived voluntariness of domestic climate migrant relocation may be an important driver for the support of the development of assistance programs for domestic climate migrants in the U.S. Studies in the U.S., Germany, and Denmark have speculated that perceived voluntariness of climate migrant relocation may be a driver of support for aid for climate migrants, however, this has yet to be formally tested (Arias and Blair 2021; Hedegaard 2022). In this study, we evaluate the perceived voluntariness of climate migrant relocation to account for aspects of perceived deservingness, a theme throughout studies on public attitudes and perceptions about climate migrants and migration. Most existing research on attitudes toward climate migrants only *implicitly* investigates the role of perceived voluntariness by measuring attitudes toward climate migrants compared to political or economic migrants. However, the perceived voluntariness of relocation may not necessarily be clear in all climate migration situations. In reality, the distance between forced displacement and voluntary migration exists on a continuum (Piguet 2013; Wilkinson et al. 2016). Planned relocation is an alternative option, particularly relevant for relocation within national borders (UNHCR 2014). While we focus on perceived voluntariness in this study, we acknowledge the complexity of climate migration decisions and outcomes and urge readers to do the same.

Research on attitudes toward immigrants and immigration reflects the importance of perceived voluntariness on public attitudes, as research consistently finds that attitudes toward refugees are fundamentally different than attitudes about immigrants[1]. Cross-nationally, researchers find that the public is more accepting of refugees[2] compared to immigrants (O'Rourke and Sinnot 2006; Lynn & Lea 2003; Verkuyten 2004; Verkuyten et al. 2018). Research on immigration finds a distinction in attitudes toward immigrants relocating for voluntary versus involuntary reasons: immigrants perceived to be relocating involuntarily—because of reasons outside of their control—are provided greater support compared to those perceived to be relocating voluntarily (Verkuyten et al. 2018). Moral accountability for relocation is an important driver of host community sentiments and policy support (Verkuyten et al. 2018). In another study, respondents were more opposed to immigrants compared to refugees (O'Rourke and Sinnott 2006). The disparity in attitudes between these groups may be explained by varying respondent sentiments associated with voluntary versus involuntary relocation. Verkuyten (2004) found that Dutch respondents were more likely to express more anger and less policy support for voluntary immigrants compared to those relocating involuntarily. Those relocating involuntarily were provided more apathy and policy support. It is unclear if these patterns from studies of international immigration can be generalized to public attitudes toward domestic climate migrants. However, these findings suggest that the reason for relocation is important for public perceptions and attitudes; and may suggest that perceived voluntariness may play a central

[1] The United Nations' International Organization for Migration (n.d.) defines "immigrants" as, "From the perspective of the country of arrival, a person who moves into a country other than that of his or her nationality or usual residence, so that the country of destination effectively becomes his or her new country of usual residence,".

[2] Refugees can be defined as "someone who has been forced to flee his or her country because of persecution, war, or violence," (UN Refugee Agency 2023).

role in the acceptance and support of domestic climate migrants and climate migrant relocation.

b. Critiques of existing research

Although a growing number of studies have begun to examine perceptions and attitudes toward climate migrants and migration, they have yet to investigate public awareness of the term climate migrant. It is critical to understand public awareness and or/provide contextualizing information regarding a potentially unfamiliar topic before using scientific jargon, which may jeopardize construct validity. Furthermore, existing research relies on experimental methodology and climate migrant framings to better understand how the public favors climate migrants compared to other relocating populations like refugees and economic migrants (e.g… Hedegaard 2022; Spilker et al. 2020; Helbling 2020; Arias and Blair 2021; Lujala et al. 2020). This insight is valuable in the context of relocating populations, however, it does not provide insight into aggregate public perceptions and attitudes toward climate migrants and migration, or the drivers of these attitudes. Better insight into aggregate public opinions may be easier for the public and policymakers to interpret, therefore serving as a valuable tool for decision-makers. Moreover, most studies have been conducted outside of the U.S. Climate change is a politically polarized issue in the U.S., thus, findings from studies conducted in other countries may not generalize to the U.S. population (Dunlap and McCright 2015, Kim et al. 2021; Mullins and Bharadwaj 2021). It is unknown how the political polarization surrounding climate change in the U.S. will impact public perceptions about climate migration. Additionally, research has primarily focused on international migration, despite empirical evidence that most climate migration will take place within countries (Biermann and Boas 2008; Tacoli 2009; Findlay 2011; Fussell et al. 2014; Mayer and Crepeau 2017). Understanding attitudes surrounding the most realistic relocation scenarios is critical for informing policymakers. Lastly, dependent variables vary widely amongst studies making it difficult to identify trends in perceptions and attitudes toward climate migrants across contexts. Insight into public attitudes toward climate migration is crucial to develop appropriate and successful policies to assist relocating populations and host societies (Arias and Blair 2021).

3. Current study

In this research we aim to understand what drives perceptions and attitudes toward domestic climate migration and how these perceptions drive support for the development of assistance programs for domestic climate migrants in the U.S. First, we ask: what is the relationship between perceptions of climate change risk and domestic climate migration? We hypothesize that existing attitudes and risk perceptions about climate change are key drivers of attitudes toward climate migrants and migration.

Hypothesis 1 (H1): Respondents who perceive greater risks associated with climate change and climate change impacts will be more likely to a) be aware of climate migrants, b) believe that domestic climate migration is currently happening in the U.S., c) indicate the belief that climate migrants relocate involuntarily and d) express support for the development of local and state programs to assist domestic climate migrants in the U.S.

Second, we aim to better understand what drives support for the development of assistive programs for domestic climate migrants in the U.S.

Hypothesis 2 (H2): Perceived voluntariness will exhibit a positive, significant relationship with support for the development of local and state programs to assist domestic climate migrants in the U.S.

We anticipate that those who believe that most domestic climate migration happens involuntarily (in other words, that people are mostly forced to relocate by current or recent climate change impacts), will support the development of local and state programs to assist domestic climate migrants in the U.S. Research on attitudes toward immigrants and immigration finds that control over one's circumstances and the public appraisal of voluntariness of relocation is a driver of public support. Immigrants believed to be responsible for their circumstances are perceived as less favorable and offered less public support (O'Rourke and Sinnot 2006; Lynn and Lea 2003; Verkuyten 2004; Verkuyten et al. 2018).

4. Methods

a. Data collection

This study draws from a national panel of U.S. adults (N = 4,074), collected online via Prolific. Prolific is an opt-in panel service developed for online recruitment and participation in academic survey research. Prolific has been utilized broadly among the academic

247 community (Peer et al. 2017), and its use is rapidly growing (Palan and Schitter 2018).
248 Anyone with Internet access can sign up to take surveys with Prolific and participants are
249 compensated for their time. In this study, participants were compensated between $0.55 and
250 $0.60 across waves, proportional to $8 an hour. To approximate a nationally representative
251 sample of the U.S. population (based on age, ethnicity, and gender) (Table 1), Prolific utilizes
252 a stratified quota sample based on demographic proportions from the 5-year Community
253 Survey Demographic and Housing Estimates 2015 (U.S. Census Bureau 2015). Although a
254 probability-based sample is optimal for generalizing results to the U.S. population, we use
255 Prolific because of its lower cost per respondent, which allows us to collect a large,
256 geographically heterogeneous sample of respondents. Survey responses were collected over
257 three waves (13 May – 15 May 2022; 12 August – 14 August 2022; 17 November – 8
258 December 2022). In total, the survey comprised eighteen short multiple-choice items, taking
259 respondents two to three minutes to complete on average. This analysis comes from nine of
260 the original eighteen survey items.

261 To combat sample deficiencies often present in online non-probability sampling, we
262 employed two strategies. First, we created unique weights for each survey respondent based
263 on their demographic characteristics (age, gender, and state of residence) according to Census
264 Current Population Survey data. We additionally weighed respondents by political affiliation,
265 as Democrats were disproportionately represented in our sample. Respondent weights were
266 also adjusted to reflect political affiliation information from Pew Research Center (Pew
267 Research Center's American Trends Panel 2021). Survey respondent weight values were only
268 used in the descriptive analysis and were not utilized in model estimates. Second, we
269 included key demographics as predictors in each logistic regression model (age, gender,
270 political affiliation, race/ethnicity, education, and Census region) to adjust for possible
271 sampling biases in these attributes.

272 *b. Survey participants*

273 Table 1. Frequency counts and percentages (weighted and unweighted) of independent and
274 dependent variables[3].

Variable	Categories	Unweighted count (%)	Weighted count (%)
Age	18-24	501 (12.3%)	492 (12.1%)
	25-34	865 (21.2%)	728 (17.9%)
	35-44	766 (18.8%)	666 (16.3%)
	45-54	671 (16.5%)	668 (16.4%)
	55-64	818 (20.1%)	679 (16.7%)
	65+	453 (11.1%)	842 (20.7%)
Gender	Female	2,086 (51.2%)	2,090 (51.3%)
	Male	1,988 (48.8%)	1,985 (48.7%)
Political affiliation	Democrat	1,989 (48.8%)	1,250 (30.7%)
	Republican	733 (18.0%)	1,009 (24.8 %)
	Independent/Other	1,293 (31.7%)	1,735 (42.6%)
	I prefer not to say	59 (1.4%)	81 (2.0%)
Region	Midwest	833 (20.4%)	847 (20.8%)
	Northeast	748 (18.4%)	728 (17.9%)
	South	1,673 (41.1%)	1,535 (37.7%)
	West	820 (20.1%)	964 (23.7%)
Education	Less than high school	32 (0.8%)	31 (0.8%)

[3] Weighted values reflect survey data weighted by age, gender, state of residence, and political affiliation according to benchmark values from Census data and Pew Research Center. Weighted counts are rounded to the nearest whole number.

Variable	Categories	Unweighted count (%)	Weighted count (%)
	High school graduate	504 (12.4%)	513 (12.6%)
	Some college, but did not graduate	1,311 (32.2%)	1,314 (32.3%)
	Bachelor's degree	1,547 (38.0%)	1,513 (37.1%)
	Master's degree	522 (12.8%)	523 (12.8%)
	Doctoral or professional degree (PhD, MD, JD)	109 (2.7%)	121 (3.0%)
Ethnicity	White	3,117 (78.7%)	3,190 (80.6%)
	Black or African American	491 (12.4%)	407 (10.3%)
	Asian or Asian American	227 (5.7%)	227 (5.7%)
	American Indian, Native American, or Alaska Native	12 (0.3%)	11 (0.3%)
	Middle Eastern or North African	8 (0.2%)	7 (0.2%)
	Native Hawaiian or other Pacific Islander	2 (0.1%)	3 (0.1%)
	Some other race, ethnicity, or origin	11 (0.3%)	18 (0.5%)
	Two or more ethnicities or origins	93 (2.3%)	95 (2.4%)
Hispanic, Latino, or Spanish	Hispanic, Latino, or Spanish	207 (5.1%)	205 (5.0%)
	Not Hispanic, Latino, or Spanish	3,867 (95.0%)	3,870 (95.0%)

Variable	Categories	Unweighted count (%)	Weighted count (%)
Extreme weather experience	No	3,022 (74.1%)	3,014 (74.0%)
	Yes	1,052 (25.8%)	1,061 (26.0%)
Perceived harm to community	Not at all	117 (2.9%)	130 (3.2%)
	Only a little	1,038 (25.5%)	1,135 (27.9%)
	A moderate amount	1,760 (43.2%)	1,709 (42.0%)
	A great deal	1,093 (26.8%)	1,025 (25.2%)
	Don't know	64 (1.6%)	74 (1.8%)
Worry about extreme weather	Not at all worried	312 (7.7%)	388 (9.5%)
	Not very worried	1,104 (27.1%)	1,168 (28.7%)
	Somewhat worried	1,878 (46.1%)	1,806 (44.3%)
	Very worried	778 (19.1%)	712 (17.5%)
Worry about global warming	Not at all worried	335 (8.2%)	446 (10.9%)
	Not very worried	473 (11.6%)	598 (14.7%)
	Somewhat worried	1,363 (33.5%)	1,353 (33.2%)
	Very worried	1,903 (46.7%)	1,677 (41.1%)
Perceived personal harm due to global warming	Not at all	432 (10.6%)	575 (14.1%)
	Only a little	1,052 (25.8%)	1,142 (28.0%)
	A moderate amount	1,752 (43.0%)	1,595 (39.2%)
	A great deal	695 (17.1%)	610 (15.0%)
	Don't know	142(3.5%)	151 (3.7%)
Awareness of climate migrants	Yes	1,709 (42.0%)	1,629 (40.0%)
	No	2,362 (58.0%)	2,441(60.0%)

Variable	Categories	Unweighted count (%)	Weighted count (%)
Belief that domestic climate migration is currently happening in the U.S.	Yes	2,438 (59.9%)	2,287 (56.2%)
	No	696 (17.1%)	806 (19.8%)
	Don't know	935 (23.0%)	976 (24.0%)
Perceived voluntariness of climate migrant relocation	Mostly choose to relocate	1,116 (28.6%)	1,281 (31.4%)
	Choose to relocate and are forced about equally	1,479 (36.3%)	1,435 (35.2%)
	Mostly are forced to relocate	1,212 (29.7%)	1,122 (27.5%)
	Don't know	217 (5.3%)	237 (5.8%)
Support for the development of assistance programs for domestic climate migrants	Strongly oppose	414 (10.2%)	543 (13.3%)
	Somewhat oppose	392 (9.6%)	473 (11.6%)
	Neither support nor oppose	889 (21.8%)	960 (23.6%)
	Somewhat support	1,374 (33.7%)	1,245 (30.6%)
	Strongly support	1,003 (24.6%)	852 (20.9%)

c. Study measures

1) DEPENDENT VARIABLES

In this study we evaluate predictors of four aspects of perceptions and attitudes toward domestic climate migrants and migration in the U.S. 1) *Awareness of (the term) 'climate migrants'* was elicited with the survey item, "A climate migrant is an individual who relocated voluntarily or involuntarily due to short-term or long-term impacts of climate change. Have you heard or read about climate migrants?", respondents responded "Yes or

No". This definition is consistent with existing definitions of climate migration[4] (International Organization for Migration n.d.).

2) *Belief that domestic climate migration is currently happening in the U.S.* was elicited with the item, "Do you think that climate change impacts like extreme weather are causing people to relocate within the U.S.?", respondents chose from the following, "Yes; No; or Don't know". Responses were recoded for analysis as follows, "Yes; No or Don't know".

3) *Perceived voluntariness of climate migrant relocation* was measured with the following item, "When people move because of climate change impacts like extreme weather, do you think they mostly choose to relocate or are mostly forced to relocate?", respondents chose from the following, "Mostly choose to relocate; Choose to relocate and are forced about equally; Mostly are forced to relocate; or Don't know". 4) *Support* was evaluated with the item, "How much do you support or oppose creating local and state programs to fund assistance for people who have relocated within the U.S. due to climate change impacts like extreme weather?", respondents chose from the following responses, "Strongly support; Somewhat support; Neither support nor oppose; Somewhat oppose; or Strongly oppose". Responses were recoded for analysis as follows, "Support; Neither support nor oppose or Oppose".

2) INDEPENDENT VARIABLES

We included a variety of demographic attributes of respondents to control for potential sampling biases and to conduct exploratory analyses of their direct effects due to the novelty of this research topic. Although we do not pose hypotheses regarding the effects of demographics, we anticipate that these characteristics will influence perceptions and attitudes

[4] The UN International Organization for Migration defines climate migration as "the movement of a person or groups of persons who, predominantly for reasons of sudden or progressive change in the environment due to climate change, are obliged to leave their habitual place of residence, or choose to do so, either temporarily or permanently, within a State or across an international border."

toward domestic climate migrants in alignment with existing literature on climate change opinions and risk perceptions.

Demographics. Demographic variables include age (18 – 24; 25 – 34; 35 – 44; 45 – 54; 55 – 64; 65+), gender (Female; Male), political affiliation (Democrat; Republican; Independent/Other; I prefer not to say), ethnicity (White; Asian or Asian American; American Indian, Native American, or Alaska Native; Middle Eastern or North African; Native Hawaiian or other Pacific Islander; Some other race, ethnicity, or origin), Hispanic (Hispanic, Latino, or Spanish; Not Hispanic, Latino, or Spanish), education (Less than high school; High school graduate; Some college; Bachelor's degree; Master's degree; Doctoral or professional degree (PhD, MD, JD), and region (Midwest; South; West; Northeast). Location information was collected via the respondent's 5-digit ZIP code or state of residence. Demographic information was either provided by Prolific or measured in our survey.

Personal experience with weather-related events. Respondents were provided the following, "In the past year, have you personally experienced any of the following?", and respondents indicated which, if any, weather events they had experienced from the following, "Severe storm; Extreme heat; Drought; Wildfire; Hurricane; Flood; None of the above". Responses were re-coded to reflect "experience" if respondents indicated that they had experienced at least one extreme weather event, and "no experience" if they did not experience any of the weather events listed.

Climate change risk perceptions were evaluated with the following four items. *Perceived personal harm due to global warming.* Respondents were asked, "How much do you think global warming will harm you personally?", and provided with the following response options, "Not at all; Only a little; A moderate amount; A great deal; Don't know". Responses were recoded into the following categories for analysis, "Not at all or Only a little; A moderate amount or A great deal; or Don't know". *Perceived harm to community due to extreme weather.* Respondents were asked, "How much do you think extreme weather (like extreme heat, drought, severe storms, floods, hurricanes, or wildfires) will harm people in your community in the next five years?" respondents answered with the following, "Not at all; Only a little; A moderate amount; A great deal; Don't know". Answers were recoded, "Not at all or Only a little; A moderate amount or A great deal; or Don't know". *Worry about extreme weather.* Respondents were asked, "How worried are you about extreme weather in your local area?", response options were as follows "Very worried; Somewhat worried; Not

very worried; Not at all worried". Responses were recoded, "Very worried or Somewhat worried; Not very worried or Not at all worried". *Worry about global warming.* Respondents were asked, "How worried are you about global warming?" responses included, "Very worried; Somewhat worried; Not very worried; Not at all worried". Responses were recoded, "Very worried or Somewhat worried; Not very worried or Not at all worried".

d. Data analyses

For each dependent variable with dichotomous outcomes (awareness of the term 'climate migrants' and belief that domestic climate migration is currently happening in the U.S.), we fit two logistic regression models. The first model contains only sociodemographic and geographic predictors, and in the second model, we additionally include climate change risk perception predictors. To evaluate predictors of perceived voluntariness of climate migrant relocation, we perform two multinomial logistic regression models (due to the categorical outcomes of this dependent variable (Mostly choosing to relocate; Choosing and being forced to relocate about equally; Mostly being forced to relocate; Don't know)). To predict support for the development of assistance programs for domestic climate migrants we performed an third logistic regression analyses including the following predictors: awareness of the term 'climate migrants', belief that domestic climate migration is currently happening in the U.S., and perceived voluntariness of climate migrant relocation.

For each analysis we report estimated odds ratios (ORs), 95% confidence intervals (CIs), and p-values. For each model, we focus our report on the predictors that exhibit a statistically significant relationship with the dependent variable. However, we include all significant and nonsignificant predictors in the graphs and tables located in the Appendix. Additionally, we report, but do not discuss in detail the results for models that only include demographic predictors. However, it is important to note that the AIC value decreased between the demographic-only models and secondary models, indicating greater explained variance in the model including climate change risk perception predictors.

e. Demographic models

Predictors in the demographic models are included to account for any sample differences that may be attributed to respondent characteristics and to broadly understand how demographic characteristics may be associated with the dependent variables. We include age, gender, political affiliation, race, Hispanic/Latino ethnicity, education, and region. The

addition of climate change risk perception predictors to the demographic models decreased model AIC values, indicating greater explained variance than provided by models with demographic predictors alone. Climate change risk perceptions are important drivers of attitudes and perceptions about domestic climate migrants and migration.

5. Results

f. Descriptive results

Over three waves of data collection between May and December 2022, we find that most Americans (60.0%) were not familiar with the term climate migrants. However, 56.2% of Americans believed that climate change impacts, such as extreme weather, are causing people to relocate within the U.S., compared to 43.8% who did not believe or were not sure if climate migration is currently happening within the U.S. Americans were unsure whether climate migrants relocate voluntarily or involuntarily. Almost one-third (31.4%) of Americans believed that climate migrants mostly chose to relocate, 35.2% reported that they chose to relocate and were forced about equally, and 27.5% indicated that they were mostly forced to relocate. Importantly, 51.5% of Americans support the development of local and state programs to assist domestic climate migrants in the U.S., compared to 24.9% of respondents who were opposed. The frequency table (Appendix, Table A1) summarizes the demographic characteristics and survey responses of our sample.

g. Predictors of awareness of climate migrants

Demographic attributes and climate change risk perceptions were strong drivers of awareness of climate migrants (Appendix, Table A1). Men were more likely to indicate that they had heard or read about climate migrants than women (OR = 1.55, 95% CI = 1.35-1.77). By age, those 65 years of age and older were 26% less likely to be aware of the term ‘climate migrants’ compared to those between the ages of 18 and 24. Politically, Democrats were 1.9 times more likely to be aware of the term ‘climate migrants’ than Republicans (OR = 0.53, 95% CI = 0.42-0.65). Asian American and African American respondents were less likely to indicate awareness of the term compared to White respondents (Appendix, Table A1). By education, those with a professional degree (PhD, MD, JD) were more likely to be aware of the term ‘climate migrants’ compared to those with a bachelor’s degree (OR = 1.46, 95% CI = 1.03-2.07). Respondents with a bachelor’s degree were more likely to report awareness of the term than those who had not graduated high school, those who were high school

399 graduates, and those who attended some college (Appendix, Table A1). Respondents who
400 indicated being worried about extreme weather were 1.2 times more likely to have heard or
401 read about climate migrants than those who were not worried about extreme weather (OR =
402 1.21, 95% CI = 1.00-1.47). Respondents who perceived that they would experience personal
403 harm due to global warming were about 1.7 times more likely to be aware of the term
404 'climate migrants' compared to those who did not perceive that they would be personally
405 harmed by global warming (OR = 1.67, 95% CI = 1.39-2.00).

406 *h. Predictors of the belief that domestic climate migration is currently happening in the*
407 *U.S.*

408 Demographic characteristics and climate change risk perceptions were drivers of the
409 belief that domestic climate migration is currently happening in the U.S. Age, political
410 affiliation, and ethnicity have important implications on this belief. Respondents 18 to 24
411 years of age were significantly more likely to believe that domestic migration is happening in
412 the U.S. compared to those 35 to 64 (Appendix, Table A2). There was no difference between
413 those 18 to 24 years of age, those 25 to 34 years of age, or those older than 65. Respondents
414 who were Republican or identified as politically independent/other were less likely to hold
415 this belief than Democrats (Appendix, Table A2). Asian American respondents were 1.5
416 times less likely to believe that domestic climate migration is happening in the U.S. compared
417 to White respondents (OR = 0.67, 95% CI = 0.50-0.92).

418 Respondents who reported experiencing an extreme weather event over the past year were
419 1.2 times more likely to believe that climate migration is happening compared to those who
420 did not personally experience an extreme weather event (OR = 1.22, 95% CI = 1.03-1.44).
421 Respondents who were concerned about extreme weather were more likely to believe that
422 climate migration is happening (OR = 1.47, 95% CI = 1.21-1.78). Importantly, those who
423 were concerned about global warming were nearly 3 times as likely to believe that domestic
424 climate migration is currently happening in the U.S. (OR = 2.94, 95% CI = 2.34-3.70).
425 Additionally, those who perceived that they may be personally harmed by global warming
426 were 1.7 times more likely to believe that climate migration is happening (OR = 1.67, 95%
427 CI = 1.39-2.00). Lastly, respondents who perceived that their communities would be harmed
428 due to extreme weather in the next five years were 1.4 times more likely to hold the belief
429 compared to those who did not perceive that their community would be harmed (OR = 1.40,
430 95% CI = 1.15-1.71).

i. Predictors of perceived voluntariness of domestic climate migration in the U.S.

To evaluate predictors of the perceived voluntariness of domestic climate migration in the U.S., we utilize a multinomial logistic regression due to the categorical attribute of the dependent variable. Respondents chose one of four responses to this item: "mostly choose to relocate," "choose to relocate and are forced about equally," "mostly are forced to relocate," andd "don't know". We used the "choose to relocate and are forced about equally" responses as the reference category.

The perception that climate migrants are mostly forced to relocate was driven by a few demographic attributes, however, climate change risk perceptions did not predict the perception that climate migrants mostly relocate involuntarily (Appendix, Table A4). Findings from the multinomial model indicate that Democrats were 24% more likely to believe that climate migrants relocate involuntarily compared to politically independent/others (OR = 0.76, 95% CI = 0.63-0.91). By education, high school graduates were about 1.4 times less likely to indicate the belief that most climate migrants are mostly forced to relocate compared to respondents with a bachelor's degree (OR = 0.74, 95% CI = 0.56-0.97). Those in the South and West were less likely to believe that climate migrants relocate involuntarily compared to those in the Northeast (Appendix, Table A4).

In contrast, demographic attributes and climate change risk perceptions were strong predictors of the perceived voluntariness of domestic climate migrant relocation (mostly choose to relocate) (Appendix, A4). Men were about 1.5 times more likely to indicate the belief that climate migrants mostly chose to relocate (voluntarily) compared to women (OR = 1.47, 95% CI = 1.24-1.73). Additionally, those 55 to 64 years of age were nearly 1.7 times more likely to report the same belief compared to those aged 18 to 24 (OR = 1.65, 95% CI = 1.20-2.26). Climate change risk perceptions were strong predictors of the perception that climate migrants relocate mostly voluntarily. Interestingly, respondents who reported having experienced an extreme weather event over the past year were nearly 1.4 times more likely to believe that climate migrants mostly chose to relocate (voluntarily) (OR = 1.39, 95% CI = 1.14-1.71). However, respondents who are not worried about global warming were nearly two times as likely to indicate that climate migrants relocate mostly voluntarily (OR = 0.52, 95% CI = 0.40-0.68). Those who do not perceive personal harm due to global warming were about 1.5 times more likely to believe that climate migrants mostly chose to relocate (OR = 0.67, 95% CI = 0.54-0.83).

j. Predictors of support for the development of assistance programs for domestic climate migrants in the U.S.

Next, we analyze predictors of public support for assistance programs for U.S. domestic climate migrants. Our first model includes demographic and climate change risk perception predictors (Appendix, Table A5). Overall, respondent demographics and climate change risk perceptions were significant drivers of support for the development of assistance programs for domestic climate migrants in the U.S. (Appendix, Table A5). Age, political affiliation, ethnicity, education, region, and climate change risk perceptions were key drivers of support. Respondents who were 18 to 24 years of age were more likely to support the development of programs compared to respondents in any other age group (Appendix, Table A5). By political affiliation, Democrats were significantly more likely to support assistance programs for climate migrants than those who reported alternative political affiliations (Republican, Independent/Other, I prefer not to say) (Appendix, Table A5). Additionally, Black or African American respondents were 1.6 times more likely to support the initiative compared to White respondents (OR = 1.63, 95% CI = 1.27-2.09). Regarding education, respondents with some college education were about 1.3 times more likely to support the development of assistance programs compared to those with a bachelor's degree (OR = 1.27, 95% CI = 1.06-1.52). We also found that those in the South and the West regions of the U.S. were less likely to support assistance than those in the Northeast (Appendix, Table A5).

Worry about extreme weather played a significant role in support for the development of assistance programs. Respondents who are worried about extreme weather were 1.5 times more likely to support the development of assistance programs for climate migrants (OR = 1.54, 95% CI = 1.25-1.89). Critically, those who are worried about global warming were nearly 4 times more likely to indicate support (OR = 3.71, 95% CI = 2.90-4.77). Respondents who perceived that they would experience personal harm due to global warming were 1.5 times more likely to support the development of assistance programs (OR = 1.52, 95% CI = 1.26-1.84). Respondents who were unsure whether their communities would be harmed by extreme weather were less likely to support the development of assistance programs for domestic climate migrants (OR = 0.42, 95% CI = 0.21-0.82).

In a subsequent model, we include additional predictors of support: awareness of the term 'climate migrants', belief that domestic climate migration is currently happening in the U.S. and the perceived voluntariness of climate migrant relocation (Appendix,Table Table A5).

The AIC value decreased in the second model (4,307 vs. 4,019), indicating greater explained variance in the second model compared to the first. We observed similar trends in the predictive patterns of age, political affiliation, ethnicity, and education compared to the previous model. However, region did not exhibit a statistically significant effect on support in the second model.

Interestingly, awareness of the term climate migrants was not a statistically significant predictor of support. However, respondents who believed that domestic climate migration is happening in the U.S. were nearly twice as likely to support initiatives for climate migrants (OR = 1.98, 95% CI = 1.67-2.34). Most importantly, those who believed that climate migrants were mostly forced to relocate (involuntarily) were 1.7 times more likely to support the development of programs than respondents who believed climate migrants chose to relocate and are forced about equally (OR = 1.70, 95% CI = 1.40-2.07). Respondents who believed that climate migrants chose to relocate (voluntarily) were 60% less likely to indicate support (OR = 0.40, 95% CI = 0.33-0.48) compared to those who thought climate migrants chose and were forced to relocate about equally. Respondents who were unsure if climate migrants relocate voluntarily, involuntarily, or somewhere in between were less likely to support the development of assistance programs for climate migrants.

Fig. 1. Predictors of support for the development of local and state programs to assist domestic climate migrants; predictors associated with demographics, climate change risk perceptions, and attitudes and perceptions about climate migrants (N = 3,994). *Reference categories as follows: Age: 18-24 years old; Gender: Female; Political affiliation: Democrat; Ethnicity: White; Hispanic: Not Hispanic, Latino, or Spanish; Region: Northeast; Extreme weather experience: No; Worry about extreme weather: Not at all or Not very worried; Worry about global warming: Not at all or Not very worried; Perceived personal harm due to global warming: Not at all or Only a little; Perceived harm to community due to extreme weather: Not at all or Only a little; Awareness of climate migrants: No; Belief that climate migration is happening: No; Perceived voluntariness of climate migrant relocation: Choose and are forced to relocate about equally.*

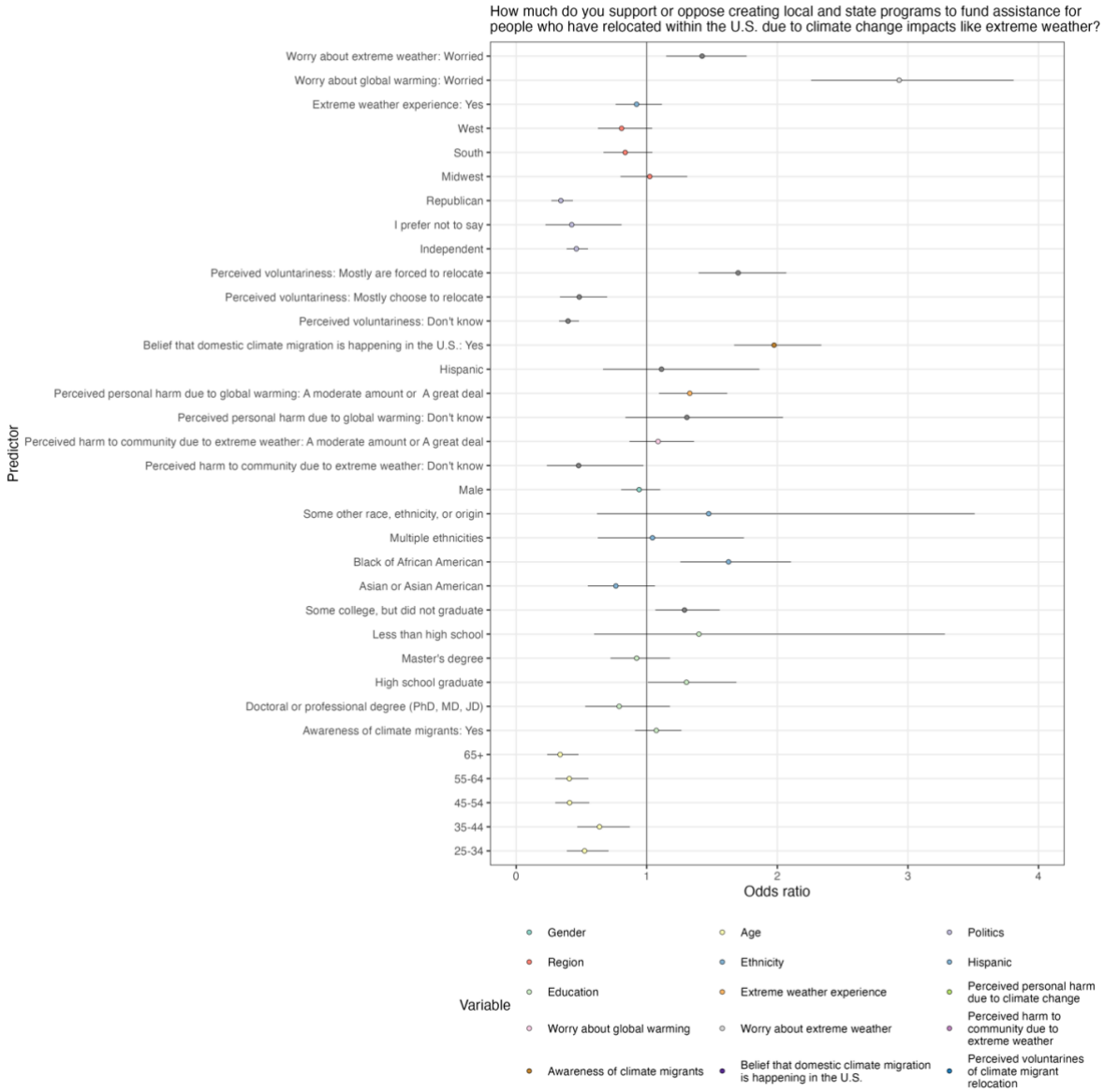

Table 2. Summary of the relationship between independent and dependent variables. Addition sign (+) indicates positive significant relationship between the predictor and dependent variables. Subtraction sign (–) indicates negative significant relationship between predictor and dependent variables. P-values are indicated as follows: *** < 0, ** 0.001, * < 0.05, . < 0.1.

Predictor		Awareness of climate migrants (Yes)	Belief that domestic climate migration is happening (Yes)	Perceived voluntariness of climate migrant relocation (Mostly choose to relocate)	Perceived voluntariness of climate migrant relocation (Mostly forced to relocate)	Support for the development of assistance programs (Support)
Age	25-34					(–)***
	35-44		(–)*			(–)**
	45-54		(–)**			(–)***
	55-64		(–)**	(+)**		(–)***
	65+	(–)*				(–)***
Gender	Male	(+)***		(+)***		
Political affiliation	Republican	(–)***	(–)***	(+)**		(–)***
	Independent /Other		(–)***		(–)***	(–)***
	I prefer not to say					(–)**
Ethnicity	Asian or Asian American	(–)***	(–)*			(–).
	Black or African American	(–)***				(+)***
	Two or more ethnicities or origins					
	Some other race, ethnicity, or origin					

Predictor		Awareness of climate migrants (Yes)	Belief that domestic climate migration is happening (Yes)	Perceived voluntariness of climate migrant relocation (Mostly choose to relocate)	Perceived voluntariness of climate migrant relocation (Mostly forced to relocate)	Support for the development of assistance programs (Support)
Hispanic, Latino, or Spanish	Hispanic, Latino, or Spanish					
Education	Did not graduate high school	(–)*				
	High school graduate	(–)***			(–)*	
	Some college	(–)**				(+)*
	Master's degree	(+).				
	Doctoral or professional degree (PhD, MD, JD)	(+)*				
Region	Midwest					
	South				(–)**	(–)*
	West				(–)*	(–)*
Extreme weather experience	Yes		(+)*	(+)**		
Worry about extreme weather	Somewhat or Very worried	(+)*	(+)***	(–)**		(+)***

Predictor		Awareness of climate migrants (Yes)	Belief that domestic climate migration is happening (Yes)	Perceived voluntariness of climate migrant relocation (Mostly choose to relocate)	Perceived voluntariness of climate migrant relocation (Mostly forced to relocate)	Support for the development of assistance programs (Support)
Worry about global warming	Somewhat or Very worried		(+)***	(–)***		(+)***
Perceived personal harm due to global warming	A moderate amount or A great deal	(+)***	(+)***	(–)***		(+)***
	Don't know			(–)**		
Perceived harm to community due to extreme weather	A moderate amount or A great deal		(–)***			
	Don’t know		(–).			(+)*

6. Discussion

In alignment with our hypotheses, most Americans were not aware of the term ‘climate migrants’. Respondents who were aware of the term tended to fall within certain respondent categories and hold elevated climate change risk perceptions. Specifically, respondents who were worried about extreme weather and perceived they would experience personal harm due to global warming were more likely to be aware of the term climate migrants (H1a). Political affiliation also played a role in awareness of the term, Democrats were more likely to be aware of the term climate migrants compared to Republicans. Individuals may actively seek information that supports their beliefs about climate change, as suggested by the theory of motivated reasoning (Druckman and McGrath 2019). This reflects findings from research on public opinions about climate change, which finds that Democrats are more likely to believe

that global warming is happening compared to Republicans in the U.S. (Hornsey et al. 2016). Democrats are also more likely to be concerned about climate change (McCright et al. 2014; Marquart-Pyatt et al. 2011; Hamilton et al. 2016; Hornsey et al. 2016), and support climate policy (Goldberg et al. 2019; McCright et al. 2014) than Republicans.

Although most Americans were not aware of the term climate migrants, most believe that domestic climate migration is currently happening in the U.S. This belief was largely driven by climate change risk perceptions (H1b). This suggests that individuals rely on pre-existing beliefs about climate change in accordance with the 'preference construction' hypothesis (Lichtenstein and Slovic 2006; Pidgeon et al. 2012). Respondents who reported that they had experienced an extreme weather event in the past year were *more* likely to indicate belief that climate migration is currently happening within the U.S. This suggests that personally experiencing the effects of global climate change reduces the psychological distance of climate migration, as described by construal level theory **(**Trope and Liberman 2003, 2010; Spence et al. 2012; Brügger et al. 2015). Despite the complexity of the push and pull factors contributing to climate migration, Americans perceive that domestic climate migration is currently happening; people perceive climate change as a legitimate driving force of relocation in the U.S.

While the effect of climate change impacts like extreme weather can result in a variety of outcomes for populations on a spectrum ranging from voluntary relocation and involuntary displacement, public opinions mirror that complexity, as respondents were split on the perceived voluntariness of climate migrant relocation. We find that different predictors drive the perception that climate migrants mostly choose to relocate (voluntarily) versus mostly forced to relocate (involuntarily). The relationship between the predictors and dependent variables varies depending on the dependent variable in question. Notably, the perception that most climate migrants chose to relocate (voluntarily) was in part, driven by experience with an extreme weather event in the past year. This suggests that personal experience with extreme weather may reduce psychological distance of climate change, emphasizing the role of construal level theory in some (but not all) circumstances. Climate change risk perceptions exhibit a negative effect on the perception that most climate migrants choose to relocate (H1c). Despite these findings, it is important to emphasize the complexity of climate migration, and that these results are not necessarily insightful independent of the context of this study. Nonetheless, perceived voluntariness does exhibit a strong effect on public support

of the development of assistance programs for domestic climate migrants in the U.S., which we detail in subsequent sections.

Support for the development of assistance programs for domestic climate migrants in the U.S. was driven by demographic attributes, climate change risk perceptions, and perceptions and attitudes toward climate migrants and migration. Respondents who were worried about extreme weather and global warming were more likely to support the development of assistance programs (H1d). Unsurprisingly, the belief that domestic climate migration is currently happening in the U.S. is a strong driver of support for the development of assistance programs. However, awareness of the term climate migrants did not predict support. Awareness of the term alone is not enough to increase support for the development of policy, but rather, the public must perceive that domestic climate migration is currently happening in the U.S. to support the development of assistance programs for domestic climate migrants.

Finally, the model results illustrate the impact of perceived voluntariness on support for programs for domestic climate migrants. Respondents who perceived that domestic climate migrants mostly are forced to relocate (involuntarily) were more likely to support the development of assistance programs compared to those who believe that climate migrants choose to relocate and are forced about equally (H2). This critical finding mirrors existing literature on attitudes toward immigrants and immigration, which finds that the reason for and perceived control of relocation matters for public opinions and support (Verkuyten et al. 2018). Importantly, this research expands upon existing research efforts that investigate attitudes toward climate migrants and finds that perceived voluntariness is a pivotal driver of public support for the development of assistance programs.

7. Conclusions and Policy Recommendations

In the U.S., changes in human mobility patterns due to climate change impacts have important societal implications. Research has yet to comprehensively evaluate the current social climate regarding perceptions and attitudes toward climate migrants and migration in the U.S. In this study, we analyzed potential drivers of 1) awareness of the term 'climate migrants', 2) belief that domestic climate migration is currently happening in the U.S., 3) the perceived voluntariness of climate migrant relocation, and 4) support for the development of assistance programs for domestic climate migrants in the U.S. for the first time (Table 2). In this research we focused on climate change risk perceptions, but also included demographic predictors in our models, although they were not a focus of this research. We found that

608 climate change risk perceptions were associated with perceptions and attitudes toward
609 domestic climate migrants. We also found that perceived voluntariness of climate migrant
610 relocation was a key driver of support for the development of assistance programs.

611 From the findings of this research, we offer several suggestions relevant to decision and
612 policy makers at a variety of subnational scales regarding domestic climate migration in the
613 U.S., as researchers have yet to provide governments with suggestions for planning and
614 preparing for climate migration (Marandi and Leilani Main 2021). First, increasing public
615 awareness of the term 'climate migrants' in the U.S. is *not* likely to increase public support of
616 the development of policy and programs to assist domestic climate migrants in the U.S.
617 Instead, communicators and educators should provide evidence that domestic climate
618 migration is currently happening in the U.S. to increase public support for the development of
619 assistance programs. Targeted messaging campaigns should aim to increase the belief that
620 climate migration is currently happening in the U.S., particularly among older populations, as
621 these groups exhibit decreased support for the development of domestic assistance programs.
622 However, we do caution, that the drivers of the specific policy explored in this study may not
623 necessarily drive support for all policies regarding climate migrants and migration.

624 Second, political polarization appears to play a substantial role in the development of
625 attitudes toward climate migrants in the U.S. While polarization may be unavoidable, efforts
626 should focus on reducing political polarization surrounding climate change adaptation efforts,
627 including climate migration. Bipartisan efforts should work to frame climate migration as one
628 of many adaptations to climate change impacts, an option to minimize exposure while
629 improving livelihoods. Lastly, communicators and educators should be cautious with efforts
630 intended to proximize climate change impacts and reduce the psychological distance of
631 climate change. Although situating personal experiences with extreme weather to the
632 forefront of public discourse may help the public understand the relationship between climate
633 change impacts and relocation. Community deliberative forums have been identified as useful
634 venues for individuals mentally traverse psychological distance (Hurst et al. 2021), and may
635 be helpful in educating the public about climate migration. It is also clear that those who have
636 experienced an extreme weather event in the past year are more likely to believe that climate
637 migrants mostly relocate voluntarily. Because support is so strongly driven by perceived
638 voluntariness, intended public outcomes should be clearly defined.

Future research should focus on several avenues. First, researchers should investigate nuances associated with perceptions and attitudes about domestic climate migration in the U.S. Varying personal experiences, political ideologies, and other geographically varying characteristics of populations may help to explain important variance in public perceptions and attitudes. Climate change impacts also disproportionately impact vulnerable populations (Tripati et al. 2023), thus scale-appropriate estimates of public opinions can also serve as a vital tool for policy and decision makers, as adaptation efforts are necessary at national and subnational scales (Brugger and Crimmins 2014). Equipping leaders with locally relevant information may help further refine the strategies we have proposed. Second, additional research should identify situations and circumstances that lead people to choose to migrate and might alter public perceptions and opinions about climate migrants and migration. Because perceived voluntariness plays a critical role in support for the development of assistance programs, it is likely that unique climate migrant circumstances are also important for these attitudes. Third, future research should be conducted to better understand the drivers of the specific policy or program of interest. Some predictors may drive support for some policies and not others (Howe et al. 2019). Fourth, policy researchers should begin to explore a range of policies at a variety of subnational scales, as well as their potential outcomes (Paolisso et al. 2012). There are few specific suggestions as to how the U.S. should proceed in efforts to minimize the effects of climate change impacts on citizens through migration.

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Data Availability Statement.

Anonymized survey data will be publicly available via Open Science Framework (OSF) at the conclusion of the project.

669 APPENDIX

670 **Appendix A Tables**

671 Table A1. Results of logistic regression models predicting awareness of climate migrants.
672 Coefficients (odds ratio, 95% confidence interval) p-value.

Predictor	Category	Demographics only	Demographics + climate change risk perceptions
	Intercept	0.10 (1.11, 0.85-1.45)	-0.56(0.57, 0.40-0.81)**
Age	25-34	-0.09 (0.91, 0.72-1.16)	-0.08 (0.93, 0.73-1.18)
	35-44	-0.10 (0.91, 0.71-1.16)	-0.07 (0.93, 0.72-1.19)
	45-54	-0.24 (0.79, 0.61-1.01).	-0.21 (0.81, 0.63-1.05)
	55-64	-0.13 (0.88, 0.69-1.13)	-0.03 (0.97, 0.75-1.24)
	65+	-0.37 (0.69, 0.52-0.91)**	-0.30 (0.74, 0.55-0.99)*
Gender	Male	0.38 (1.47, 1.28-1.67)***	0.44 (1.55, 1.35-1.77)***
Political affiliation	Republican	-0.91 (0.40, 0.33-0.49)***	-0.64 (0.53, 0.42-0.65)***
	Independent/Other	-0.15 (0.86, 0.74-1.00)*	-0.02 (0.99, 0.84-1.15)
	I prefer not to say	-0.56 (0.57, 0.30-1.03).	-0.46 (0.63, 0.33-1.16)
Ethnicity	Asian American	-0.80 (0.45, 0.33-0.60)***	-0.82 (0.44, 0.32-0.59)***
	Black or African American	-0.71 (0.49, 0.40-0.61)***	-0.74 (0.48, 0.38-0.59)***
	Two or more ethnicities or origins	0.09 (1.09, 0.71-1.67)	0.05 (1.05, 0.69-1.62)
	Some other race, ethnicity, or origin	0.18 (1.20, 0.58-2.46)	0.20 (1.22, 0.59-2.53)

Predictor	Category	Demographics only	Demographics + climate change risk perceptions
Hispanic, Latino, or Spanish	Hispanic, Latino, or Spanish	-0.20 (0.82, 0.53-1.26)	-0.24 (0.79, 0.51-1.22)
Education	Less than high school	-1.10 (0.33, 0.13-0.74)*	-1.12 (0.32, 0.13-0.73)*
	High school graduate	-0.56 (0.57, 0.46-0.71)***	-0.55 (0.58, 0.46-0.73)***
	Some college	-0.25 (0.78, 0.67-0.91)**	-0.27 (0.77, 0.65-0.90)**
	Master's degree	0.24 (1.27, 1.03-1.57)*	0.21 (1.23, 0.99-1.52).
	Doctoral or professional degree (PhD, MD, JD)	0.38 (1.46, 1.03-2.06)*	0.38 (1.46, 1.03-2.07)*
Region	Midwest	-0.11 (0.90, 0.73-1.11)	-0.08 (0.92, 0.75-1.14)
	South	-0.05 (0.95, 0.79-1.14)	-0.09 (0.91, 0.75-1.10)
	West	0.15 (1.16, 0.94-1.43)	0.07 (1.07, 0.86-1.33)
Extreme weather experience	Yes		0.13 (1.14, 0.97-1.34)
Worry about extreme weather	Somewhat or Very worried		0.19 (1.21, 1.00-1.47)*
Worry about global warming	Somewhat or Very worried		-0.07 (0.94, 0.74-1.18)
Perceived personal harm due to global warming	A moderate amount or A great deal		0.51(1.67, 1.39-2.00)***
	Don't know		-0.09 (0.91, 0.60-1.37)

Predictor	Category	Demographics only	Demographics + climate change risk perceptions
Perceived harm to community due to extreme weather	A moderate amount or A great deal		0.10 (1.11, 0.91-1.35)
	Don't know		-0.23 (0.80, 0.42-1.44)
AIC		5,182	5,101
N		3,955	3,951

*p-value *** < 0 , ** 0.001, * < 0.05, . < 0.1*

Reference categories: Age: 18-24 years old; Gender: Female; Political affiliation: Democrat; Ethnicity: White; Hispanic: Not Hispanic, Latino, or Spanish; Region: Northeast ; Extreme weather experience: No ; Worry about extreme weather: Not at all or Not very worried ; Worry about global warming: Not at all or Not very worried; Perceived personal harm due to global warming: Not at all or Only a little; Perceived harm to community due to extreme weather: Not at all or Only a little

694 Table A2. Results of logistic regression models predicting the probability belief that climate
695 change impacts like extreme weather are causing people to relocate within the U.S.
696 Coefficients (odds ratio, 95% confidence interval) p-value.

Predictor	Category	Demographics only	Demographics + climate change risk perceptions
	Intercept	1.27 (3.56, 2.69-4.74)***	-0.89 (0.41, 0.28-0.60)***
Age	25-34	-0.19 (0.83, 0.64-1.06)	-0.17 (0.84, 0.65-1.10)
	35-44	-0.39 (0.67, 0.52-0.87)**	-0.35 (0.70, 0.54-0.92)*
	45-54	-0.47 (0.62, 0.48-0.81)***	-0.44 (0.64, 0.49-0.85)**
	55-64	-0.57 (0.57, 0.44-0.73)***	-0.38 (0.68, 0.49-0.85)**
	65+	-0.43 (0.65, 0.49-0.87)**	-0.26 (0.77, 0.57-1.06)
Gender	Male	-0.11(0.90, 0.79-1.03)	0 (1.00, 0.87-1.23)
Political affiliation	Republican	-1.22 (0.30, 0.24-0.36)***	-0.37 (0.69, 0.55-0.86)***
	Independent/Other	-0.65 (0.52, 0.45-0.61)***	-0.27 (0.76, 0.65-0.90)**
	I prefer not to say	-0.80 (0.45, 0.26-0.79)**	-0.33 (0.72, 0.40-1.32)
Ethnicity	Asian or Asian American	-0.35 (0.70, 0.52-0.94)*	-0.39 (0.67, 0.50-0.92)*
	Black or African American	0.01 (1.01, 0.82-1.26)	-0 (1.00, 0.80-1.25)
	Two or more ethnicities or origins	0.15 (1.16, 0.75-1.83)	0.15 (1.16, 0.72-1.90)
	Some other race, ethnicity, or origin	-0.17 (0.85, 0.41-1.74)	-0.21 (0.81, 0.38-1.77)
Hispanic, Latino, or Spanish	Hispanic, Latino, or Spanish	0.37 (1.45, 0.92-2.33)	0.34 (1.40, 0.86-2.33)

Predictor	Category	Demographics only	Demographics + climate change risk perceptions
Education	Less than high school	0.59 (1.80, 0.84-4.21)	0.56 (1.75, 0.78-4.26)
	High school graduate	-0.01 (0.99, 0.79-1.23)	0.05 (1.05, 0.83-1.32)
	Some college	0.04 (1.04, 0.89-1.22)	0.03 (1.04, 0.87-1.23)
	Master's degree	0.11 (1.11, 0.90-1.38)	0.03 (1.03, 0.82-1.29)
	Doctoral or professional degree (PhD, MD, JD)	0.04 (1.05, 0.74-1.49)	0.07 (1.07, 0.74-1.57)
Region	Midwest	-0.06 (0.94, 0.76-1.17)	0.04 (1.04, 0.83-1.31)
	South	-0.10 (0.90, 0.75-1.09)	-0.16 (0.85, 0.70-1.04)
	West	0.16 (1.17, 0.94-1.46)	0.02 (1.02, 0.81-1.29)
Extreme weather experience	Yes		0.20 (1.22, 1.03-1.44)*
Worry about extreme weather	Somewhat or Very worried		0.39 (1.47, 1.21-1.78)***
Worry about global warming	Somewhat or Very worried		1.08 (2.94, 2.34-3.70)***
Perceived personal harm due to global warming	A moderate amount or A great deal		0.51 (1.67, 1.39-2.00)***
	Don't know		-0 (1.00, 0.67-1.49)
Perceived harm to community due to extreme weather	A moderate amount or A great deal		0.34 (1.40, 1.15-1.71)***
	Don't know		-0.54 (0.58, 0.31-1.08).
AIC		5,095	4,635

Predictor	Category	Demographics only	Demographics + climate change risk perceptions
N		3,953	3,949

*p-value *** < 0 , ** 0.001, * < 0.05, . < 0.1*

Reference categories: Age: 18-24 years old; Gender: Female; Political affiliation: Democrat; Ethnicity: White; Hispanic: Not Hispanic, Latino, or Spanish; Region: Northeast; Extreme weather experience: No; Worry about extreme weather: Not at all or Not very worried; Worry about global warming: Not at all or Not very worried; Perceived personal harm due to global warming: Not at all or Only a little; Perceived harm to community due to extreme weather: Not at all or Only a little

730 Table A3. Results of multinomial logistic regression models predicting perceived
731 voluntariness of climate migrant relocation "mostly choose to relocate". Coefficients (odds
732 ratio, 95% confidence interval) p-value.

Predictor	**Category**	**Demographics only**	**Demographics + climate change risk perceptions**
	Intercept	-1.04 (0.35, 0.25-0.50)	0.16 (1.18, 0.75-1.84)
Age	25-34	0.02 (1.02, 0.75-1.38)	0.02 (1.02, 0.74-1.39)
	35-44	0.19 (1.21, 0.89-1.66)	0.16 (1.18, 0.85-1.63)
	45-54	0.18 (1.20, 0.87-1.66)	0.14 (1.15, 0.83-1.60)
	55-64	0.61 (1.85, 1.36-2.51)***	0.50 (1.65, 1.20-2.26)**
	65+	0.36 (1.43, 1.00-2.03)*	0.26 (1.29, 0.90-1.86)
Gender	Male	0.47 (1.60, 1.36-1.89)***	0.38 (1.47, 1.24-1.73)***
Political affiliation	Republican	1.03 (2.79, 2.23-3.48)***	0.40 (1.49, 1.16-1.92)**
	Independent/Other	0.25 (1.28, 1.06-1.54)	-0.04 (0.96, 0.79-1.18)
	I prefer not to say	0.32 (1.37, 0.69-2.72)	-0.07 (0.94, 0.46-1.91)
Ethnicity	Asian or Asian American	-0.23 (0.80, 0.54-1.17)	-0.20 (0.82, 0.56-1.21)
	Black or African American	-0.17 (0.85, 0.65-1.10)	-0.12 (0.89, 0.68-1.17)
	Two or more ethnicities or origins	-0.23 (0.79, 0.46-1.35)	-0.24 (0.79, 0.45-1.37)
	Some other race, ethnicity, or origin	0.22 (1.24, 0.51-3.00)	0.23 (1.26, 0.51-3.12)

Predictor	Category	Demographics only	Demographics + climate change risk perceptions
Hispanic, Latino, or Spanish	Hispanic, Latino, or Spanish	-0.17 (0.84, 0.50-1.41)	-0.15 (0.86, 0.51-1.46)
Education	Less than high school	-0.70 (0.49, 0.19-1.31)	-0.68 (0.51, 0.19-1.36)
	High school graduate	0.09 (1.09, 0.85-1.41)	0.10 (1.10, 0.85-1.43)
	Some college	-0.04 (0.96, 0.79-1.17)	-0.03 (0.97, 0.80-1.19)
	Master's degree	-0.06 (0.94, 0.72-1.22)	0.01 (1.01, 0.77-1.33)
	Doctoral or professional degree (PhD, MD, JD)	-0.21 (0.81, 0.53-1.25)	-0.28 (0.76, 0.49-1.18)
Region	Midwest	0.03 (1.03, 0.79-1.34)	-0.03 (0.97,0.74-1.27)
	South	0.08 (1.08, 0.86-1.37)	0.09 (1.09, 0.86-1.39)
	West	0.16 (1.17, 0.90-1.53)	0.23 (1.26, 0.96-1.66)
Extreme weather experience	Yes		0.33 (1.39, 1.14-1.71)**
Worry about extreme weather	Somewhat or Very worried		-0.33 (0.72, 0.57-0.90)**
Worry about global warming	Somewhat or Very worried		-0.65 (0.52, 0.40-0.68)***
Perceived personal harm due to global warming	A moderate amount or A great deal		-0.41 (0.67, 0.54-0.83)***
	Don't know		-0.80 (0.45, 0.27-0.76)**

Predictor	Category	Demographics only	Demographics + climate change risk perceptions
Perceived harm to community due to extreme weather	A moderate amount or A great deal		-0.28 (0.68, 0.60-0.96)
	Don't know		-0.40 (0.68, 0.32-1.45)
AIC		9,623	9,357
N		3,958	3,954

*p-value *** < 0 , ** 0.001, * < 0.05, . < 0.1*

Reference categories: Age: 18-24 years old; Gender: Female; Political affiliation: Democrat; Ethnicity: White; Hispanic: Not Hispanic, Latino, or Spanish; Region: Northeast; Extreme weather experience: No; Worry about extreme weather: Not at all or Not very worried; Worry about global warming: Not at all or Not very worried; Perceived personal harm due to global warming: Not at all or Only a little; Perceived harm to community due to extreme weather: Not at all or Only a little.

752 Table A4. Results of multinomial logistic regression models predicting perceived
753 voluntariness of climate migrant relocation "mostly forced to relocate". Coefficients (odds
754 ratio, 95% confidence interval) p-value.

Predictor	Category	Demographics only	Demographics + climate change risk perceptions
	Intercept	0.24 (1.28, 0.94-1.74)	0.10 (1.18, 0.72-1.70)
Age	25-34	-0.16 (0.85, 0.65-1.12)	-0.14 (0.87, 0.66-1.14)
	35-44	0.03 (1.03, 0.78-1.37)	0.04 (1.05, 0.79-1.39)
	45-54	-0.09 (0.91, 0.68-1.22)	-0.08 (0.93, 0.69-1.24)
	55-64	-0.13 (0.88, 0.65-1.18)	-0.11 (0.89, 0.66-1.20)
	65+	-0.15 (0.86, 0.61-1.20)	-0.13 (0.88, 0.63-1.23)
Gender	Male	-0.01 (0.99, 0.85-1.16)	-0.01 (0.99, 0.84-1.16)
Political affiliation	Republican	-0.19 (0.83, 0.64-1.06)	-0.14 (0.87, 0.66-1.13)
	Independent/Other	-0.29 (0.75, 0.62-0.89)**	-0.28 (0.76, 0.63-0.91)**
	I prefer not to say	-0.33 (0.72, 0.36-1.44)	-0.40 (0.68, 0.34-1.39)
Ethnicity	Asian or Asian American	0 (1.00, 0.72-1.40)	0 (1.00, 0.72-1.40)
	Black or African American	0.07 (1.08, 0.85-1.36)	0.08 (1.09, 0.86-1.38)
	Two or more ethnicities or origins	-0.06 (0.94, 0.57-1.56)	-0.06 (0.94, 0.57-1.55)
	Some other race, ethnicity, or origin	0.22 (1.25, 0.50-3.11)	0.23 (1.26, 0.51-3.14)

Predictor	Category	Demographics only	Demographics + climate change risk perceptions
Hispanic, Latino, or Spanish	Hispanic, Latino, or Spanish	-0.36 (0.70, 0.42-1.17)	-0.37 (0.69, 0.41-1.15)
Education	Less than high school	-0.43 (0.65, 0.27-1.54)	-0.42 (0.65, 0.25-1.55)
	High school graduate	-0.32 (0.73, 0.55-0.96)*	-0.30 (0.74, 0.56-0.97)*
	Some college	0.02 (1.02, 0.85-1.23)	0.03 (1.03, 0.86-1.25)
	Master's degree	0.02 (1.02, 0.79-1.31)	0.03 (1.03, 0.80-1.32)
	Doctoral or professional degree (PhD, MD, JD)	-0.05 (0.95, 0.63-1.43)	-0.04 (0.95, 0.63-1.43)
Region	Midwest	-0.18 (0.83, 0.65-1.06)	-0.19 (0.83, 0.65-1.06)
	South	-0.31 (0.73, 0.59-0.91)**	-0.09 (0.73, 0.59-0.91)**
	West	-0.30 (0.74, 0.58-0.95)*	-0.30 (0.74, 0.57-0.95)*
Extreme weather experience	Yes		0.02 (1.02, 0.84-1.24)
Worry about extreme weather	Somewhat or Very worried		-0.15 (0.86, 0.68-1.08)
Worry about global warming	Somewhat or Very worried		0.10 (1.10, 0.82-1.50)
Perceived personal harm due to global warming	A moderate amount or A great deal		0.04 (1.04, 0.84-1.29)
	Don't know		0 (1.00, 0.63-1.59)

Predictor	Category	Demographics only	Demographics + climate change risk perceptions
Perceived harm to community due to extreme weather	A moderate amount or A great deal		0.13 (1.14, 0.89-1.45)
	Don't know		-0.47 (0.63, 0.26-1.49)
AIC		9,623	9,357
N		3,958	3,954

*p-value *** < 0 , ** 0.001, * < 0.05, . < 0.1*

Reference categories: Age: 18-24 years old; Gender: Female; Political affiliation: Democrat; Ethnicity: White; Hispanic: Not Hispanic, Latino, or Spanish; Region: Northeast; Extreme weather experience: No; Worry about extreme weather: Not at all or Not very worried; Worry about global warming: Not at all or Not very worried; Perceived personal harm due to global warming: Not at all or Only a little; Perceived harm to community due to extreme weather: Not at all or Only a little

776 Table A5. Results of logistic regression models predicting support for creating local and state
777 programs to fund assistance for people who have relocated within the U.S. due to climate
778 change impacts like extreme weather. Coefficients (odds ratio, 95% confidence interval) p-
779 value.

Predictor	Category	Demographics only	Demographics + climate change risk perceptions	Demographics + climate change risk perceptions + attitudes and perceptions about climate migrants and migration
	Intercept	2.00 (7.41, 5.43-10.16)***	-0.03 (0.97, 0.65-1.46)	-0.98 (0.38, 0.24-0.59)***
Age	25-34	-0.64 (0.53, 0.40-0.69)***	-0.66 (0.52, 0.39-0.69)***	-0.65 (0.52, 0.39-0.71)***
	35-44	-0.53 (0.59, 0.44-0.78)***	-0.49 (0.61, 0.45-0.82)**	-0.45 (0.64, 0.47-0.87)**
	45-54	-0.95 (0.39, 0.29-0.51)***	-0.94 (0.39, 0.29-0.53)***	-0.89 (0.41, 0.30-0.56)***
	55-64	-1.13 (0.32, 0.24-0.42)***	-1.01 (0.37, 0.27-0.49)***	-0.90 (0.41, 0.30-0.55)***
	65+	-1.21 (0.30, 0.22-0.41)***	-1.13 (0.32, 0.23-0.45)***	-1.09 (0.34, 0.24-0.48)***
Gender	Male	-0.21 (0.81, 0.70-0.93)**	-0.11 (0.89, 0.77-1.04)	-0.06 (0.94, 0.80-1.10)
Political affiliation	Republican	-1.94 (0.14, 0.12-0.18)***	-1.16 (0.31, 0.25-0.39)***	-1.07 (0.34, 0.27-0.43)***
	Independent/Other	-1.14 (0.32, 0.27-0.37)	-0.80 (0.45, 0.38-0.53)***	-0.77 (0.46, 0.39-0.55)***
	I prefer not to say	-1.38 (0.25, 0.14-0.44)	-0.93 (0.39, 0.21-0.73)**	-0.85 (0.43, 0.22-0.81)**
Ethnicity	Asian or Asian American	-0.26 (0.77, 0.57-1.05).	-0.30 (0.74, 0.54-1.02).	-0.27 (0.76, 0.55-1.07)
	Black or African American	0.47 (1.59, 1.26-2.02)***	0.49 (1.63, 1.27-2.09)***	0.49 (1.63, 1.26-2.11)***

Predictor	Category	Demographics only	Demographics + climate change risk perceptions	Demographics + climate change risk perceptions + attitudes and perceptions about climate migrants and migration
	Two or more ethnicities or origins	0.11 (1.11, 0.71-1.77)	0.12 (1.13, 0.69-1.88)	0.04 (1.04, 0.63-1.76)
	Some other race, ethnicity, or origin	0.28 (1.32, 0.63-2.81)	0.29 (1.34, 0.61-3.04)	0.39 (1.47, 0.62-3.56)
Hispanic, Latino, or Spanish	Hispanic, Latino, or Spanish	0.12 (1.12, 0.71-1.81)	0.09 (1.09, 0.67-1.82)	0.11 (1.11, 0.67-1.88)
Education	Less than high school	0.46 (1.59, 0.73-3.64)	0.46 (1.58, 0.70-3.77)	0.34 (1.40, 0.61-3.40)
	High school graduate	0.08 (1.08, 0.86-1.36)	0.16 (1.17, 0.92-1.49)	0.27 (1.30, 1.01-1.69)*
	Some college	0.22 (1.25, 1.06-1.48)**	0.24 (1.27, 1.06-1.52)*	0.25 (1.29, 1.07-1.56)**
	Master's degree	0.03 (1.03, 0.82-1.29)	-0.05 (0.95, 0.75-1.20)	-0.08 (0.92, 0.72-1.18)
	Doctoral or professional degree (PhD, MD, JD)	-0.18 (0.83, 0.58-1.20)	-0.16 (0.85, 0.58-1.25)	-0.24 (0.79, 0.53-1.18)
Region	Midwest	-0.07 (0.93, 0.74-1.17)	0.02 (1.03, 0.81-1.30)	0.02 (1.02, 0.80-1.31)
	South	-0.24 (0.79, 0.65-0.96)*	-0.25 (0.78, 0.63-0.96)*	-0.18 (0.84, 0.67-1.04)
	West	-0.16 (0.85, 0.68-1.07)	-0.28 (0.76, 0.59-0.97)*	-0.21 (0.81, 0.63-1.04).
Extreme weather experience	Yes		-0.11 (0.90, 0.75-1.08)	-0.08 (0.92, 0.76-1.12)

Predictor	Category	Demographics only	Demographics + climate change risk perceptions	Demographics + climate change risk perceptions + attitudes and perceptions about climate migrants and migration
Worry about extreme weather	Somewhat or Very worried		0.43 (1.54, 1.25-1.89)***	0.35 (1.42, 1.15-1.76)**
Worry about global warming	Somewhat or Very worried		1.31 (3.71, 2.90-4.77)***	1.08 (2.93, 2.26-3.82)***
Perceived personal harm due to global warming	A moderate amount or A great deal		0.42 (1.52, 1.26-1.84)***	0.28 (1.33, 1.09-1.62)**
	Don't know		0.34 (1.41, 0.92-2.17)	0.27 (1.31, 0.84-2.05)
Perceived harm to community due to extreme weather	A moderate amount or A great deal		0.21 (1.24, 1.00-1.53).	0.08 (1.09, 0.87-1.36)
	Don't know		-0.87 (0.42, 0.21-0.82)*	-0.74 (0.48, 0.23-0.96)*
Awareness of climate migrants	Yes			0.07 (1.07, 0.91-1.27)
Belief that climate migration is happening	Yes			0.68 (1.98, 1.67-2.34)***
Perceived voluntariness of climate migrant relocation	Mostly choose to relocate			-0.92 (0.40, 0.33-0.48)***
	Mostly are forced to relocate			0.53 (1.70, 1.40-2.07)***
	Don't know			-0.73 (0.48, 0.33-0.70)***
AIC		4,701	4,307	4,019

Predictor	Category	Demographics only	Demographics + climate change risk perceptions	Demographics + climate change risk perceptions + attitudes and perceptions about climate migrants and migration
N		3,956	3,952	3,944

*p-value *** < 0 , ** 0.001, * < 0.05, . < 0.1*

Reference categories: Age: 18-24 years old; Gender: Female; Political affiliation: Democrat; Ethnicity: White; Hispanic: Not Hispanic, Latino, or Spanish; Region: Northeast; Extreme weather experience: No; Worry about extreme weather: Not at all or Not very worried; Worry about global warming: Not at all or Not very worried; Perceived personal harm due to global warming: Not at all or Only a little; Perceived harm to community due to extreme weather: Not at all or Only a little; Awareness of climate migrants: No; Belief that climate migration is happening: No; Perceived voluntariness of climate migrant relocation: Choosing and being forced about equally

Survey instructions and survey items.

Opinions about environmental issues

You are invited to participate in a research study by Dr. Peter Howe and Brittany Harris in the Department of Environment and Society at Utah State University.

The purpose of this research is to understand opinions about environmental issues. You are being asked to participate in this research because you are a U.S. resident over 18 years of age.

Your participation in this study is voluntary and you may withdraw your participation at any time for any reason. You can decline to participate in any part of this study for any reason and can end your participation at any time.

If you take part in this study, you will be asked to answer 17 questions about your own opinions. Completing this study should take about 3 minutes.

You will be compensated $.60 through Prolific for completing this study. Participants will be compensated automatically when their submissions are approved by the researcher, or they are approved automatically after 21 days if the researcher has not approved them by that time. In addition to direct compensation, this study has been designed to benefit society by learning more about attitudes and perceptions related to environmental issues.

The possible risks of participating in this study include loss of confidentiality and possible discomfort when answering questions about your own opinions. We will make every effort to ensure that the information you provide remains confidential. Personally identifying information will not be collected in this survey.

We will collect your information through an online survey via Qualtrics. Online activities always carry a risk of a data breach, but we will use systems and processes that minimize breach opportunities. The survey data will be securely stored in a restricted-access folder; in an encrypted, cloud-based storage system.

If you have any questions about this study, you can contact Dr. Peter Howe at peter.howe@usu.edu. If you have any concerns about this study, please contact Utah State University's Human Research Protection Office at (435) 797-0567 or irb@usu.edu. Thank you again for your time and consideration.

By continuing to the survey, you agree that you are 18 years of age or older and wish to participate. You agree that you understand the risks and benefits of participation, and that you know what you are being asked to do.

- Yes, I consent
- No, I do not consent

(If participants selected "No, I do not consent" the survey concluded.)

What is your Prolific ID? Please note that this response should auto-fill with the correct ID:

In the past year, have you experienced any of the following?

- Hurricane
- Wildfire
- Extreme heat
- Drought
- Severe storm
- Flood
- None of the above

How much do you think extreme weather (like extreme heat, drought, severe storms, floods, hurricanes, or wildfires) will harm people in your community in the next five years?

- Not at all
- Only a little
- A moderate amount
- A great deal
- Don't know

How worried are you about extreme weather in your local area?

- Very worried
- Somewhat worried
- Not very worried
- Not at all worried

Climate change adaptation means preparing for extreme weather caused by global warming to reduce risks to people and communities. Have you heard of climate change adaptation?

- Yes
- No

Climate change adaptation requires costs now to reduce greater costs in the future. How much do you support or oppose adaptation efforts by your local government?

- Strongly support
- Somewhat support
- Somewhat oppose
- Strongly oppose
- Don't know

How confident are you that, over the next five years, your local government can prepare your community for extreme weather?

- Very confident
- Somewhat confident
- Not very confident
- Not at all confident
- Don't know

How confident are you that, over the next five years, you can prepare yourself for extreme weather?

- Very confident

- Somewhat confident
- Not very confident
- Not at all confident
- Don't know

How worried are you about global warming?

- Very worried
- Somewhat worried
- Not very worried
- Not at all worried

How much do you global warming will harm you personally?

- Not at all
- Only a little
- A moderate amount
- A great deal
- Don't know

A **climate migrant** is an individual who relocated *voluntarily* or *involuntarily* due to short-term or long-term impacts of climate change.
Have you heard or read about climate migrants?

- Yes
- No

Do you think that climate change impacts ike extreme weather are **causing** people to relocate *within* the U.S.?

- Yes
- No
- Don't know

When people move because of climate change impacts, like extreme weather, do you think they mostly **choose to relocate** or are mostly **forced to relocate**?

- Mostly choose to relocate
- Mostly forced to relocate
- Mostly forced to relocate
- Don’t know

How much d you *support* or *oppose* creating local and state **programs to fund assistance** for people who have relocated within the U.S. due to climate change impacts like extreme weather?

- Strongly support
- Somewhat support
- Neither support nor oppose
- Somewhat oppose
- Strongly oppose

Which of the following describes your race or ethnicity? (Check all that apply)

- White

- Hispanic, Latino, or Spanish
- Black or African American
- Asian or Asian American
- American Indian, Native American, or Alaska Native
- Middle Eastern or North African
- Native Hawaiian or other Pacific Islander
- Some other race, ethnicity, or origin

What is the highest level of school you havae completed or the highest degree you have received?

- Less than high school degree
- High school graduate (high school diploma or equivalent including GED)
- Some college but no degree
- Bachelor's degree in college (4 year)
- Master's degree
- Doctoral or professional degree (ex. PhD, JD, MD)

Generally speaking, do you think of yourself as a...

- Republican
- Democrat
- Independent
- I prefer not to say
- Other

What is your 5-digit ZIP code?

(If participants did not provide their ZIP code, they were prompted with the following:)

In what state or U.S. territory do you live?

Participants selected from a drop-down list of U.S. states and territories.

Survey participants and limitations,

Although U.S. Census data provides a broad overview of the demographic characteristics of the U.S. population, because we utilized a stratified quota sampling method and post-stratification weighting in our descriptive results, it is important to make a few notes. First, it is possible that U.S. Census data is not always accurate, as some groups of individuals may choose not to report information or may be difficult to reach. For example, according to the 2020 Census report (Khubba et al. 2022), the Census undercounted some age-sex groups and overcounted other groups. Specifically, those under the age of 50 were overcounted, and those over the age of 50 were undercoundted. The report also details that adult males were identified to be undercounted, and adult females were overcounted. Children between the ages of 0 and 4 years old were undercounted. Complexities and complications associated with using Census data in survey research should be considered when interpreting our findings.

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