

# People's Action for Climate Justice: A Systematic Review

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Increasing recognition of the multi-faceted injustices of climate change has led to growing interest in the actions people can take to advance climate justice (CJ). Yet, within the empirical literature on climate change action by everyday people, limited research has considered climate justice as a framework for action. To explore the current state of the literature on this critical topic, this systematic review examined 74 peer-reviewed articles (2008 to 2020) focused on CJ action. Within this rapidly-growing literature, we found that—in contrast to traditional definitions of action, which often emphasize individual behavioural shifts with consequences for the environment—people's involvement in CJ action was largely framed as a collective pursuit with consequences for humanity. Moreover, in this multidisciplinary literature with data collected across 69 countries, CJ action was employed by children, youth, adults, and elders in diverse forms—from activism (e.g., protests) to community-based initiatives (e.g., restoration projects)—aimed at systemic change to prevent future climate-driven harms.

Keywords: action; activism; climate change; climate justice; environmental justice; systematic review

## Background

There is growing recognition that climate change is an issue of social, environmental, racial, intergenerational, and other forms of justice (Sultana 2022). Within and across countries, the consequences of climate disruption are already falling disproportionately on societies' most marginalized groups who have often done the least to contribute to the problem in the form of greenhouse gas emissions (Füssel 2010). Globally, for example, residents of small island nations with the lowest levels of historic carbon emissions are mobilizing to resist rising sea levels and minimize harms from more frequent and intense weather-driven hazards and displacement (Weatherill 2022). In the U.S., BIPOC (Black, Indigenous, and People of Colour) and low-income communities as well as children and the elderly are facing disproportionate burdens as the impacts of climate change exacerbate existing social, economic, and health inequities and exploit

physiological vulnerabilities (Benevolenza and DeRigne 2019). Alongside growing awareness of these historical and ethical dimensions of climate disruption, public and policy discourse has shifted towards the necessity not just for taking bold action to address climate change, but to advance climate justice (CJ).

At a fundamental level, CJ is a matter of “paying attention to how climate change impacts people differently, unevenly, and disproportionately, as well as redressing the resultant injustices in fair and equitable ways” (Sultana 2022, 118). Demands for CJ are rooted in the recognition that climate change both arises from and further entrenches a global network of layered inequalities, in which those who have generated the most carbon pollution are in possession of the greatest power to address climate disruption, while also possessing the wealth needed to avoid its worst impacts, and those who have contributed the least to anthropogenic alteration of atmospheric thermodynamics are simultaneously the most likely to suffer disaster and loss of well-being under a changing climate, the least able to adapt to climate-driven hazards, and the least likely to be included within the decision-making spaces of global climate policy and economic strategy (Dreher and Voyer 2015; Gibson and Duram 2020). Beyond issues of disproportionality, CJ frameworks “link ‘environmentalism’ to intersecting analyses of global wealth disparity, ongoing (settler) colonialism, capitalist extraction and profiteering, border imperialism, racism, patriarchy, and more” (Chazan and Baldwin 2019, 245-6). As evidence of the increasing prominence of CJ in mainstream discourse, in its February 2022 report, the United Nations Intergovernmental Panel on Climate Change (IPCC 2022) for the first time named colonialism as a driver of disproportionate climate-fuelled risks faced by marginalized groups. This important shift in the climate change conversation raises the question: What actions can people take to advance CJ?

To date, much of the literature on CJ has an inherently systems-level focus on historical processes of injustice and the institutions, policies, and powerful organizations that perpetuate them. As a result, CJ action in this literature is often framed in macro-level terms and as a ‘top-down’ process undertaken not by the general public, but by organizations, governments, legal institutions, and other such entities towards mitigating and adapting to climate change while minimizing harms to societies’ most vulnerable groups as well as promoting broad participation in decision-making and action to promote human flourishing (Miller Hesed and Ostergren 2017). In contrast, most research on ‘bottom-up’ climate change action by everyday people—that is, individuals acting in household, consumer, neighbourhood, or other grassroots activist contexts—has focused on mitigating climate change (e.g., via carbon footprint reductions; Fuller 2017) and/or adapting to its effects (e.g., Adger et al. 2016; Carman and Zint 2020), but rarely with an explicit focus on advancing CJ. For instance, in a recently published systematic review of 113 studies examining outcomes of sustained environmental collective action (Gulliver et al. 2022), just five studies focused on environmental justice and only one named CJ as a goal (i.e., Hicks and Fabricant 2016). A common critique of the literature on individual climate change action is that it privatises responsibility for the atmospheric commons, thereby exonerating states from responsibility for public goods, including the environment (Shove 2010). As such, there is a need to understand and advance action repertoires for the general public that eschew neoliberal narratives of climate change action and build capacity for societal transformation. Given the systems-level critique at the core of CJ discourse, the actions of everyday people to advance CJ may offer a much-needed bridge between ‘bottom-up’ and ‘top-down’ action in spurring systemic change. With aims of addressing the more general question of what actions people can take to advance CJ, the present

systematic review asks: how is the broader literature on people's climate change action reflecting the emergence of CJ principles, concepts, and discourse? In particular, this systematic review examines the literature on people's CJ action in order to classify and describe how CJ is defined and enacted in published, peer-reviewed studies, as well as how scholars describe the actual and aspirational impacts of CJ action in terms of its micro-level (i.e., cognitive, affective and behavioural) to macro-level (i.e., policy) effects. The present research was guided by the following research questions, in which "CJ action" is defined as the ways in which the general public takes action to advance CJ:

- (1) What are notable publication trends in research on CJ action?
- (2) How and to what extent do scholars define and make central CJ frameworks in their research on CJ action?
- (3) In the peer-reviewed, empirical literature on CJ action, who are the actors and what methodological approaches are employed to examine their actions?
- (4) How is CJ action described, both in terms of processes and outcomes, and what micro- to macro-level factors are investigated in research on CJ action?

## **Method**

This systematic review is based on 74 peer-reviewed journal articles identified through a multi-phase process. The process began by reviewing closely-aligned systematic review articles (e.g., Carman and Zint 2020) and generating a search string comprised of keywords adequate to identify relevant studies. The reporting process in this review is guided by the PRISMA (i.e., "preferred reporting items for systematic reviews and meta-analyses") framework (Page et al. 2021).

[Figure 1]

### ***Search Strategy and Information Sources***

To identify records of interest, search terms related to CJ and action were arranged in a variety of combinations and searched using Boolean operators (i.e., “AND”; “OR”) to generate a search string used across databases. The Boolean/Phrase used for the present research was: "climate justice" AND action OR "climate justice" AND activis\* OR "climate justice" AND advoca\* OR "climate justice" AND movement. This search string was used in several databases chosen for their broad scope and specific relevance to the present review: Web of Science, Academic Search Complete, Scopus, and PsycINFO. These databases collectively index more than 10,000 journals spanning a wide range of disciplines. The search terms could appear anywhere in the article, including in the article’s title, abstract, keywords, main text, or references, as well as in the title of the journal. Only journal articles were included in this review, and the articles were not date-restricted. This review includes all articles published through the end of 2020. With the exception of advanced online publications published prior to December 2020 with official publication dates later updated, no articles from 2021-2022 are included in this review. The final search was conducted on January 12, 2021. Across databases, the initial search produced a sample of 527 records to be included in the initial review (see Figure 2).

[Figure 2]

Before considering the initial sample complete, a manual search was conducted to identify potentially-overlooked articles of interest. This involved: (1) reviewing the reference lists of excluded theoretical and review articles closely-aligned with the

present review; (2) scanning the reference lists of included articles that were determined to be most relevant to the focus of this review; and (3) manually searching keywords in a small subset of top journals publishing articles relevant to the present review (i.e., *Local Environment; Environmental Politics; Global Environmental Change*). Manual search strategies play a valuable role in locating additional articles beyond those indexed in major databases (DeLuca et al. 2008). Together, these searches yielded a total of 10 non-duplicate articles to be added to our review sample.

### ***Eligibility Criteria***

The eligibility criteria for this systematic review emphasized empirical articles reporting on data collected by the authors. This could include data collected directly from participants (i.e., human subjects research) or indirectly through the collection of archival data (e.g., from websites, campaign materials, media coverage). This systematic review thus did not include theoretical articles, non-empirical case studies, or review articles (e.g., literature, systematic, or scoping reviews). To ensure only empirical articles were included in this review, the reporting of data collection methods was critical in determining eligibility. Eligibility criteria further stipulated that articles must focus on the intersection of CJ and action. Specifically, to classify and describe forms of CJ action the average person may engage in, a second eligibility criterion was that the action(s) described in articles must be available to “everyday people” (i.e., the general public) and not forms of specialized action accessible only to professionals (e.g., academics, lawyers, policymakers). Articles could explore a range of topics at the intersections of CJ and action, including individual behaviour change, collective action, activism, or research on the cognitive or affective dimensions of CJ action. This review aimed to be inclusive of diverse research designs and methodologies, not limited to

outcomes-focused assessments of CJ actions or campaigns. This approach was guided by the notion that, by including psychosocial investigations exploring the thinking and feeling aspects of CJ action, the review may shed light not only on what sorts of activities are occurring at the intersections of CJ and action, but also how they are viewed and experienced by those involved. Finally, articles were retained in the analysis as long as they made mention of “climate justice” in the title, abstract, keywords, or body of the article. Due to the language capabilities of the research team, only articles published in English were included in this review.

### ***Screening Process and Study Selection***

This systematic review took place in five phases over a period of 20 months by a research team consisting of four graduate students and one faculty member. After conducting the initial search and exporting search results into a reference manager (i.e., RefWorks), duplicates were identified and removed using automated and manual processes. Next, all articles were imported into an open-access systematic review software tool (i.e., CADIMA) and subjected to a third round of duplicate-screening using CADIMA’s auto-detection tool. In total, 186 duplicate articles were removed from the database, leaving 351 articles to be screened for eligibility.

Phase 1 involved screening titles and abstracts according to three inclusion/exclusion criteria relating to “Article Type” (i.e., empirical, not theoretical or review), “Action Type” (i.e., general public), and “Study Focus” (i.e., climate change action). All article titles and abstracts were independently screened by two members of the research team who later met to resolve inconsistencies by consensus. Screening in Phase 1 deliberately erred on the side of inclusivity; If any uncertainty existed based on title and abstract review, the article was retained for further analysis. In Phase 1, of the



351 article titles and abstracts reviewed, 198 were screened out due to not being empirical articles, not focusing on climate change action, or actions being inaccessible to the general public (e.g., policymaking). A few additional articles were removed from the database due to not being in English. This left 153 articles to be reviewed in Phase 2.

Phase 2 involved uploading full-text articles into the CADIMA system, then double-checking each article for Phase 1 eligibility criteria (i.e., Article Type, Action Type, and Study Focus), plus reviewing for the CJ dimension. Articles not mentioning “climate justice” in article title, abstract, keywords, or body were screened out. As in Phase 1, all full-text articles were reviewed independently by two members of the research team who later met to resolve discrepant responses through a consensus process. As depicted in Figure 2, of the 153 full-text articles reviewed, 63 were screened out due to not meeting one or more eligibility criteria. This left 90 articles to be included in further phases of review and analysis.

### ***Coding Process***

Phases 3 and 4 involved developing and applying a coding system to capture article properties. Each article was coded for a range of dimensions across four key categories corresponding with this study’s research questions: (1) Article Properties; (2) Justice Dimensions; (3) Methodological Approaches and Participants; (4) Action Properties.

After an initial coding system was developed, all coding questions and categories (i.e., a mix of open-ended and multiple-choice items) were entered into REDCap (Research Electronic Data Capture). Each article was entered as a unique record, and all codes were entered into a form for completion by members of the research team. To pilot the coding system, pairs of coders were assigned across 10% of

articles ( $n = 9$ ), and the full team met to discuss applications of codes, raise questions, and make further updates to refine the coding system. Once a full coding system was established, each article was coded by one member of the research team, with uncertainties regarding specific coding decisions reviewed by a second member of the research team via the REDCap comment system. Additionally, the five-member team met regularly over a period of 9 months to discuss, clarify, and refine the coding structure and process. During coding, additional articles were identified as not meeting inclusion criteria and were reviewed by two members of the research team before finalizing an exclusion decision. In the present review, 16 articles were excluded during the coding stage, leaving 74 articles as the final sample for this review.

### ***Analysis***

Phase 5 involved analysing the full sample of 74 articles for all coding questions and categories using descriptive statistics (e.g., frequency counts; percentages) for close-ended items as well as reflexive thematic analysis for open-ended items (Braun and Clarke 2006). The comprehensive database and codebook were exported from REDCap and analyses were conducted primarily in Microsoft Excel (e.g., quantitative analyses), MAXQDA 2020 (e.g., qualitative analyses), and QGIS. Because it was not possible to code every article for every codebook item, in the results that follow, totals do not always equal the full sample. Further, because most close-ended items allowed multiple response options to be selected, the reported totals often sum to more than 100%.

## **Results**

### ***Article Properties***

The earliest article meeting the inclusion criteria for this review was published in 2008

(Saunders), and the volume of publications reporting on CJ action has grown markedly in the 12-year span covered in this review (see Figure 3). Journals publishing research on CJ action span a range of disciplines, though social sciences—corresponding with numerous sub-disciplines form the vast majority (see Figure 4).

[Figures 3 and 4]

To capture the geographic context of publishing authors, the number of authors and their institutional affiliations were documented (i.e., city, state/province/territory, region, country, continent). Figure 5 is a map of authors' institutional affiliations by country. By continent, the greatest proportions of author institutional affiliations are from Europe (e.g., United Kingdom, Spain, Sweden), with 42.7% of total institutional affiliations, followed by North America (i.e., Canada; USA; 41.1%), and Australia and New Zealand (15.3%). Of the 16 countries represented, just one author affiliation—from the United Arab Emirates (0.8%)—fell outside of the Global North. It is worth noting that because this review is based on English-language publications, these analyses are not representative of all published, peer-reviewed studies of CJ action.

[Figure 5]

### ***Justice Dimensions***

To describe whether and to what extent scholars defined and made central CJ frameworks in their research, each article was coded for whether it provided a definition and/or theoretical background on CJ. Building on these properties, in order to capture the centrality of CJ, each article was placed into one of four categories based on the system developed by Aboytes and Barth (2020), from low centrality (i.e., Buzzword/Minimal Usage) to high centrality (i.e., Central Framework). While nearly

two-thirds of articles (66.2%) provided at least some theoretical background on CJ, the same proportion (66.2%) did not explicitly define the term. Of the 33.8% of articles providing a definition, most offered limited and imprecise definitions of CJ, commonly referring to its roots in environmental justice, human rights frameworks, and the importance of bringing a historical and moral framework into climate change discourse and thereby serving to (re) politicize what has otherwise been treated as a ‘post-political’ scientific and technical issue.

Articles providing more detailed definitions touched upon one or more of the following elements: (1) the conceptualization of climate change as the outcome of systemic global processes wherein; (2) certain countries and groups have been systematically marginalized within systems of power and wealth generation (i.e., global capitalism, for the purposes of extracting cheap labour and resources for the benefit of the wealthy), and in which; (3) these patterns of extraction have led to the radically unequal distribution of the wealth and political power needed to address climate risks at the same time as they; (4) position climate change and its risks as a continuation of Western colonial and capitalist violence upon the global poor, as the same characteristics that contribute to the exploitation of these groups simultaneously enhance their exposure and sensitivity to climate disruptions. In the absence of a more detailed definition, the need for CJ was most often attributed to the reality that those most responsible are least at risk, and likewise, those most at risk are those least responsible (e.g., Barrett 2013).

Articles in this review embodied CJ values and principles, for example by calling for intersectional and intergenerational solidarities with underrepresented groups and frontline communities who are bearing the brunt of climate disruption (e.g., BIPOC and indigenous groups; Chazan and Baldwin 2019; Jodoin et al. 2020; Miller Hesed and

Ostergren 2017; Norman 2017; Roosvall and Tegelberg 2015; Spiegel 2021), as well as demanding more human-centred and horizontal (vs. hierarchical) modes of interaction, including democratic participation, alternative ways of knowing, and “common but differentiated responsibilities” rooted in an awareness of historical, colonial, racial, and ethical dimensions of climate change (Mikulewicz 2019; Fuller 2017; Rice et al. 2015; Slocum 2018; Warlenius 2018).

CJ had the highest centrality in the greatest proportion of articles included in this review. In more than two-thirds (67.6%) of articles, CJ was treated as a Central Framework, meaning it was the leading focus (or rationale) in the argumentation of the article and/or CJ represented the main framework of the article. Beyond framing the article in CJ terms, these 50 articles documented actions aimed to advance CJ as an outcome of efforts described. An additional 9 articles (12%) used CJ as a Supportive Framework, meaning that authors explicitly referred to CJ or some of its elements, yet they stopped short of featuring it as a central part of the narrative or the articles’ main arguments. Just one article (1.4%) fell into a third category, applying CJ as an Alternative Framework, meaning that the concept of CJ was framed as an approach opposed to that of “climate change,” the latter having a less transformative impact, thus serving to highlight the more radical and critical features of the former. The remaining 19% of articles used CJ terminology sparsely. These 14 articles, classified as Buzzword/Minimal Usage, displayed an imprecise use of the term either not defining it at all or describing it superficially without direct bibliographic references to CJ theory or research.

To capture additional justice framings, each article was further coded for the types of justice (e.g., social, environmental, racial) mentioned anywhere in the article’s abstract, keywords, or main text (excluding references). In addition to CJ, which was

mentioned in all articles, the 12 justice types most frequently mentioned across articles are noted in Figure 6. Beyond these 13 justice types, 30 additional forms of justice were mentioned once across articles. Specifically, these forms of justice included: agrarian, burden-sharing, civic, climate finance, contextual, cosmopolitan, earth, educational, ethnic, gender and sex-based, harm avoidance, historical, immigrant, interdependency, international, intra-societal, legal, normative, North-South, procedural, restorative, retributive, socioecological interdependency, spatial, sustainable, trade, transitional, and transnational justice.

[Figure 6]

### ***Methodological Approaches and Participants***

To document methodological trends in this body of research, each article was coded for its major methodological approach (e.g., qualitative), as well as for the specific types of data collected (e.g., interviews) and research designs used (e.g., ethnography). More than three-quarters of studies used qualitative methods only (78.4%), followed by mixed methods (17.6%), and quantitative methods (4.1%). As depicted in Figure 7, studies employed a range of research designs, with case studies (single- and multiple-site) and ethnographic methods employed in most studies (83.8%). The most common data collection methods across studies were interviews and archival methods, at least one of which was employed in 83.8% of articles (36.5% used both), leaving only 12 articles (16.2%) using neither interview nor archival data (see Figure 8). Most often, interviews were conducted directly with CJ activists and advocates (e.g., Wahlström et al. 2013) and archival data consisted of campaign materials, public documents, legislative archives, social media and web content, corporate documents and press releases (e.g., Uldam 2016), and media portrayals of climate change, movements, and

disproportionately-affected groups (e.g., Shea et al. 2020; Sze et al. 2009; Widener 2013). Direct observation and ethnographic field notes (40.5%) appeared twice as often across studies as survey methods (20.3%), but surveys were the most prevalent data collection method used in mixed methods research designs and the only data collection method in quantitative studies (100%; Running 2015; Sweetman and Whitmarsh 2016; Vicens et al. 2018). Studies often used a combination of qualitative methods, such as Widener and Rowe (2018) who combined case study, ethnographic, and direct observation approaches and conducted a range of analyses (i.e., event, media, visual, and resident-researcher) in their exploration of climate change discourse in Southeast Florida over a period of fourteen years.

[Figures 7 and 8]

Each article was coded according to the nature of scholars' involvement and their proximity to the data. A notable finding was that more than one-third of studies (36.5%) involved researchers on the ground working alongside the CJ action efforts they were documenting. At times, these were autoethnographic studies of scholar-activists who self-identified as part of the movement (e.g., Bratman et al. 2016; Larri and Whitehouse 2019). Scholars were also active in community-based, educational, or outreach programs or interventions framed as advancing CJ through local planning processes or adaptation action (e.g., Miller Hesed and Ostergren 2017). However, the majority of studies (63.5%) were characterized by more passive data collection, the role of the researcher being primarily to gather and analyse data from unknown others (e.g., during or after protests) and over greater distances (e.g., multi-country surveys).

Because it became clear that author institutional affiliations (Figure 5) may not reflect where the CJ activities took place, each article was coded for the geographic location(s) of data collection (see Figure 9). Similar to the map of authors' institutions,

the most prominent data collection locations were the United States and Canada (23.0%), Western Europe (27.0%), and Australia and New Zealand (7.5%)—which together made up 57.5% of reported data collection locations. However, compared to the number of countries associated with authors' institutions ( $N = 16$ ), the number of data collection countries ( $N = 69$ ) was much higher, representing a more than four-fold increase, with several articles collecting data in multiple countries (see Table 1). Further, whereas all but one author institutional affiliation was from the Global North, the number of data collection countries in the Global South ( $n = 99$ ; 56.9%) was higher compared to the Global North ( $n = 75$ ; 43.1%). This suggests that, while most publishing authors hold institutional affiliations in Global North countries, a significant proportion of the research evidence on CJ action is from Global South countries.

[Figure 9 and Table 1]

To explore who the main actors were in each study, articles were coded for the age groups associated with CJ action as well as the roles of participant groups (e.g., students, community members), categories which were variously overlapping. In terms of age, most articles reported on the CJ actions of adult participants (63.5%), followed by college students (9.5%), children and youth (8.1%), and older adults (ages 65+; 2.7%), though a sizeable proportion of articles (43.2%) did not clearly specify participants' ages. More than half of articles (54.1%) specified more than one age group, and a few articles reported age ranges inclusive of most categories (e.g., 18-71; Fernandes-Jesus et al. 2020). Those acting for CJ across studies included a combination of activists (74.3%), professionals (e.g., NGO workers, nurses, social workers, local policymakers; 43.2%), community residents (31.1%), students (16.2%), and educators (8.1%), though some articles described the actions of groups such as coalitions (e.g., Audet 2013) or civil society or non-governmental organizations (e.g., Buckley 2018).



### ***Action Properties***

To summarize how CJ action processes and outcomes were described across studies, each article was coded for a range of properties. Table 2 provides the total number and percentage of articles coded for each property. A range of CJ actions were described across articles, from the actions of activists (e.g., protests; non-violent direct action) to community-based outreach programs and interventions (e.g., planning processes) to active climate change adaptation and mitigation efforts (e.g., restoration projects). Following Klutz and Walter (2018), CJ actions were coded according to the processes by which they were carried out, ranging from individual (i.e., personal) to collective (i.e., many at once; mass action) to collaborative (i.e., working together; see Table 2). These processes often took place in tandem with one another, with two or more action processes showing up in the majority of articles (51.4%) and some capturing all three (9.5%). Across action processes, collective and collaborative actions were most common, appearing in 87.8% of articles. Additionally, each action process was coded according to whether those actions corresponded most closely with people (i.e., unaffiliated individuals) or organizations. More than two-thirds of articles (67.6%) had no individual action component, but the greatest proportion of actions taking place at the individual level was by unaffiliated individuals, appearing in 20.3% of articles. In studies describing collective action, the smallest proportion (14.9%) described actions by unaffiliated individuals and the greatest proportion reported on actions taking place across organizations (29.7%). Lastly, articles describing collaborative action processes were most likely to encapsulate a combination of people and organizations working together, appearing in 27.0% of articles.

[Table 2]

CJ actions were further classified as taking place within the private sphere (e.g., household behaviours) or in the public sphere, the latter of which was further classified into two categories (i.e., activist or non-activist) depending on how the CJ actions were described in the article (see Table 2). A notable finding here is that although private-sphere actions appeared in nearly a quarter of articles (24.3%), most of these articles combined private- with public-sphere action (77.8%), with just 4 articles out of 74 (5.4%) describing private-sphere actions only. Additionally, the geographic scale of CJ actions was documented along a continuum of smaller-scale actions affecting individuals, families, classrooms, and peer groups to larger-scale actions affecting the neighbourhood or community (e.g., school, workplace, or church), city, state/region, or country as well as those with inter- or transnational reach (see Table 2). Although debates about CJ have primarily taken place at the international level (Bulkeley et al. 2015), a notable finding was that the second greatest proportion of articles (following multiple-country action processes; 50.0%) included actions at the neighbourhood or community scale (40.5%).

To summarize the targeted outcomes (i.e., goals) of CJ action, action targets were coded for the full set of articles. Guided by the question, “Who or what is expected to change?”, action targets ranged from carbon emissions reductions to interpersonal influence to changes in policies, corporate entities, universities, and infrastructure. Across articles, the most common goals were shifting public opinion and changing policies (see Figure 10), though the diversity of strategies and tactics made clear that CJ actors hold a range of perspectives on the question posed above (e.g., Kenis 2016). Examples of CJ action include student-led university (fossil free) divestment campaigns (e.g., Bratman et al. 2016; Gibson and Duram 2020; Grady-Benson and Sarathy 2016; Healy and Debski 2017; Maina et al. 2020), climate mobilizations involving non-violent

direct action (e.g., protests, marches, sit-ins, lock-ons, street theatre; Larri and Whitehouse 2019; Martiskainen et al. 2020; Wahlström et al. 2013), blockades, for example to prevent entry to bank branches or flotillas to prevent deep-sea exploration and drilling (e.g., Bond et al. 2018; Diprose et al. 2017), petitions (e.g., Jodoin et al. 2016) litigation (e.g., Franta 2017), community-led and local-level climate adaptation actions and deliberative planning processes (e.g., deforestation opposition; mangrove restoration; Barrett 2013; Omukuti 2020; Sauls 2020; Schlosberg et al. 2017); local- and state-level policy advocacy (e.g., Sicotte and Joyce 2017; Sze et al. 2009) and more generally, attempting to (re) politicize the climate conversation by framing climate change as a justice issue (e.g., Kenis 2019), drawing linkages across justice and labour movements (e.g., Kenfack 2019), and negotiating and disseminating clear principles and goals rooted in CJ (e.g., Fuller and McCauley 2016).

[Figure 10]

CJ actions were further classified as either mitigation- or adaptation-oriented. While a third of articles (33.8%) included a combination of both, 27 articles (36.5%) reported on mitigation actions only and another 14 articles (18.9%) reported on adaptation actions only. Beyond mitigation and adaptation, a small subset of articles (10.8%) reported on actions falling outside these clear categories, such as those calling for the accountability of wealthy nations, reparations, and land rights (e.g., Harvey 2011; Hicks and Fabricant 2016) as well as those calling for a shift towards inclusion, solidarity, and uplifting community voices across mitigation and adaptation processes (e.g., Dreher and Voyer 2015; Glaab 2017; Gonda 2019).

Following definitions offered by Foran (2019), the modes of CJ action described in each article were coded according to the extent to which they engage with current systems, specifically, whether they were radical (i.e., operating beyond formal systems)

and/or reform-oriented (i.e., seeking to change existing systems). Additionally, CJ actions were coded according to whether change processes were operating within or against existing systems, whereby ameliorative change refers to action intended to reduce harms within unchanged systems (e.g., access to cooling centres during heatwaves) and transformative change refers to action intended to fundamentally change systems to prevent harms from taking place (e.g., shifting economic policies; see Table 2). RAcross the full sample of articles, most CJ actions were those that sought to change systems (89.2%) in order to avert future harms (86.5%).

Actions were also classified as either direct, indicating actions that address climate change directly (i.e., Actor-to-Environment); indirect, indicating actions that address climate change indirectly through other people (i.e., Actor-to-Actor); or both, indicating a combination of actions. Notably, while 17.6% of articles had a direct environmental action component (e.g., tree-planting), most of these (69.2%) were combined with indirect actions (e.g., social influence), with just 4 articles of 74 (5.4%) reporting on environmental action only. To more explicitly examine the nature of the action goals, CJ actions were categorized into four key groupings according to whether they were aimed at advancing equity (i.e., Power), thriving communities (i.e., People), environmental protection (i.e., Planet), and/or local (built environment) improvements (i.e., Place; see Table 2). Articles often displayed more than one type of action goal, and similar to Action Type though less pronounced, focusing on People and Power were more common than focusing on Planet and Place.

The final set of coding categories sought to classify and describe what was measured or documented in each article, along a spectrum of micro- to macro-level factors. Whereas micro-level factors referred to properties of individuals and macro-level factors referred to properties of society as a whole, meso-level factors referred to

group-level factors and parts of society (e.g., families; communities; see Figure 11). These nested factors could be antecedents or outcomes of CJ action, or processes unfolding alongside CJ action. Nearly half of the factors investigated were at the macro-level, with 97.3% of articles exploring at least one macro-level factor. Most articles (82.4%) examined CJ action processes across the full range of ecological levels, with just two articles (2.7%) examining factors on a single level.

[Figure 11]

Numerous articles examined how activists' interior political life (e.g., emotions; efficacy beliefs; problem framing; moral beliefs and values; activist identity; worldview and ideologies) fed into their participation in CJ action as well as the socio-psychological and mental health impacts of activism, particularly how activists respond to negative outcomes (Bond et al. 2020; Fernandes-Jesus et al. 2020; Grosse 2019; Isenhour 2013; Kenis and Mathijs 2014; Martiskainen et al. 2020; Stoddart et al. 2012; Westwell and Bunting 2020; Whitmarsh 2016). Additionally, several articles examined how community, municipal, and regional (movement) organizations and coalitions are framing the problem, negotiating (internal) tensions, building alliances, and pushing for change at local to global levels, within and beyond international negotiation contexts (e.g., Derman 2014; Fabricant 2013; Hadden 2014; Kenfack 2020; Long et al. 2010; Montoute et al. 2019; Pavel 2015; Pye 2010; Reitan and Gibson 2012; Robinson 2020; Russell et al. 2012; Schlembach 2011; Thomas Black et al. 2016; Tormos-Aponte and García-López 2018; Uldam 2013; Vandepitte et al. 2019; Widick and Foran 2016; Yona et al. 2020).

## Discussion

The present systematic review summarizes the literature on CJ action published through 2020, with aims of describing how CJ action by the general public is conceptualized and described in the peer-reviewed literature as well as laying the groundwork for more meaningful and widespread CJ-focused research and action by interdisciplinary sustainability scholars interested in how everyday people can advance CJ. Specifically, this review examined notable publication trends, surveyed CJ definitions and the degree of centrality of CJ frameworks across studies, documented methodological approaches employed by scholars of CJ action, and explored the individuals, groups, and organizations acting for CJ. Further, this systematic review summarizes the processes and outcomes, both actual and aspirational, of CJ action as well as the micro- to macro-level factors investigated in this body of research. Several notable findings are worth mentioning. First, the interdisciplinary literature on CJ action has grown rapidly in recent years, with most studies being qualitative in nature and published in social sciences journals, though there was a remarkable diversity of methodological approaches and disciplinary affiliations represented across articles. Further, while most studies applied CJ as a central framework in their research, few provided any kind of definition and some articles were imprecise in their use of the term. Across studies, people acting for CJ spanned a wide age range—from children to elders—and employed a range of actions to shift public opinion, push for policy change, disrupt fossil fuel extraction, and pave pathways toward more just, equitable, and sustainable futures around the globe.

## ***Climate Justice Action: Collective Efforts to Transform Systems and Build***

### ***Alternatives***

Returning to the question, “What actions can people take to advance climate justice?”, this systematic review has revealed a wide range of activities that tend to share certain properties. Although some articles described individual and private-sphere actions, most CJ actions were collective, collaborative, and took place in the public sphere, by self-described activists as well as non-activists, including community members, professionals, and youth. Beyond taking action to benefit the environment directly (e.g., conservation; restoration projects), CJ action was often about raising public awareness and building momentum for broader political and sociocultural change. Often, this meant influencing other people—whether public audiences or policymakers—to care about, vote for, invest funding, direct resources, and otherwise take concerted action to combat multi-faceted climate injustices. Beyond the activist realm, CJ action was taking place on the ground in communities, often at the neighbourhood and city level, by deliberately attending to the ways climate change affects people “differently, unevenly, and disproportionately” (Sultana 2022, 118) and by centring the perspectives, experiences, and needs of marginalized groups in education/outreach, planning, and active mitigation and adaptation processes (e.g., Gonda 2019; Schlosberg et al. 2017). Despite encompassing a wide range of actions that are anything but uniform, studies in this review made clear that CJ actions are united under an umbrella of shared goals, specifically toward dismantling systems of domination, extraction, and exploitation, either by transforming existing institutions or building alternative institutions to advance CJ. As such, CJ action, as documented in the present research, offers an important framework for global resistance by everyday people that aims to expose and address the unjust and inequitable impacts of climate change.

The forms of action documented in this systematic review represent a significant departure from those frequently documented in the social science literature examining the actions available to everyday people—as individuals, consumers, community members, and citizens—towards addressing climate change. Historically, the literature on people’s climate change action has largely focused on individualised, micro-level behaviour changes not explicitly driven or shaped by CJ goals (e.g., Carman and Zint 2020; Gulliver et al. 2022). By examining the forms of action undertaken by everyday people towards advancing CJ, the present research showcases expanded repertoires for climate change action that not only reflect present-day public and policy discourse on how to address climate change, but also widen the scope of actions worthy of study by scholars—particularly in psychology and other social science fields—interested in individual climate change action. Moreover, findings of the present review may begin to address key questions raised by members of the general public often directed at scholars of climate change action. If, in the past, concerned individuals were presumed to be asking, “What can I (and other people) do to address climate change?”, findings of the present study begin to address new questions by concerned citizens, activists, and other grassroots actors who want to know, “How can I support and work towards climate justice?” Finally, by expanding the scope of climate change action to include those directed at advancing CJ, scholars of individual climate change action may find new or different antecedents, processes, and outcomes of action that may illuminate additional pathways towards broad societal-level shifts in policy and culture required to avert catastrophic climate change (Shove 2010).

### ***Limitations and Future Directions***

In addition to synthesizing the literature on CJ action, this review has identified a



number of gaps, omissions, areas in need of further research. First, CJ demands that the perspectives and needs of the most marginalized and underrepresented groups, within and across countries, be centred in any effort to understand or act on climate change. This review found that almost all publishing authors were affiliated with Global North institutions (and concentrated in 16 countries), even though the research evidence on CJ action was from every populated continent and most was from Global South countries. A limitation of the present research was that, due to language limitations of the research team, only English-language articles were included in this review, so this study's sample should not be considered representative of all published research on CJ action. Still, to advance a CJ research agenda, journal editors should seek to publish studies by scholars who reside and hold institutional affiliations outside of Global North countries.

Another key recommendation for future research is that scholars of CJ be more intentional in their use of the terminology, either by providing a definition or some theoretical background on the meaning they ascribe to the term. We acknowledge that CJ is “a broad and unsettled concept” with a variety of conceptualizations (Thomas Black et al. 2016, 286), which sometimes diverge between activists and academics (Schlosberg and Collins 2014). Findings of the present review suggest that research on CJ action is growing rapidly, which is both heartening and a reason for caution. Despite variation across its conceptualizations, there is no doubt that the cause for CJ is embedded in traditions of social, political, and cultural change and struggle. Whereas more widespread conceptualizations of climate change action imply or promote an ahistorical or apolitical perspective, CJ is distinctive in that it embraces a social and environmental justice agenda—one that is fundamentally aimed at societal transformation. As the literature on CJ continues to grow, it is critical for scholars to be explicit about their usage of the term and its radical implications.

Lastly, a powerful force in the CJ movement, especially in recent years, has been young people. Knowing this, a surprising finding of the present study was that a small proportion of articles documented the actions of youth. Children and youth can be powerful social change agents in their communities in responding to climate change (Author 2019), including to advance CJ (Authors 2020). While it is possible that more studies document the CJ actions of youth, a limitation in our analysis was that a large proportion of articles (43.2%) did not provide clear age descriptions. Future research is recommended that centres the perspectives and experiences of young people who have historically been excluded from key spheres of decision-making and action on climate change and who will face greater exposure to climate risks throughout the course of their lives.

## ***Conclusions***

Climate change is certain to transform societies around the globe, as increased global temperatures and more frequent and severe weather-driven hazards disrupt lives and cause mental and physiological distress, geographical displacement, and ever-increasing societal discontent with the failures of today's political and institutional leaders to act swiftly and urgently to avert the most catastrophic threat ever faced by our species. The degree of these outcomes is not yet known, leaving open a window of hope that inevitable societal transformation bends towards climate justice. This review begins to address questions around the role of the general public in advancing CJ, for example, "how are individuals engaging with, encountering, and utilizing CJ principles and discourse as they take action within the broader climate change activism and policy landscape?" Findings of the present review serve not only to classify and describe the growing body of research on this important topic but make clear that meaningful,

people-powered action aimed at addressing the multi-faceted injustices of climate change is by nature a collective project not done alone, and one that takes many forms in many places united by a shared ethos of confronting and dismantling the systemic roots of humanity's gravest challenges.

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[Declaration of Interest Statement]

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## Figure Captions

Figure 1. Stages of the Systematic Review Process

Figure 2. Systematic Review Process: Identification, Screening, and Eligibility Assessment

Figure 3. Number of Publications Over Time

Figure 4. Publications by Journal Discipline

Figure 5. Map of Authors' Institutional Affiliations by Country

Figure 6. Prevalence of Justice Framings Across Articles

Figure 7. Research Design by Major Methodology

Figure 8. Data Type by Major Methodology

Figure 9. Geographic Location of Climate Justice Actions Across Studies

Figure 10. Action Targets by Climate Action Outcome

Figure 11. Factors Investigated across Ecological Levels

Table 1

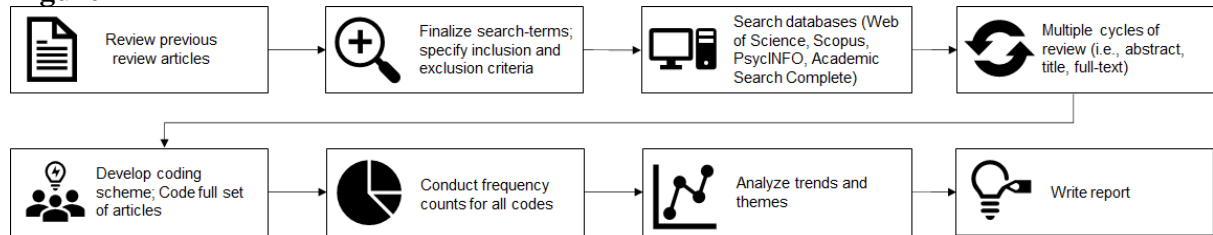
<i>Data Collection Countries Across Articles</i>	
Continent / Country	Total Articles
<b>Asia</b>	<b>15 (8.6%)</b>
China	2
Cyprus	1
Georgia	1
Hong Kong	2
India	1
Indonesia	1
Japan	1
Malaysia	1
Qatar	1
Russia	1
South Korea	1
Taiwan	1
Thailand	1
<b>Africa</b>	<b>16 (9.2%)</b>
Burkina Faso	1
São Tomé and Príncipe	1
Ethiopia	1
Ghana	1
Malawi	3
Mali	1
Rwanda	1
South Africa	3
Tanzania	2
Tunisia	1
Zambia	1
<b>Australia and Oceania</b>	<b>22 (12.6%)</b>
Australia	9
Fiji	1
Kiribati	2
Micronesia	1
New Zealand	4
Papua New Guinea	1
Solomon Islands	1
Tonga	1
Tuvalu	2
<b>Europe</b>	<b>58 (33.3%)</b>
Andorra	1
Belgium	4
Bulgaria	1
Denmark	5
Finland	1
France	6
Germany	5
Hungary	1
Ireland	1
Moldova	1
Netherlands	1
Norway	2
Poland	2
Portugal	4
Romania	1
Serbia	1
Slovenia	1
Spain	1
Sweden	2
Turkey	2
Ukraine	1
United Kingdom	14
<b>North America</b>	<b>49 (28.2%)</b>
Canada	8
Guatemala	1
Honduras	1
Mexico	5
Nicaragua	2
United States	32
<b>South America</b>	<b>14 (8.0%)</b>
Argentina	1
Bolivia	4
Brazil	3
Chile	1
Colombia	1
Peru	1
Trinidad and Tobago	2
Uruguay	1

Table 2

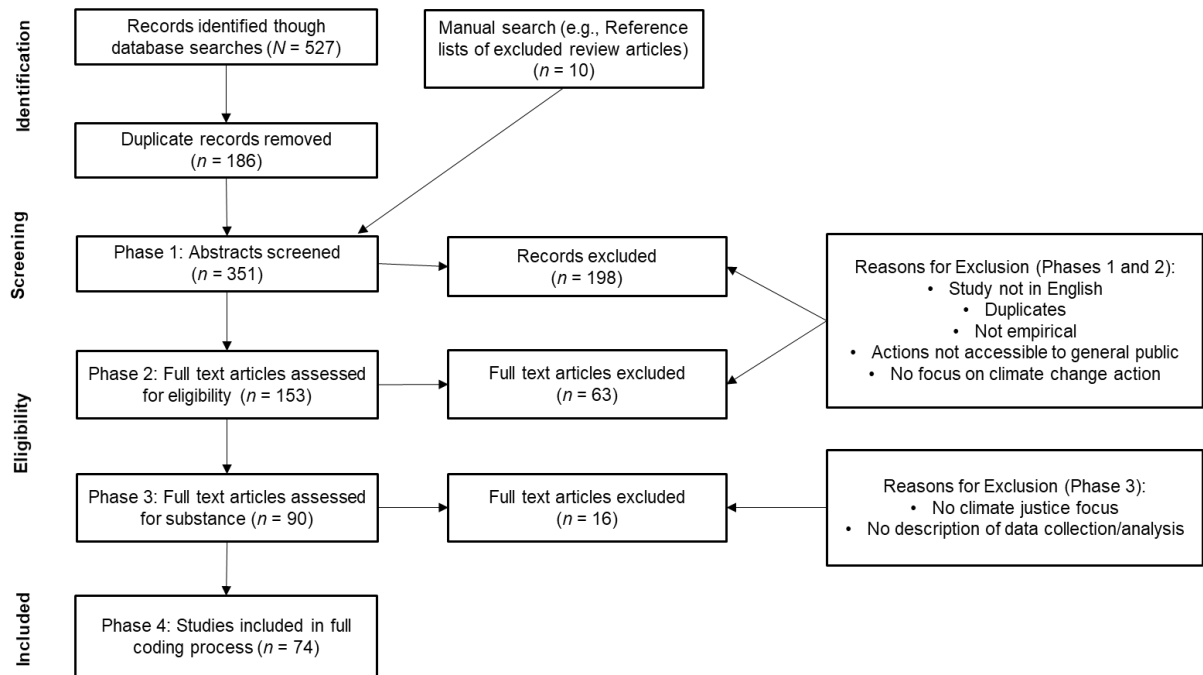
*Action Properties Across Articles*

Characteristic		Articles	%
Action Process	Individual	24	32.4%
	Collective	50	67.6%
	Collaborative	45	60.8%
Action Context	Private Sphere	18	24.3%
	Public Sphere	70	94.6%
	<i>Activist</i>	56	75.7%
	<i>Non-Activist</i>	29	39.2%
Action Type	Direct	13	17.6%
	Indirect	68	91.9%
	Both	9	12.2%
Action Mode	Radical	27	36.5%
	Reform	55	74.3%
	Both	11	14.9%
Change Process	Ameliorative	26	35.1%
	Transformative	51	68.9%
	Both	13	17.6%
Scale of Action	Individual or Lifestyle	13	17.6%
	Family or Household	5	6.8%
	Classroom or Peer Group	1	1.4%
	Neighborhood or Community	30	40.5%
	City	22	29.7%
	State or Region	24	32.4%
	Country	29	39.2%
	Inter/Transnational or Global	37	50.0%
	Other	9	12.2%
Action Outcome	Mitigation	52	70.3%
	Adaptation	39	52.7%
	Both	25	33.8%
	Other	8	10.8%
Action Goals	People	51	68.9%
	Power	42	56.8%
	Planet	41	55.4%
	Place	38	51.4%

**Figure 1**



**Figure 2**



**Figure 3**

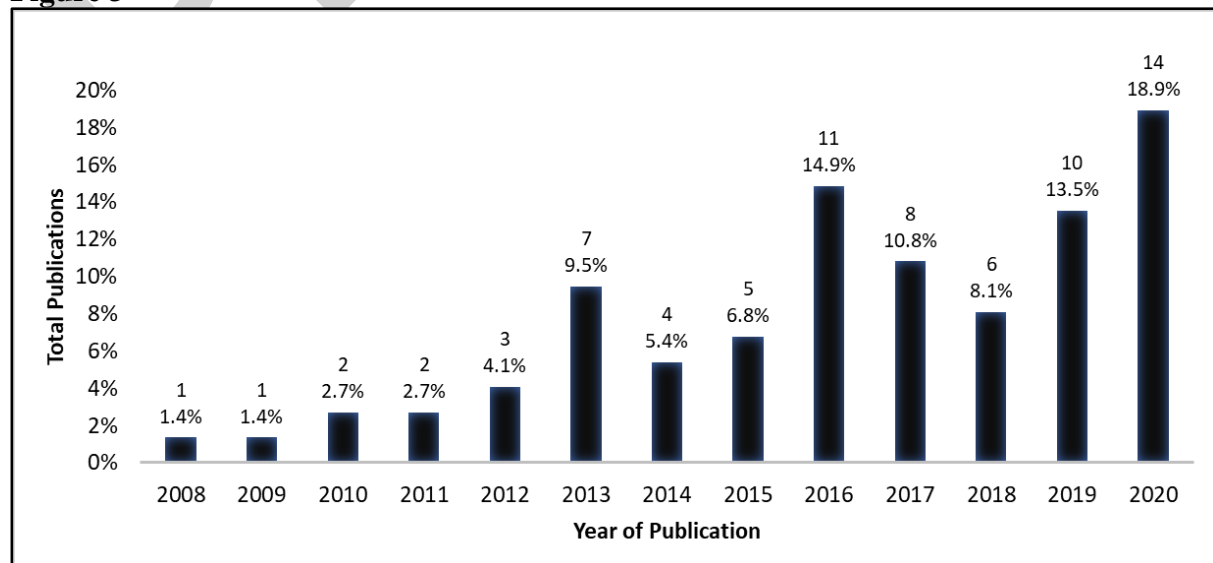




Figure 4

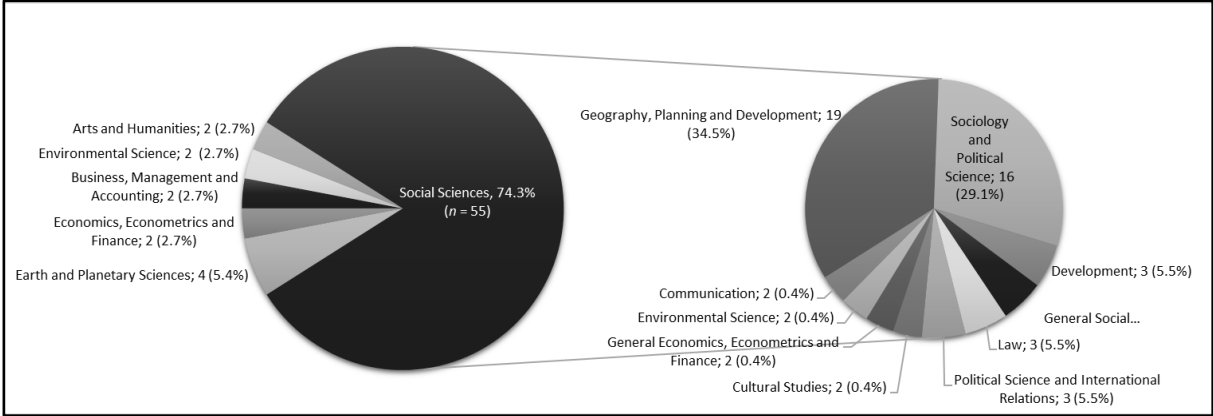
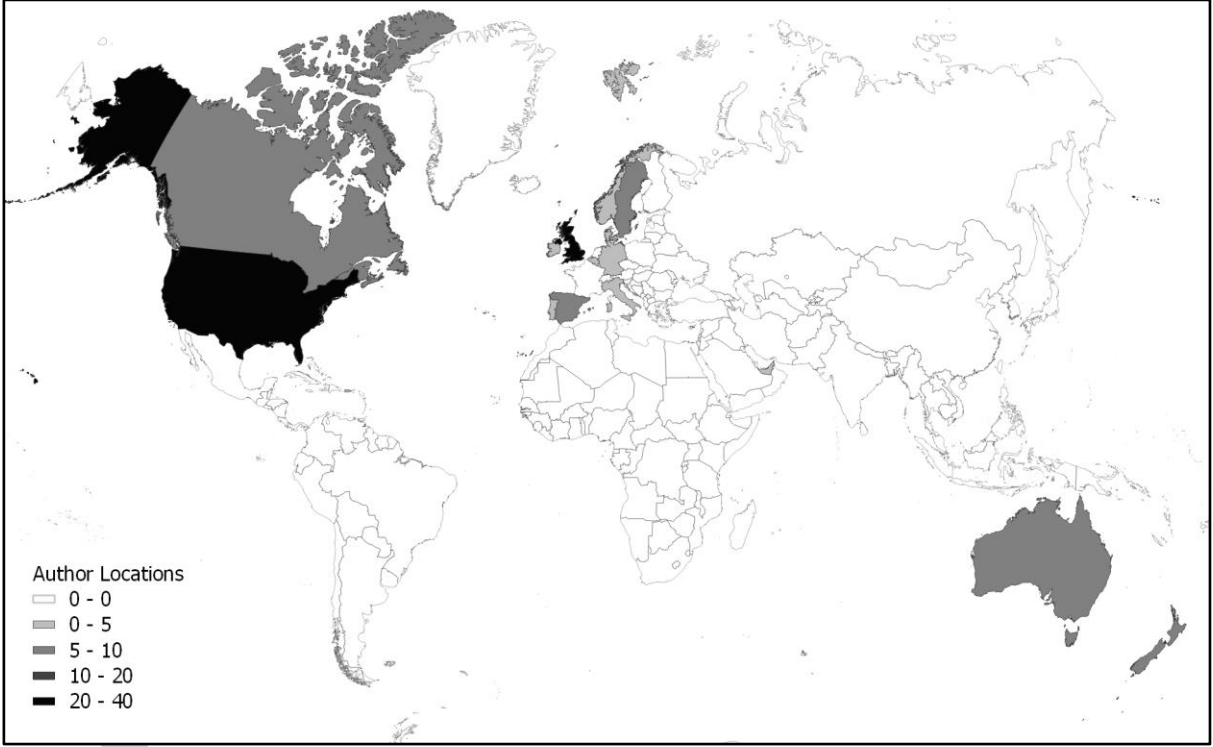
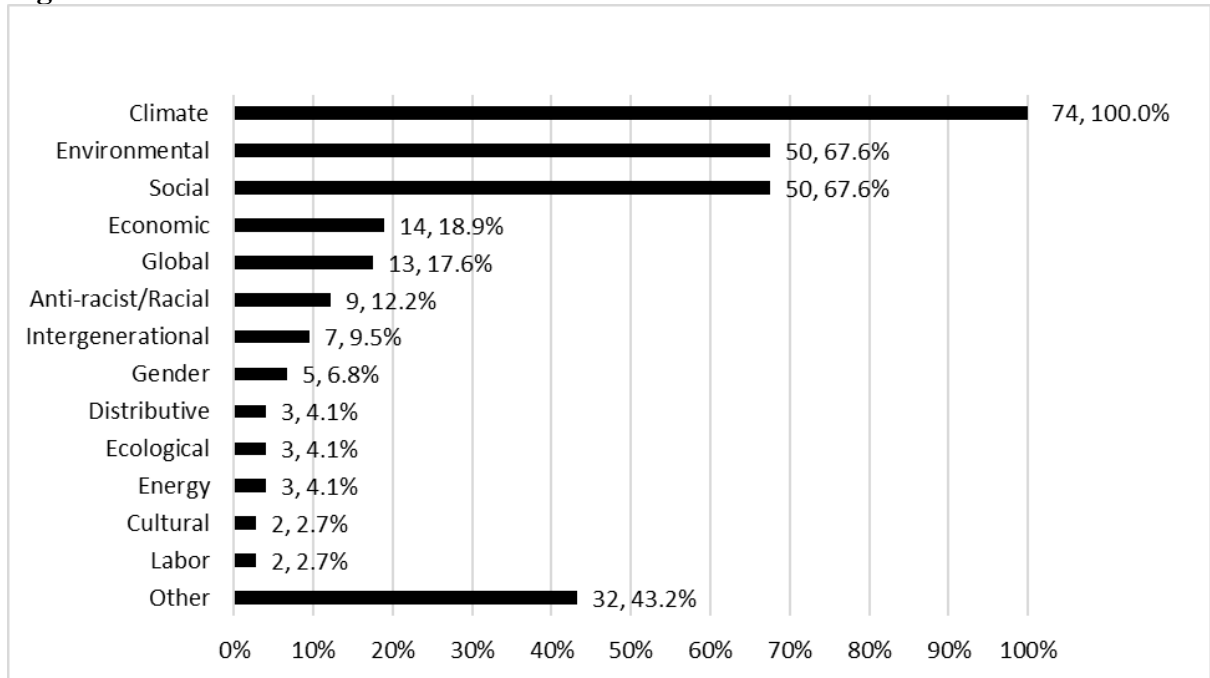


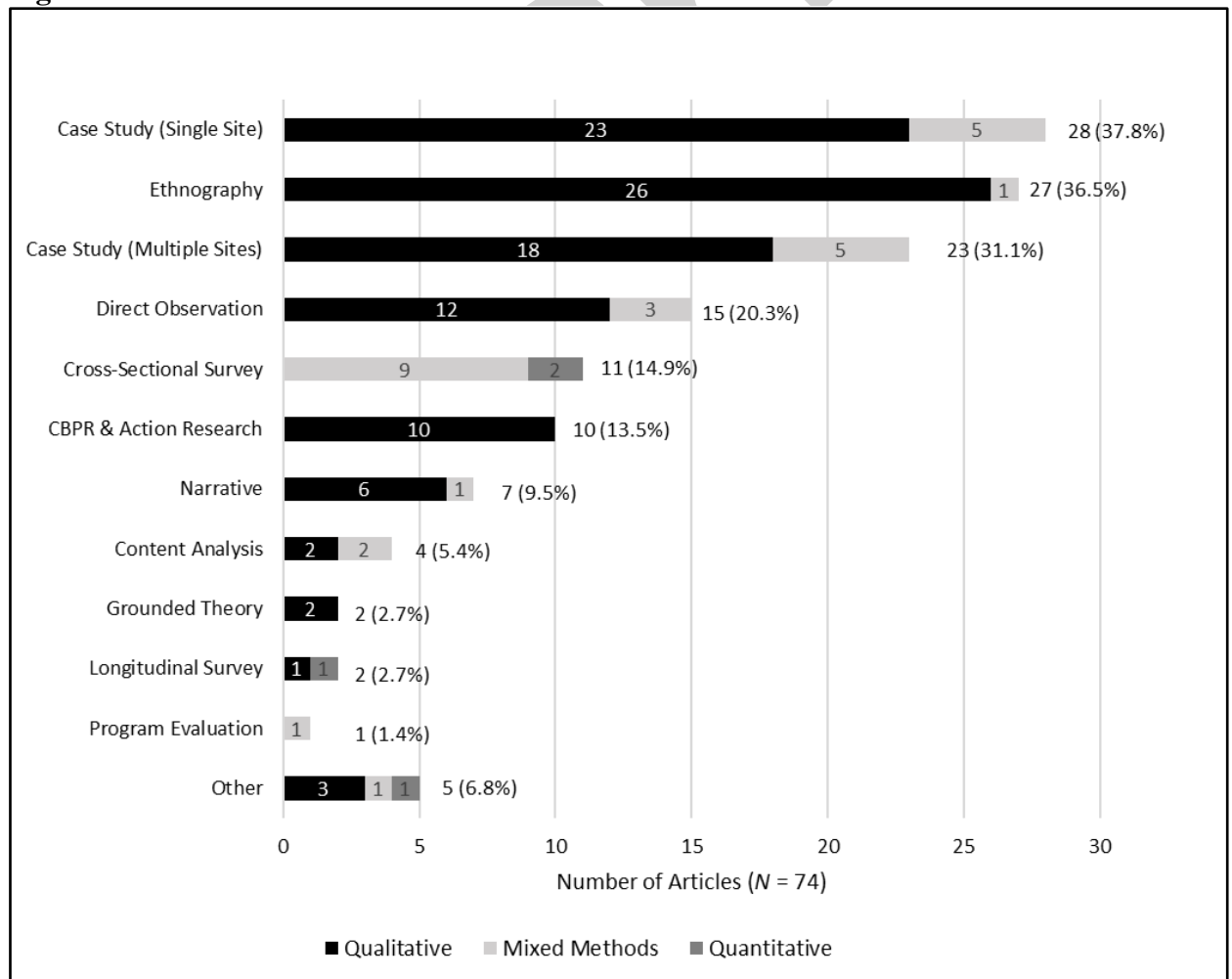
Figure 5



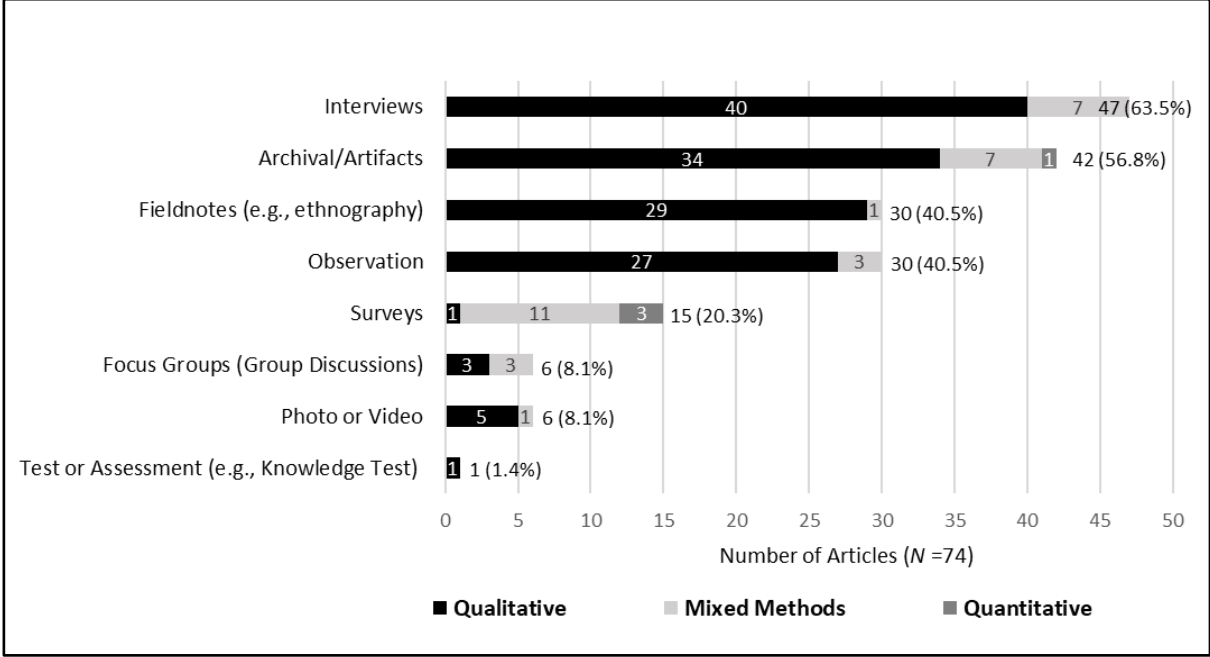
**Figure 6**



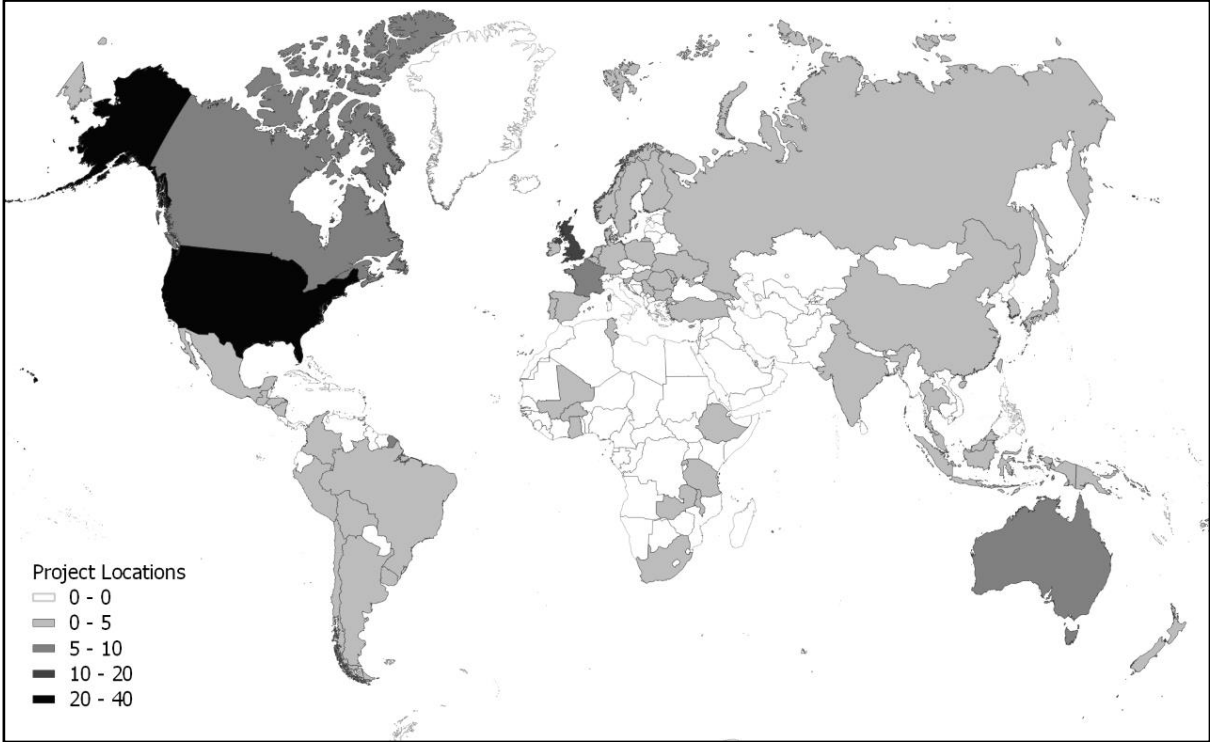
**Figure 7**



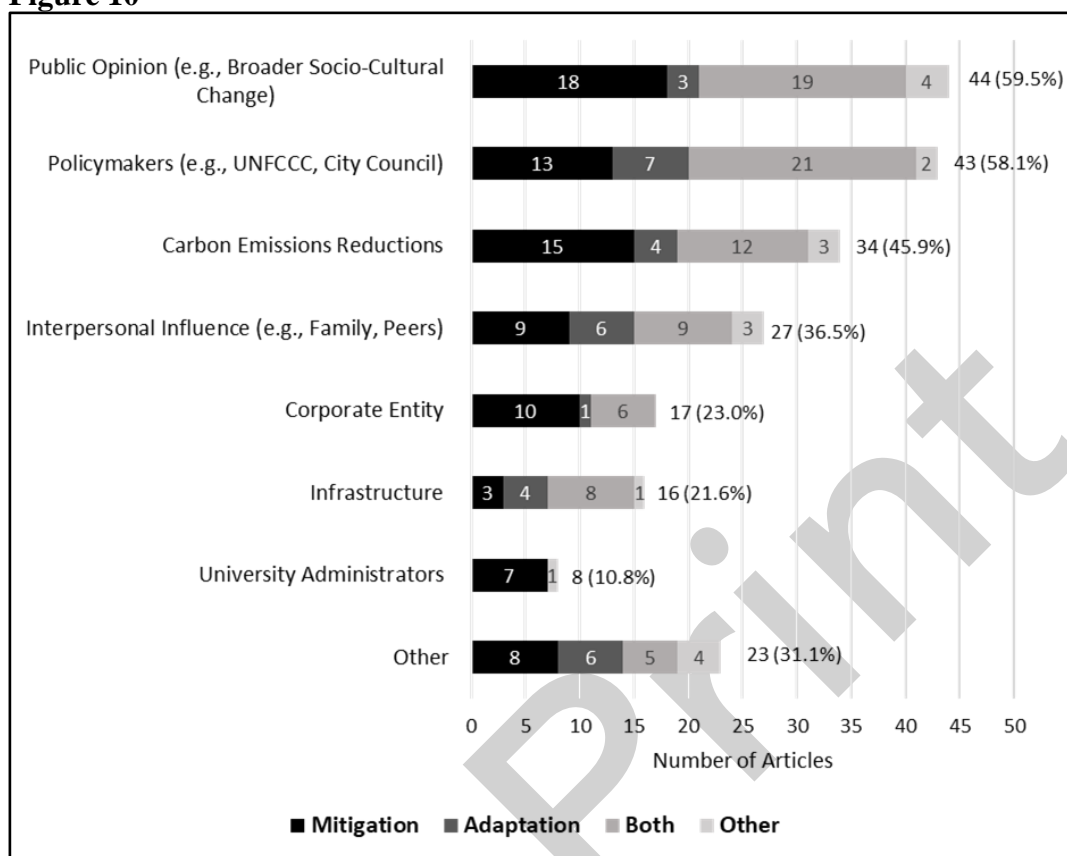
**Figure 8**



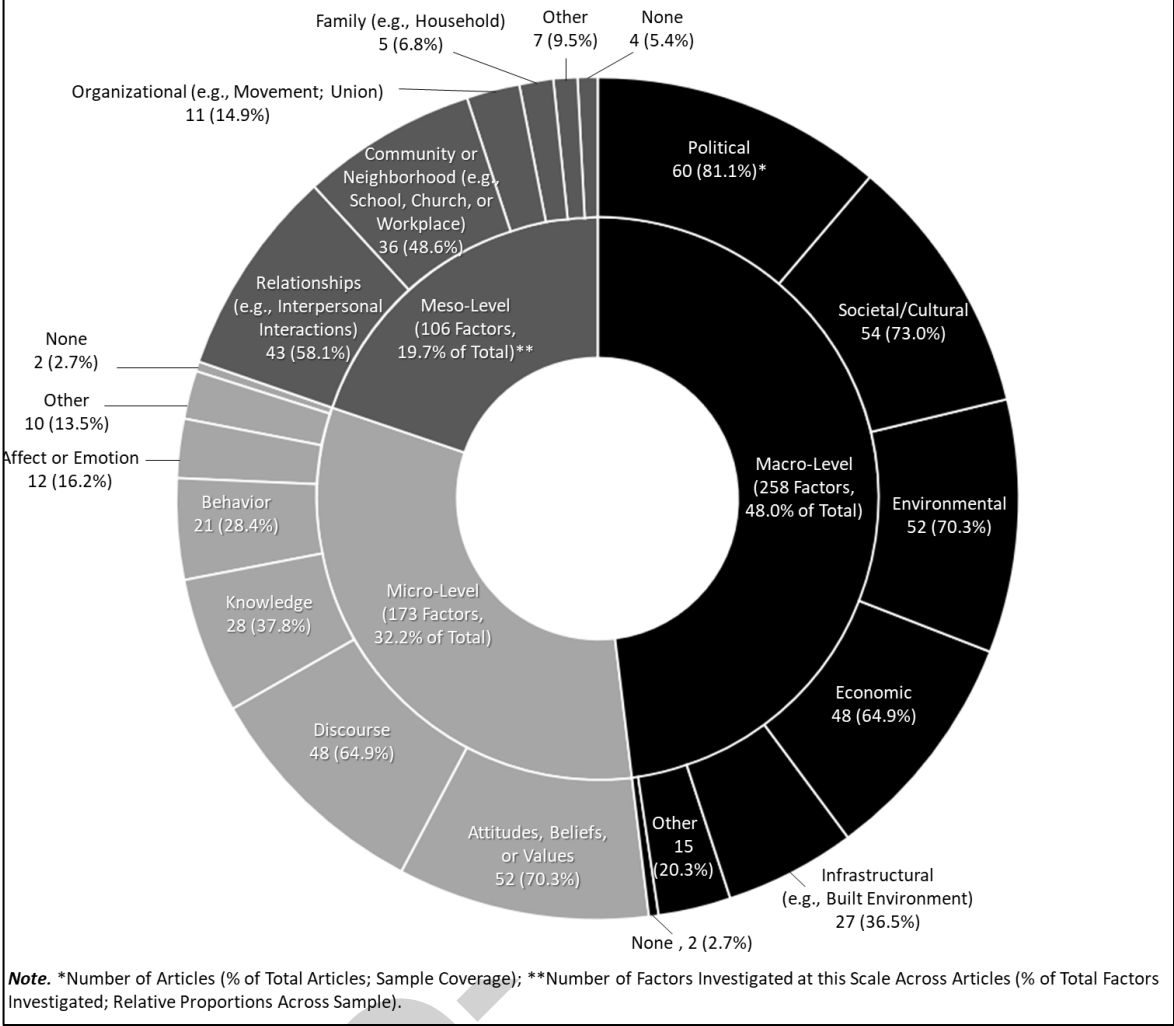
**Figure 9**



**Figure 10**



**Figure 11**



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