Racialised Environments and the Politicisation of Nature: A Review of the Literature on Racism and Environmental Degradation

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Growing concerns over environmental degradation and climate change have increasingly entered public discourses in much of the world, including Germany. Movements such as Fridays for Future or Extinction Rebellion have mobilised masses of young people and heightened the pressure on governments across Europe. As a result, the issues of climate change and ecological degradation regularly feature in newspaper headlines and TV programmes, pressing political and economic actors to take a stance on the matter, with buzzwords like ›socio-ecological transformation‹, ›green transition‹, and ›climate justice‹ appearing more frequently in election programmes and business strategies.

However, during the course of a new wave of public outrage over racist police brutality in response to the killing of George Floyd in the US in May 2020 and the subsequent internationalisation of the Black Lives Matter movement, a growing number of voices in Germany and beyond have highlighted the overwhelming silence of mainstream environmental discourses on racism and global power structures (e.g., Ituen 2020; Nowshin 2020; Thomas & Haynes 2020). These voices forcefully emphasise how ecological degradation and structural racism are historically intertwined and co-constitutive. While the conceptual conjoining of social inequality and environmental destruction is not unprecedented, the burgeoning public interest in these connections (particularly in the German context) appears to be a relatively new phenomenon. This new-found interest warrants an assessment of the more recent scholarly contributions on the subject matter in order to provide a state of the art of the academic research and help facilitate further engagement that continuously pushes boundaries and carries the debate forward – particularly in relation to Germany. Therefore, a semi-systematic literature review was conducted, centring around the following research question: How and to what extent does the academic literature establish a link between racism[1] and environmental degrada-

1 Throughout this paper, racism is understood as a »material discursive formation that is routinely and differentially harnessed across space and time by capital and state power« (Pulido

tion, and what – if any – is the current state of the academic debate regarding this issue in Germany? In order to guide and specify such a broad enquiry, the review is thematically organised around the following three sub-questions:

1. How are the impacts of environmental degradation (including climate change and the wider ecological crisis) racialised?
2. How are the underlying causes of ecological degradation racialised?
3. How do institutional and discursive responses to ecological degradation and climate change reproduce or entrench racialised hierarchies?

One of the key findings is that the literature on racism and environmental degradation has gradually moved beyond its initial focus on the empirical assessment of individual instances of racialised environmental inequality and towards a more theoretical, intersectional perspective on the subject matter, drawing on existing theories of racism, capitalism, and colonialism. Building on this theoretical foundation, there is also a growing interest in ostensible solutions to the ecological crisis and their role in reproducing racial hierarchies. With regard to the German context, however, one of the main findings concerns the remarkable lack of contributions on the subject. While the analysis was originally intended to systematically review both the Anglophone and the German-language literature, early on in the research process, it became evident that this would be neither feasible nor particularly insightful. Consequently, the systematised search was conducted in English only and the Anglophone literature that predominantly examines regions outside of Germany was employed as a benchmark for an enquiry into the comparative silence of German academia on the subject.

Due the variety of issue areas and the limited scope of this paper, the article merely scratches the surface of the literature without investigating individual arguments in greater detail. It therefore cannot – and does not – claim comprehensiveness. Yet, it offers an overview of ongoing debates on the connections between racism and the ecological crisis and provides insight into important trends in the literature, thereby shedding light on possible avenues for further research.

Subsequent to this introduction, the article is structured as follows. It begins with an outline of the method and research design, before the review of the Anglophone literature is divided into three sections that correspond to the questions above. These examine recent debates and tendencies in the research in relation to

2016: 2). This not only refers to overt manifestations of white supremacy through intentional acts of bigotry or violence but includes structural and institutional forms of discrimination produced through a hegemonic social system that privileges white people at the expense of non-white groups (Pulido 2000: 534; see also Mascarenhas 2016). Importantly, the term ›race‹ is hereby understood as socially constructed and does not refer to biological categories.

(1) the racialised *impacts* of ecological degradation, (2) the racialised dimension of its underlying *causes*, and (3) the racialised *responses* to climate change and environmental degradation. Before moving on to the conclusion, a substantial section of the article then discusses the German context, critically reflecting on the overwhelming silence regarding the racism-environmental degradation nexus in Germany. Here, a tentative explanation for the lack of literature is offered and areas in need of further research are identified.

A Note on Method, Research Design, and Limitations

In order to analyse the ongoing academic debates on the subject matter, a literature review of journal articles, monographs, and contributions to edited volumes covering a time period from 2000–2020 was carried out. The year 2000 was identified as a suitable start date for examining recent trends and developments within the literature on racism and environmental degradation. The turn of the century coincides with the growing internationalisation of the US American environmental justice movement, which has been instrumental in foregrounding race and class differences in relation to the environment (Dawson 2010: 17). Moreover, the early 2000s also constituted the period in which scientists such as geologist and Nobel laureate Paul Crutzen (2002) first declared the arrival of the Anthropocene, a new geological epoch in which human activity has come to disrupt biophysical processes on a planetary scale. While the underlying assumptions are increasingly contested in the humanities and social sciences, the Anthropocene concept has »become a shorthand for our present cascading and overlapping ecological crises in general, and in particular, the crisis of global warming« (Eichen 2020: 42). Nevertheless – or precisely for this reason – the introduction of the concept has reinvigorated critical academic debate in relation to the social factors underpinning the impacts and causes of as well as the responses to the ecological crisis (Ojeda et al. 2020: 317).

The academic literature that examines the link between racism and environmental degradation is diverse and multifaceted, approaching the subject from a variety of theoretical and methodological angles. Naturally, the contributions focus on different aspects of ecological degradation[2] and therefore employ a range of different terms, such as climate change or global warming, Anthropocene, ecological crisis, and more. Since the aim of this review was to approach the existing literature in an open-ended fashion in order to capture the wide array of focus areas, seven broad

2 Note that terms like environmental/ecological degradation/destruction and ecological crisis are used interchangeably throughout this article to describe the catastrophic biophysical state of our planet.

search terms were identified. These include but explicitly go beyond the US American concept of ›environmental racism‹ (outlined below) so as to explore the ways in which a diverse set of contributions draws a link between racism and environmental destruction, thereby bringing the US American environmental justice literature into a dialogue with other perspectives and approaches. In November 2020, the seven search term combinations were employed to search the title and abstract of Anglophone journal articles, monographs, and edited volumes on EBSCO, JSTOR, and Scopus, which are widely used databases due to their refined search options and capacity to survey a wide range of literature. This led to the following results: ›rac* AND ecological crisis‹ (44 contributions), ›rac* AND Anthropocene‹ (113 contributions), ›rac* AND climate change‹ (1,257 contributions), ›rac* AND global warming‹ (362 contributions), ›rac* AND climate crisis‹ (42 contributions), ›rac* AND mitigation‹ (714 contributions), ›environmental racism‹ (498 contributions).

In total, this produced a collection of 3,030 contributions. Using the reference management software Zotero, 1,025 duplicates were identified and deleted. A further 1,609 contributions with little or no thematic relevance – i.e., texts that either were completely unrelated, merely touched on the subject matter in an exemplary manner, or provided a review of the existing literature – were removed. Consequently, a total of 396 relevant publications were identified. The large number of unrelated sources can predominantly be attributed to the use of truncation (rac*). While this involved the time-consuming task of weeding out results that were unrelated to the issue area of racism (due to words like rack, racoon, animal races etc.), it also ensured the inclusion of different relevant terms such as ›race‹, ›racism‹, ›racial‹, ›racialised‹, and more. The identified contributions were then grouped into categories that loosely correspond to the sections of this review article.

At this point, it is important to highlight a general limitation of systematic scoping reviews. Some key texts did not correspond to the determined selection criteria and search terms and thus escaped the systematised research. In order to counteract this problem, the research design was adapted into a semi-systematic approach, so that a number of recurring references that appeared in the identified texts (Bullard 1990; Bullard & Wright 2009; Pulido 2018; Mirzoeff 2018; United Church of Christ Commission for Racial Justice 1987; Waldron 2018a; Yusoff 2018) could be added to the pool of relevant literature.

Another difficulty encountered throughout the research process concerns the lack of available sources specifically on the German and European context. Since this review also aims to make a contribution to the research on racism in Germany, the initial intention was to systematically survey both the English- and the German-language literature along similar lines. However – as mentioned in the introduction – early on in the research process, it became evident that there is a remarkable absence of contributions on the German context that explicitly discuss racism in relation to environmental degradation (a finding that is critically examined in more

detail below). Consequently, the systematic review was confined to the Anglophone literature and was supplemented with a small number of German- and English-language papers that displayed thematic relevance in relation to the German context. These were retrieved from an unrefined search by using Google Scholar and tracing citations from a few core contributions. Popular scientific publications that were deemed particularly relevant were included. Moreover, in recent years, BIPOC (Black, Indigenous, and People of Colour) climate activists have increasingly pushed the link between racism and environmental degradation onto the agenda of German news outlets. Thus, key newspaper articles were also added to the pool of relevant literature.

Further, it is important to note that this study was commissioned in 2020 as part of the German National Monitoring of Discrimination and Racism (NaDiRa) by the German Centre for Integration and Migration Research (DeZIM). The research was conducted in late 2020 and the review article was written up in early 2021. It can therefore be assumed that a significant number of relevant articles have been published in the run up to the publication of this paper but have escaped the scope of this review. While selected recent publications specifically addressing the German context have been added to the pool of literature under consideration, the semi-systematic review of the Anglophone literature remains confined to the period up to 2020.

Finally – and with a critical note on social positioning and perspective – the author's whiteness and situatedness in western academia must be acknowledged. While the present author concurs with the African American writer Richard Wright, who famously identified racism as a »white problem« (cited in Lipsitz 1995: 369) that remains insurmountable without the critical and self-reflective work of white people, it is – however – imperative to highlight the privileged vantage point from which white individuals approach the subject matter. Despite active (un)learning and critical reflection, white privilege[3] unavoidably shapes the present author's perception and experience of the world, directing attention towards certain issues and away from others. In the attempt to somewhat mitigate this unconscious selection bias, a number of environmental activists and academics of colour were consulted for relevant literature throughout the research process. While these suggestions are neither representative nor exhaustive, they constitute an important and valuable addition to the identified literature and were thus included in this semi-systematic review. It goes without saying that all remaining omissions and errors are the author's own.

In sum, despite the large body of literature under consideration, this research cannot and does not claim comprehensiveness due to the multiple limitations discussed above. Moreover, given the limited scope of this review article, only a small

3 Here, white privilege is understood, along the lines of Peggy McIntosh's (1989) definition, as unearned advantage and conferred dominance on the basis of skin colour.

selection of papers is discussed in greater detail below. Nevertheless, the review illustrates general tendencies in the scholarly debate on racism and environmental degradation and provides important examples of respective studies in the field.

Politicising the Environment: The Racialised Impacts of Ecological Degradation

Although it would appear logical to begin this review by surveying the literature on the racialised *causes* of environmental degradation, the historical development of the debate necessitates a different structure. In order to follow the evolution of the literature on racism and the environment, we must start by assessing the differential *impacts* of ecological degradation. Indeed, the majority of the studies under consideration (namely 263 out of 396) approach the issue area from this perspective. Most of these focus on the racialised distribution of environmental harms at the local level in the US (162) and beyond (38). A further 7 articles examine environmental racism on a global scale and 56 studies draw attention to the racialised effects of climate change. But what are their main findings and how are they connected?

The Unequal Distribution of Environmental Harms and the Origins of the Environmental Justice Literature in the US

Employing the concept of environmental racism,[4] the majority of the articles analysing the racialised impacts of ecological degradation examine the disproportionate exposure of minority communities to environmental hazards and health risks in the US. Given that North America constitutes the birthplace of the environmental justice movement, this comes as no surprise. Indeed, academic concerns over environmental inequalities grew directly out of the grassroots movement, which loosely formed in the US during the late 1960s (Opperman 2019: 59–60). A bottom-up struggle against the discriminatory siting of toxic waste and hazardous industrial facilities, it emerged in the context of the Civil Rights Movement and was overwhelmingly led by Black women*[5] from poor and marginalised communities

4 Note that the terms ›environmental racism‹ and ›environmental justice‹ are not synonymous, although they are often used interchangeably. Environmental racism refers to the condition of the disproportionate burdening of communities of colour with environmental harms, whereas environmental justice constitutes the end goal of overcoming this disproportionality (Waldron 2018b). While the research on environmental racism is generally considered to be part of the environmental justice literature, the latter extends beyond the focus on racism to include all forms of environmental inequality.

5 The words women* and female* are intentionally spelled with an asterisk in the attempt to challenge binary and exclusive understandings of gender.

(Dawson 2010: 14). The environmental justice movement gained traction in 1982 when a nonviolent disobedience campaign against the opening of a PCB[6] landfill in the predominantly African American Warren County (North Carolina) culminated in over 500 arrests (United Church of Christ Commission for Racial Justice 1987: xi). The incident led Reverend Benjamin Chavis, then the director of the United Church of Christ's Commission for Racial Justice (CRJ), to coin the term environmental racism (Bullard 2004). Five years later, the landmark report on »Toxic Wastes and Race in the United States,« released by the Commission for Racial Justice, concluded that race constituted the single most important factor in the siting of commercial hazardous waste facilities in the US (United Church of Christ Commission for Racial Justice 1987: xiii; Bennett 2004: 128). Around the same time, leading academics like Robert Bullard (1990) or Paul Mohai and Bunyan Bryant (1992) provided additional evidence for the disproportionate exposure of communities of colour to environmental and health risks, further refining the definition of environmental racism.

One of the main achievements of the environmental justice movement and the early academic literature on environmental racism was to denaturalise and extend the notion of the environment, redefining the latter as »the air people breathe walking down a city or country street, the water drawn from their taps or wells, the chemicals a worker is exposed to in an industrial plant or strawberry field, and the forests people visit to hike, extract mushrooms, and engage in spiritual practice« (Turner & Wu 2002). While the focus was initially on toxic waste, around the turn of the century, the lens of environmental racism was increasingly broadened, shifting from an emphasis on chemical hazards to the built environment (Frumkin 2005). Thus, the literature reviewed in this article illustrates the racialised impacts of environmental degradation in relation to a wide variety of issue areas such as so-called ›natural‹ disasters (e.g., Bullard & Wright 2009; Mohai & Bryant 1992; Méndez et al. 2020; Rivera 2020), energy provisioning (e.g., Baker 2019), urban green spaces (e.g., Douglas et al. 2019; Pham et al. 2012), air pollution (e.g., Martin & Do 2014), housing and infrastructure (e.g., Golub et al. 2013; Ranganathan 2016), segregation and gentrification (e.g., Gibson 2015; Levy 2012), the prison industrial complex (e.g., Pellow & Vazin 2019), or nutrition (e.g., Hatch et al. 2019; Jones 2019). Moreover, the literature places particular emphasis on health-related inequalities, which emerge as a consequence of differential exposure to pollution, environmental disasters, or health emergencies. Accordingly, the disproportionate impact of the Covid-19 pandemic on minority groups in the US is receiving growing attention both in the media (see especially Healy 2021; Lakhani 2021) and in academic discourses (e.g., see

6 Polychlorinated biphenyl is an organic chlorine compound that is known for its environmental toxicity and adverse impact on human health (United States Environmental Protection Agency 2016).

Bui et al. 2020; Edwards 2021; Krieger 2020; Muñoz-Price et al. 2020; Washington 2020). However, it is Hurricane Katrina (2005) that is generally regarded to be a watershed event by much of the literature (e.g., Bakker 2005; Bullard & Wright 2009; Byrnes 2014; Dawson 2010; Ivry 2020; Levy 2012; Tuana 2008). Its devastating impact on the Black population of New Orleans drew nationwide attention to environmental inequality and the disproportionate vulnerability of minority groups to extreme weather events (Shepherd & Binita 2015: 580). Applying the lens of environmental racism, scholars not only highlight how it was predominantly people of colour who lived in New Orleans' low-lying, flood-prone areas but also how the emergency evacuation, the post-disaster response, and the media coverage were racialised (Bullard & Wright 2009).

Further, the literature under consideration shows that the broadening of the research field took place not only thematically but also geographically. Thus, from roughly 2005 onwards, the lens of environmental racism has increasingly been applied outside the US American context to highlight the racialised impacts of ecological degradation elsewhere. Although the majority of the reviewed literature does focus on the US, a number of articles discuss the specific contexts of other settler colonial states such as Canada (14 contributions, e.g., Mascarenhas 2016; Mitchell & D'Onofrio 2016; Pham et al. 2012; Waldron 2018a) and Brazil (6 contributions, e.g., de Andrade Meireles, Melo, & Said 2018; Herculano & Pacheco 2008; Pacheco 2008). European, Asian, and African regions are examined to a much lesser extent.

The Unequal and Racialised Distribution of Environmental Harms on a Global Scale

Besides the thematic and geographical broadening, the literature also displays a growing focus on the racialised impacts of environmental degradation on a global scale (e.g., Gonzalez 2015; McIntyre-Brewer 2019; Menon 2018; Probyn 2018). Here, pollution plays a similarly important role. For example, Ifesinachi Okafor-Yarwood and Ibukun Jacob Adewumi (2020) examine the (often illegal) export of toxic waste from the Global North to West African countries such as Côte d'Ivoire, Ghana, and Nigeria, describing the international waste trade as a form of toxic colonialism that constitutes »environmental racism on an international scale« (Okafor-Yarwood & Adewumi 2020: 286). Without adequate measures in place to treat and dispose of the waste in a safe manner, industrialised countries externalise extremely hazardous chemicals and electronics to the Global South, and thus knowingly contaminate the local land and water, thereby endangering the lives of resident communities (Okafor-Yarwood & Adewumi 2020: 293).

Oceanic methylmercury pollution (Probyn 2018) is another illustrative example of the global dimension of environmental inequality. Released into the ocean primarily through gold mining and atmospheric emissions from fossil fuel com-

bustion, mercury is chemically converted into highly toxic methylmercury through bioaccumulation in algae, fish, and other marine creatures. This has particularly severe health consequences, including cancer, organ failure, and neurological damage, for marginalised Indigenous coastal communities in the Northern hemisphere, due to the high concentration of the heavy metal in the seals and polar bears on which these communities depend (Probyn 2018: 397). Surprisingly, fossil fuel extraction itself is receiving close to no attention in the reviewed literature. However, it is an increasingly politicised environmental justice issue – particularly in the Nigerian context (e.g., Akpan 2006; Kirchner 2021) – that demands closer investigation in future research on the subject matter.

The largest number of studies examining the racialised impacts of environmental degradation at the global level investigate the consequences of atmospheric pollution and climate change (e.g., Jolly 2019; Martinez-Alier et al. 2016; Moe-Lobeda 2016; Nagel 2012; Takei 2016; Tuana 2019). This strong concern with global warming is predominantly attributable to the rise of an international climate justice movement around the turn of the century.[7] Key demands of the movement include the recognition and implementation of the principle of ›common but differentiated responsibilities‹, greater participation of BIPOC communities in climate-related decision-making, as well as swifter measures to reduce greenhouse gas emissions and assist those impacted the most by climate change. Growing out of the early environmental justice movement, the climate justice frame was thus similarly driven by grassroots efforts to denaturalise ecological degradation and redefine climate change as a global justice issue (Dawson 2010).

Thanks to decades of climate activism, it is now increasingly recognised in mainstream discourses that climate change and the ecological crisis disproportionately harm the Global South. However, the reviewed literature demonstrates how the role of racism is still largely overlooked. Indeed, mainstream discourses rarely recognise that »it is overwhelmingly places occupied primarily by non-white peoples that will pay the highest price for global warming: death« (Pulido 2018: 118). For example, some of the studies under review (e.g., Batur & Weber 2017; Hayward et al. 2020) highlight the disproportionate impact of climate change-induced sea level rise on small island states in the Pacific, where governments were forced to make plans for relocation before concerns over climate change had even entered western political discourses. Others have analysed the disparate effects of heat waves on neighbourhoods of colour in the Global North; these effects were due to a lack of access to ur-

7 In 2002, the Bali Principles of Climate Justice were adopted by a transnational coalition of activist groups. Highlighting the disparity between responsibility and impact, the document called for »the recognition of a principle of ecological debt that industrialised governments and transnational corporations owe the rest of the world« (International Climate Justice Network 2002: 1).

ban green spaces and air-conditioning (Pulido 2018: 118) or to the disproportionate exposure of BIPOC communities to wildfire (Davies et al. 2018; Bishai & Summin 2020). As mentioned above, Hurricane Katrina serves as a prime example for the overwhelming exposure of minority groups to extreme weather events and natural disasters that – although not directly attributable to climate change – are becoming more frequent with global warming (Byrnes 2014: 308–309). In sum, a major contribution of literature is to emphasise that vulnerability to climate change is distributed not merely along geographical and socio-economic but also along racial lines.

However, despite the disproportionate environmental harm inflicted upon countries in the Global South as well as Indigenous and minority communities in the Global North, one must be cautious not to sideline the agency that people exercise in their resistance to the encroachment on their land, the pollution of their environments, and the constant infringement upon their rights. Long before the emergence of the literature on racialised environments, the story of environmental inequality has been intertwined with the fight for justice. Decades (and even centuries) of protest and resistance by local communities, particularly women* of colour, have been key in delaying and halting environmentally destructive operations (Waldron 2018c). Moreover, it is often Indigenous communities and grassroots movements that drive engagement with the deeper causes of environmental degradation and climate change, emphasising the need to adopt a socio-historical perspective on the interlocking crises of racism and ecological collapse (Waldron 2018c: 259).

Beyond the Surface: Theorising the Racialised Causes of Ecological Degradation

As we have seen above, over the past twenty years, the literature on racism and the environment has increasingly moved beyond its initial focus on the racialised distribution of toxic waste in the US to investigate the multiple ways in which the environment is racialised both at the local and the global level. At the same time, the first decade of the 21st century was also spent taking stock, critically assessing why environmental racism persisted or even worsened, despite more than two decades of grassroots activism and academic research (Bullard et al. 2008; Pulido 2017). Grappling with this question encouraged a self-reflective turn, with a growing number of studies suggesting that the overwhelming focus of the early literature on gathering empirical evidence had come at the expense of a thorough theorisation of the link between racism and the environment (e.g., Pulido 2017; Pellow 2006; Seamster & Purifoy 2020; Waldron 2018b). A deeper engagement with the factors maintaining environmental inequality, scholars increasingly argue (in 78 of the 396 papers),

forces us to recognise how the unrestrained appropriation of the earth's resources is itself a racialised process that can be historically traced back to European colonialism and the emergence of racial capitalism. These arguments are further outlined in the following.

Colonialism as a Driver of Racialised Environmental Inequality

As previously illustrated, most of the articles under consideration analyse environmental inequalities in the settler colonial states of the US and (to a much smaller extent) Canada. Given this historical context, scholars argue, it is particularly important to highlight the colonial continuities in the current distribution of environmental harms and benefits. For example, the disproportionate siting of hazardous waste facilities on Indigenous reserves and the blatant disregard for Indigenous land rights resemble the settler colonial notion of *terra nullius* and the *doctrine of discovery* (Waldron 2018c: 260; Baldwin 2009). These served to ›legitimise‹ imperial conquest and the extraction of resources, as well as dispossession and genocide, in the Americas. Based on an ideology of white superiority, which dehumanised and naturalised the native American population, the land was framed as unoccupied territory that could be freely appropriated.

Others argue that the seeds for contemporary environmental racism were planted during the period of the transatlantic slave trade and the North American plantation system. Thus, Elyes Hanafi's theory of »spa-cial formation« highlights »the parallel processes of spatial discrimination and racial subjugation« (2017: 397), locating the origins of differential environmental impacts on African American communities today in the colonial management of nature and its inhabitants. During colonialism, the movement of Black and Indigenous populations was restricted through confinement and segregation, thus imprinting racialised social relations in physical geography. A similar point is made by Gahman and Thongs (2020) about the Caribbean, demonstrating how local geographies were shaped by a colonial past that renders the region's population particularly vulnerable to contemporary climate change.

However, a number of articles have pushed the debate further, arguing that the subordination of Black and Indigenous peoples during colonialism went hand in hand with rapid environmental degradation. Multiple scholars (Eichen 2020; Haraway 2015; Murphy & Schroering 2020) emphasise the connection between the exploitation and dehumanisation of Black bodies and the rapid deforestation and soil depletion on the American slave plantation. Hannah Holleman (2018) highlights another important case in point. Recalling the systematic killing of bison by British imperial forces, she demonstrates how colonial acts of violence towards non-human nature served the immediate purpose of undermining local livelihoods and displacing large numbers of Indigenous people, while at the same time reshaping the

landscape for decades to come. Such colonial practices, she demonstrates, produced severe soil erosion and desertification and were at the heart of the US Dust Bowl disaster in the 1920s (Holleman 2018).

The conceptualisation of colonialism itself as an »ecological regime« (Erickson 2020: 114) has also entered more recent debates on the Anthropocene (e.g., Agathangelou 2016; Baldwin & Erickson 2020; Eichen 2020; Karera 2019; Kirbis 2020; Luke 2020; Mirzoeff 2018; Opperman 2019; Padovan & Alietti 2019; Reyes & Chirindo 2020; Saldanha 2020; Vergés 2017). Building on Lewis' and Maslin's proposal (2015, 2018) of taking 1610 as the start date of the new geological epoch, various scholars have emphasised the centrality of racism as a causal factor behind the Anthropocene. Although not explicitly mentioning racism (Pulido 2018: 125), Lewis' and Maslin's Orbis hypothesis suggests that European colonisation of the Americas from 1492 onwards is visible in the atmospheric concentration of carbon dioxide at the planetary level. Killing tens of millions of Indigenous people (around 90 % of the Indigenous population) through disease, dispossession, and genocide, early colonialism led to a dramatic reduction in farming activity, which produced a visible decline in global CO2 levels in 1610. European colonialism, Lewis and Maslin reason, should therefore be regarded as the onset of a continuous process of anthropogenic interference with biophysical processes on a planetary scale. The blatant and relentless colonial violence described in this reading of the Anthropocene was crucially informed by a deep sense of entitlement associated with the ideology of racism and white superiority (Holleman 2018: 22; Pulido 2018: 125).

Recognising this colonial history of the links between racism and the environment, an increasing number of scholars asserts, necessitates a move beyond the individualistic understanding of racism that pertains in much of the early environmental justice literature (Hanafi 2017: 403; Waldron 2018b: 38). Instead of framing racialised environmental inequalities as individual acts of animosity, they must be conceptualised as symptomatic of a wider socio-historical and institutional structure of white supremacy. The latter rests on a sense of colonial entitlement to appropriate and pollute the earth's ecosphere, while maximising white benefits at the expense of racialised populations (Hanafi 2017; Waldron 2018b; also see Moe-Lobeda 2016). It is this recognition that leads Seamster and Purifoy (2020) to argue that the development of white spaces has long been premised on the exploitation of non-white spaces, prompting the authors to question the feasibility of the widely proposed solution to make the spaces of communities of colour equal to white spaces.

Racial Capitalism and the Material Dimension of the Ecological Crisis

In addition to highlighting colonial continuities, a growing number of studies draw on Cedric Robinson's (1983) concept of racial capitalism in order to illustrate how the socio-economic structures that maintain and reproduce racial inequalities also lie

at the heart of the global ecological crisis (e.g., Holleman 2017; Pulido 2016, 2017; Ranganathan & Bratman 2019; Saldanha 2020). Speaking to a debate in the early environmental justice literature that addresses the question of whether race or class should be regarded as the main driver of environmental racism (see Pulido 1996 for a discussion of this debate), more recent contributions highlight the racialised nature of capitalism and thus bridge the divide by adopting a more nuanced and intersectional lens (see also Hanafi 2017; Waldron 2018b). Here, racism is understood as the systematic devaluation of non-white lives that is predicated on the overvaluation of white ones – both in an ideological and material sense (Pulido 2018: 121). It is precisely the devaluation of non-white (predominantly working-class) lives and their general expendability that »allows both capital and the state to pursue policies and practices that are catastrophic to the planet and its many life forms« (Pulido 2016: 8; see also Eichen 2020; Padovan & Alietti 2019; Saldanha 2020).

Drawing on the concept of racial capitalism to supplant the widespread notion of the state as a neutral actor, scholars also increasingly highlight the complicit character of the state in maintaining racialised environmental inequality (see especially Pulido 2016, 2017; but also Eichen 2020; Waldron 2018c). Indeed, in her boundary-pushing work, Laura Pulido conceptualises environmental racism as »state-sanctioned racial violence« (Pulido 2017: 524). She illustrates this argument in relation to the water crisis in Flint, Michigan, where state officials knowingly supplied the city's overwhelmingly Black population with poisoned water in order to ensure fiscal solvency in the wake of a financial crisis in 2011 (Pulido 2016). As a consequence of the industrially contaminated river water and deteriorated infrastructure, a number of people have died from legionnaires' disease and thousands of Flint residents now suffer from the long-term health consequences of lead poisoning. Thus, in the context of neoliberal austerity measures, financial concerns were prioritised over Black lives, »paying testimony to the utter disregard in which Flint residents are held« (Pulido 2016: 6). Similarly, others (e.g., Mascarenhas 2016; Waldron 2018c) illustrate how Canada's ostensibly neutral and colourblind politics of neoliberalism serve to protect and entrench white privilege by opening up Indigenous territories to private corporations and externalising unwanted industries and land use to Indigenous spaces.

On a global scale, the literature increasingly invokes the concept of racial capitalism to destabilise the Anthropocene notion of a universal human agent bearing the responsibility for the global ecological crisis (e.g., Eichen 2020; Murphy & Schroering 2020; Padovan & Alietti 2019; Pulido 2018; Saldanha 2020; Vergés 2017). Instead, scholars argue, the Anthropocene is the product of centuries of colonial and capitalist exploitation along the lines of race, class, and gender. Identifying the origins of the current ecological predicament in the historical links between colonialism, racism, and extractivism, scholars regard the transatlantic slave trade and the plantation system as emblematic instances of the racialised dynamics at work in pro-

ducing ecological collapse (Murphy & Schroering 2020). As a laboratory of industrial capitalism, the plantation constituted a system of monocultural production for export, one that rested on forced labour and the unrestrained appropriation of natural resources (Eichen 2020: 39). Similar dynamics are at work in contemporary processes of unequal ecological exchange. Ongoing forms of racialisation create a global division of labour that locks the majority of the Global South into a system of colonial production for export that is based on the simultaneous exploitation of human and non-human nature through large-scale resource extraction and monocropping (Batur & Weber 2017: 339). Therein, the »brutal role of the appropriation and manipulation of natural resources for the reproduction of the whole society [can be delegated] to some dehumanized groups« (Padovan & Alietti 2019: 176).

In sum, the contributions to the literature highlight not merely that the impacts of environmental degradation are disproportionately harming people of colour but that the very processes and structures producing ecological crisis are similarly racialised. Here, racism and ecological collapse are conceptualised as conjoined crises (Opperman 2019: 57), emphasising how the two are historically linked through the colonial-capitalist's joined subjugation of non-white humans and non-human nature.

The Problem of Colourblindness: How Responses to the Ecological Crisis Risk Reproducing Racialised Power Structures

Building on the research that theorises the racialised causes of environmental degradation, an emerging strand of literature (84 of the 396 articles) takes the debate a step further by examining responses to the ecological crisis and their role in reproducing colonial hierarchies and racial inequalities. These contributions involve analyses of issues that range from state-led mitigation and adaptation policies to international climate negotiations and the discursive framing of the crisis in politics and social movements. Despite the different issue areas, there are significant commonalities in the findings and conclusions reached in the articles. For, in one way or another, they illustrate how ostensibly neutral and colourblind responses to the crisis serve to entrench and reproduce racialised hierarchies within and between countries. A number of examples are examined in the following.

The Reproduction of Racism in Colourblind Environmental Policy

As we have seen above, a major contribution of the literature was to highlight the historical role of colonialism and racial capitalism in producing environmental inequalities. However, despite the growing amount of valuable academic contributions on the structural links between racism and the environment, few of these critical in-

sights have entered mainstream environmental policy making. Instead, mitigation and adaptation measures are often carried out in a manner that overlooks or dismisses racial inequalities.

A small but significant number of the studies under review critically discuss this issue, highlighting what is often referred to as colourblind environmental policy (e.g., Barra 2020; Blanton 2011; Checker 2008; Hardy et al. 2017). By neglecting how colonial histories of racial inequality are inscribed in the landscape through legal institutions such as land rights, ownership, and employment and demographic patterns, colourblind adaptation »is likely to perpetuate the ›slow violence‹ of environmental racism« (Hardy et al. 2017: 62). Case studies from Canada, the US, Belize, and Colombia investigate several issues, including ecotourism (e.g., Checker 2008), sediment restoration (e.g., Hardy et al. 2017), climate-induced relocation (e.g., Shearer 2012), and carbon offsetting (e.g., Baldwin 2009). What they have in common is an emphasis on hegemonic knowledge systems. The normalisation of science as neutral and colourblind, they argue, reinforces its »unmarked privilege to delimit the boundaries between life and non-life/human and nonhuman – one of the central mechanism [sic!] through which race is produced« (Barra 2020: 271). Historically, science and engineering have been mobilised to justify the dispossession of Black and Indigenous communities, creating ›sacrifice zones‹ that further entrenched the colonial racialisation of the landscape. By neglecting this history and failing to incorporate the experiential knowledge and expertise of local inhabitants, colourblind adaptation and mitigation programmes tend to impose top-down environmental management that often aggravates the marginalisation and discrimination of racialised communities (Checker 2008; Hardy et al. 2017; Shearer 2012).

Moreover, several studies argue that – due to the structural connections between racism, capitalism, and extractivism – measures operating within the parameters of green capitalism not only are unlikely to address the root causes of the ecological crisis but also tend to rest on the continuous devaluation of non-white lives (see especially Baldwin 2009; Holleman 2018). Andrew Baldwin's (2009) study of carbon management policy in Canada's boreal forest offers a useful example to illustrate how techno-rational neoliberal environmentalism is intimately bound up with neocolonial processes of racialisation. Framing environmental degradation as a consequence of market failure, neoliberal environmentalism advocates market-based solutions, such as internalising carbon value into the cost of forest management by converting ›natural‹ biospheres, such as the boreal forest into, designated forest plantations. However, the conceptualisation of Canada's boreal forest as a wilderness space and an untouched carbon reservoir reproduces »the imperial racism of *terra nullius*« (Baldwin 2009: 241). Discursively emptying the forest of its social content not only erases Indigenous communities that have lived in and shaped the space

for centuries but also serves to dispel questions of land ownership, thus authorising the overriding of political and economic access in the name of conservation.

Of ›Overpopulation‹ and ›Climate Refugees‹: How Narratives Entrench Racialised Hierarchies

The responses to the ecological crisis are not confined to adaptation and mitigation measures, however. Discursive attempts to make sense of the crisis are also crucial to understanding the ways in which racialised hierarchies are entrenched and reproduced. Thus, a growing number of studies among the reviewed literature critically assess discursive framings of climate change and the ecological crisis. Some of these discuss neo-Malthusian theories of overpopulation that identify ostensibly unrestrained population growth in the Global South as the driver of ecological exhaustion and climate change. Analysing neo-Malthusian elements in both liberal development policy (e.g., Dyett & Thomas 2019; Ojeda et al. 2020; and see Shaw & Wilson 2020; Wilson 2017 for an analysis of the Bill and Melinda Gates Foundation) and right-wing discourses (see Dyett & Thomas 2019; Biehl & Staudenmaier 1996; Forchtner 2019; but also Nicolaisen & Passeick 2018), the publications highlight how such depoliticising narratives reproduce racist and sexist framings of female* sexuality in the Global South as threatening and dangerous, thereby ›justifying‹ top-down fertility management and the exercise of neo-colonial control over Black and Brown bodies (Shaw & Wilson 2020).

Another discourse subjected to critical scrutiny in the articles under consideration centres on the phenomenon of climate-induced migration. For instance, authors such as Andrew Baldwin (2012, 2013, 2016), Betsy Hartmann (2010), Chris Methmann (2014), and Andrew Telford (2018) highlight how the figure of the ›climate-change migrant‹ is racialised[8] through the dual framing of threat and victim. On the one hand, the migrant is imagined as the non-white Other »capable of destabilising a set of values or, indeed, a presumed stable social order, upon which white power and privilege are sustained« (Baldwin 2013: 1477). This association with violence and disorder produces climate-induced migration as something to be contained and managed, a potential (national) security threat that needs to be pre-empted (Baldwin 2016: 80, 87). On the other hand, climate change migrants

8 Baldwin (2013: 1478) differentiates between racialisation and racism, arguing that the former refers to a discursive process by which ›race‹ is produced as an ontological category, whereas the latter denotes an ideological belief system that naturalises race in order to justify exclusion and violence. In reality, however, the two are difficult to disentangle since they have the same effect of violent exclusion, which is produced through both conscious and subconscious acts. Also note that Baldwin (2013: 1475) deliberately uses the term »climate-change migrant« in order to avoid the contested designation »climate refugee« (also see Hartman 2010 for a discussion of the term »environmental refugee«).

are often framed as passive, childlike victims exposed to uncontrollable natural forces and requiring assistance and intervention from white agents (Jolly 2019). As a result, contemporary migration-related development policy often resembles colonial practices of controlling migration patterns, as was most egregiously the case in the transatlantic slave trade (Telford 2018: 275). At the same time, this framing of migration as a result of biophysical processes serves to elide responsibility for global warming and conceals the underlying power relations between the Global North and Global South (Baldwin 2013: 1480; Hartmann 2010; Methmann 2014: 416).

Besides these two pervasive narratives, the review of the literature also directs attention towards a discourse that has become increasingly relevant in recent years. Reactionary climate scepticism that often includes elements of racism and misogyny is gaining foothold in the west (e.g., Byrne 2020; Daggett 2018; Nelson 2020; Norgaard 2012; Pulido et al. 2019; Rose 2018). According to the literature (see especially Nelson 2020), this should be understood as a reaction to the contemporary destabilisation of racialised and gendered hierarchies as well as the growing climate-related uncertainties that increasingly challenge traditional white male power and privilege. Moreover, in Europe – and particularly in Germany – scholars and political educators have studied the history of radical right-wing environmentalism and ecofascism, drawing attention to the parallels in contemporary narratives of the radical right (see especially Biehl & Staudenmaier 1996 and Forchtner 2019; but also Nicolaisen & Passeick 2018). While this literature on right-wing environmental communication has the potential to greatly contribute to debates on racism and the ecological crisis, it has only recently entered a dialogue with established theories of structural racism and white supremacy. A promising new development in Germany are the works by Matthias Quent, Christoph Richter, Axel Salheiser (see Quent et al. 2022; Richter et al. 2022), and Dennis Eversberg (2022). Following Jeremy Williams (2021), the scholars use the term ›Klimarassismus‹ (climate racism) to denote the global socio-economic *structures* by which a predominantly white west externalises the ecological costs of its industrial way of living onto largely non-white regions. At the same time, they employ the term to describe the ideological and strategic motivations behind the climate change communication of the radical right and conceptualise the latter as a key *mechanism* through which racialised structures are preserved and reproduced (Quent et al. 2022: 27).

Another area that has yet to receive more attention comprises the discourses invoked by groups and movements pressing for ambitious climate and environmental policy. Narratives championed by transnational environmental movements such as Fridays for Future or Extinction Rebellion have received surprisingly little scrutiny in the academic literature on racism and the environment. Indeed, few of the articles under consideration critically study social movements and their role in framing the crisis (although Arthur's (2015) extensive analysis of the British climate movement is a notable exception). Yet, BIPOC collectives such as Wretched of the Earth (2019) in

the UK or the Black Earth Kollektiv – BIPOC Environmental and Climate Justice in Germany have repeatedly drawn attention to the reproduction of racialised hierarchies in environmental movements. They particularly highlight the predominance of white, middle-class activists, and the fact that this predominance means that demands tend to be articulated from a privileged vantage point (Ituen & Kennedy-Asante 2019). For example, the future-oriented discourse of Fridays for Future (i.e., the slogan ›Why study for a future, which may not be there?‹) conceals how climate change and the ecological crisis have been a contemporary reality in large parts of the Global South for decades or even centuries (Ituen 2020). Similarly, Extinction Rebellion's call to radical kindness in interactions with the police fails to take into account the racialised state violence and police brutality that BIPOC experience in much of the west (Wretched of The Earth 2019).

Moreover, while BIPOC activists are indeed part of transnational environmental movements, as the literature highlights, they receive much less attention and visibility in the media, as the removal of the Ugandan climate activist Vanessa Nakate from a picture taken at the 2020 World Economic Forum in Davos tellingly illustrates (Rafaely & Barnes 2020). It is therefore crucial that white environmental activists learn to make space for and listen to the perspectives of BIPOC communities and actors. However, except for a study by May Chazan and Melissa Baldwin (2019) that examines the solidarity-building of elderly white settler women* with Indigenous-led environmental movements in Canada, the literature remains overwhelmingly silent on the responsibility of white activists to challenge racial hierarchies. Yet, diverse and inclusive alliance building across the lines of race, class, and gender demands that those in a privileged position engage in a process of active listening, critical reflection, and constant (un)learning in order to decentre white hegemonic knowledge systems and dismantle the white supremacist, capitalist, and patriarchal structures that perpetuate ecological degradation.

No Problem in Germany? Tentative Thoughts on Racialised Environmental Inequality in the German Context

While the link between racism and the environment has been discussed widely in relation to the US and Canada, much less has been said about Europe and particularly Germany. Indeed, when environmental inequality is discussed in relation to the German context, the issue of racism tends to be predominantly associated with the history of the environmental justice movement in the US. To be sure, notable exceptions do highlight racist and neo-colonial continuities in relation to issue areas such as the global distribution of environmental harms (Backhouse & Tittor 2019), nuclear waste management (Losada 2016), and international climate negotiations (Bauriedl 2015). Moreover, in the wake of climate movements such as Extinction Re-

bellion or Fridays for Future, BIPOC scholars and climate activists have increasingly sought to emphasise the importance of adopting a historical perspective on the climate crisis. A growing number of articles and interviews in the German media (e.g., Ituen 2020; Ituen & Kennedy-Asante 2019; Nowshin 2020) as well as events and public talks challenge colourblind narratives of the crisis, drawing attention the role of racism, colonialism, and persisting global power structures in shaping differential exposure and vulnerability to climate change.

However, the different contributions to the academic literature, as well as the media, overwhelmingly adopt a global or inter-generational perspective on environmental inequality (Schlüns 2007: 25). While the lack of BIPOC representation and visibility in the climate movement is increasingly discussed (e.g., Bruder 2020; Nowshin 2020; Sommer et al. 2019), an issue that receives much less attention is the role of racism in shaping local environmental inequalities. In contrast to US academia, the German literature tends to frame environmental (in)justice predominantly in socioeconomic terms (Grafe 2020: 42). Thus, it is generally argued – in comparison to the persistence of environmental racism in the US –that »there are no problems of this kind and dimension in Germany« (Schlüns 2008: 97, own translation). Instead, environmental inequalities such as the disproportionate exposure to air, water, and noise pollution, the differential access to urban green spaces, or the (in)ability to lead a sustainable lifestyle are widely regarded to be shaped by general socioeconomic factors including income, education, and employment.

To establish the differences between the US and Germany, scholars refer to the particular historical context of the US, the large proportion of Black citizens and communities of colour, as well as the high degree of segregation by which the American population is characterised (e.g., Grafe 2020; Schlüns 2008). While there are, of course, important socio-historical differences between the US and Europe, a small number of studies (e.g., see Antypas et al. 2008; Steger et al. 2007) have demonstrated that environmental racism is also prevalent in European countries. For example, the research by Antypas et al. (2008) highlights »the extreme environmental injustices« (10) inflicted upon the Romani population in Eastern Europe (see also European Environmental Bureau 2020). Here, Romani communities disproportionately suffer from exposure to hazardous waste and chemicals, are often denied proper housing and sanitary facilities, and are thus particularly vulnerable to extreme weather events like storms and flooding (Antypas et al. 2008: 10–12).

The EU's border and immigration regime are another telling example of blatant environmental racism. It is not only that refugees are forced to live in overcrowded camps without basic infrastructure, such as adequate accommodation, access to running water, and sanitary facilities. Recent reports have also found that an emergency camp on the Aegean island of Lesbos has been constructed on a former military site with high levels of lead contamination, thus exposing the more than 7,000 residents to a severe health hazard (Smith 2021).

Importantly, however, racialised environmental inequality is not confined to Eastern or Southern Europe. In Germany, Sinti and Roma[9] have a history of being subjected to high degrees of ethnic segregation, often living in remote industrial areas with substandard housing that lacks insulation, heating, and running water (Rose 1985; Abdikeeva 2002). Exposed to structural racism, the minority group faces (violent) exclusion from social spaces and has long been the target of institutional discrimination, such as systematic racial profiling, deportation, and denial of public services, including the provision of infrastructure, health care, and insurance. The starkest instances of environmental racism include attempts to relocate Romani communities to industrially polluted areas, knowingly exposing them to chemical toxins that are hazardous to human health (Abdikeeva 2002: 6).

Moreover, immigrant communities tend to bear the brunt of environmental harms in Germany. For example, generations of Turkish immigrants have worked in precarious jobs under unsafe conditions and thus also tend to live in more polluted areas (Steger et al. 2007: 15). While »empirical analyses in Germany are still scarce« (Rüttenauer 2018), this finding is confirmed by Best and Rüttenauer (2018; see also Rüttenauer 2018, 2019). Their analysis shows how environmental inequalities in Germany cannot solely be explained by socio-economic factors and that particularly first-generation immigrants with visible differences (in language skills or citizenship) face a higher exposure to environmental harms, independently from their socio-economic background (Best & Rüttenauer 2018; but see also Köckler 2005; Köckler et al. 2008; Raddatz & Mennis 2013).

However, despite their finding that socio-economic factors are not the only determinant in the distribution of environmental inequalities, the analyses tend to avoid the concept of environmental racism. In fact, they are relatively removed from theoretical discussions of racism, often focusing narrowly on empirical questions and thereby neglecting deeper structural issues.[10] This resembles a tendency in the early environmental justice literature in the US that centred around the questions of whether race or class was the main determinant of environmental inequality and whether the causal mechanism behind the unequal distribution of environmental hazards was selective siting or selective migration (see Pulido 1996 for a valuable overview of the early literature in the US).

Moreover, not all minority groups that experience racist discrimination are also immigrants. Yet, empirical analyses of environmental inequality in Germany define

9 Simplified, Roma is a general collective term that is used in Germany to describe the Romani communities that live in Southern and Eastern Europe, whereas the term Sinti specifically refers to the German-speaking communities living in Germany (Engbring-Romang 2014; Heinrich-Böll-Stiftung Sachsen n.d.).

10 An important exception is a recent study by Imeh Ituen and Lisa Hey (2021), which collects instances of environmental racism in Germany.

minority groups in terms of either their foreign nationality or their ›migration background‹.[11] The problem with this term, however, is that it includes white migrants from Western Europe or the US, while excluding Black Germans and POC who have lived in the country for generations (Gyamerah cited in Gaul & Vooren 2020). Black Germans or Germans of colour, who face racist discrimination in their everyday lives but do not have a ›migration background‹, thus statistically fall through the cracks and are thereby rendered invisible in academic and political discourses on the issue.

Given the country's National Socialist past, in which the Nazi regime pseudo-scientifically categorised the German population into different ›races‹ that facilitated a state-led programme of ethnic cleansing and genocide, there is naturally a high degree of suspicion among the general population and particularly among minority communities such as Sinti and Roma towards the collection of demographic data based on ethnicity (Gaul & Vooren 2020). Thus, while American scholars can draw on a wide range of data on racial minorities in order to investigate issues such as environmental racism, there is no comparable data available in Germany (Gyamerah 2020).

It is therefore questionable whether environmental inequality along ethnic or racial lines is indeed not prevalent in Germany or whether there is instead a lack of statistical tools to prove that it is. In a first step, it would therefore be necessary to establish a clearer picture of the demography of minority groups in Germany. One initiative that has attempted to do just that is the project #AFROZENSUS. While it is rightly discussed critically in light of Germany's fascist past, #AFROZENSUS is a grassroots initiative organised by the Black community in Germany with the objective of collecting statistical data on people of African descent that can help articulate and underscore political demands (EOTO – Each One Teach One e.V. n. d.). This data would then have to be compared with existing information on the spatial distribution of environmental pollution in order to investigate the extent of environmental racism in the German context. Importantly, such research should aim to connect empirical analyses and findings to existing theories of structural racism and intersectionality as well as to the specific socio-historical context that shapes contemporary processes of racialisation in Germany.

Concluding Remarks

The aim of this review was to provide an overview of the more recent issue areas and debates in the literature exploring the link between racism and the environment. A

11 In Germany, the term ›Migrationshintergrund‹ (translated: migration background) is used to describe a person who was born without German citizenship or has at least one parent that was not a German citizen at birth (Statistisches Bundesamt 2021).

second objective was to offer a tentative explanation for the comparative absence of a significant body of literature on the subject matter in Germany. Finally, the third goal was to highlight research themes that demand further scholarly engagement both in the Anglophone and the German context.

The analysis was divided into three themes that the literature tended to more or less chronologically. It began by assessing the racialised effects of environmental degradation and climate change, before moving on to examine the ways in which the underlying causes are racialised and, finally, to scrutinise how elements of racialisation and racism are reproduced in discursive and institutional responses to the ecological crisis. In sum, key developments in the Anglophone literature include a geographical and thematic broadening of the issue areas as well as a move away from the early focus on purely empirical assessments to a more politicised understanding of the underlying structures and systemic issues upholding and reproducing the racialisation of environments. This evolution of the literature was arguably based on important changes in the theoretical understanding of racism, away from a conceptualisation of the latter as intentional acts of animosity and towards a definition that emphasises the systemic nature of racism as pertaining to all spheres of society.

In contrast to the US, the research and public discourse on racism in Germany are significantly underdeveloped. In Germany, there is still little consensus on the definition of racism and political debates on the issue rarely go beyond discussing whether racism exists at all on a societal level (Kelly 2020). The overwhelming association of racism with intentional and violent acts of animosity, as well as with Germany's fascist past, hinders much of the white majority from recognising the structural forms of racist discrimination that permeate German society (Ogette 2019: 87–88). This general lack of knowledge and widespread refusal to acknowledge the persistence of racism certainly provides a partial explanation for the overwhelming absence of literature on the links between racism and the environment in Germany. This review highlights another explanation, namely the comparative lack of demographic data on minority groups, which would allow for an assessment of racialised environmental inequality similar to the studies of environmental racism in the US. Further research on racialised groups in Germany that is attentive to the country's specific socio-historical context, as well as a strengthening of German research on racism in general, is thus urgently needed. For example, such enquiries could investigate racist discrimination in the German health sector (Sahebi 2021) or the high degree of exploitation and dehumanisation that migrant workers are subjected to in German industries, i.e. the meat processing industry (Verschwele 2020). Globally, analyses should look beyond the promise of a ›green transition‹ by western governments, including Germany, to pose the question of how exactly and at the expense of whom such a transition is taking place. Here, new technologies like hydrogen (e.g., Thiele 2022) and electric mobility (e.g., Balch 2020) that are politically hailed as panaceas should be subjected to critical scrutiny

in order to uncover the underlying power dimensions and racialised inequalities at both the global and local level. Crucially, given the urgency of the global ecological crisis, there is a pressing need to communicate these insights beyond the realm of academia to advance the political and public discourse on this issue.

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