

A review of the (potential) implications of climate change for policing practice worldwide

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ABSTRACT

Climate change is now considered more than just an environmental issue, with far-reaching effects for society at large. While the exact implications of climate change for policing practice are still unknown, over the past two decades criminologists have anticipated that climate change will have a number of effects that will result in compromised safety and security. This article is informed by the outcome of a co-creation workshop with 16 practitioners and scholars of diverse backgrounds based in The Netherlands, who sought to conceptualize and systematize the existing knowledge on how climate change will most likely impact the professional practice of the Dutch (or any other) police. These challenges, with varying degrees of intensity, are observable at three main levels: the societal, organizational, and individual level. These levels cannot be separated neatly in practice but we use them as a structuring device, and to illustrate how dynamics on one level impact the others. This article aims to establish the precepts necessary to consider when exploring the intersection between climate change and policing. We conclude that much still needs to be done to ensure that the implications of climate change and the subject of policing are better aligned, and that climate change is recognized as an immediate challenge experienced on the ground and not treated as a distant, intangible phenomenon with possible future impacts. This starts with creating awareness about the possible ways in which it is already impacting the functioning of policing organizations, as well as their longer-term repercussions.

INTRODUCTION

Policing in general, and the work of the police as the primary policing actor in particular, has continuously been affected by ever-changing social, cultural, political, economic, and ecological developments. Climate change, as the most significant challenge facing humankind, is now considered more than just an environmental issue, with far-reaching effects for society at large. Nonetheless, the topic of climate change does not appear to have been mainstreamed in police planning, strategies, and daily work.

The Intergovernmental Panel on Climate Change (IPCC) has iteratively claimed that the intensifying effects of climate change (extreme weather events such as heatwaves, storms, droughts, and flooding, as well as slow-onset changes such as sea level rise) are already affecting people's health and livelihoods, food security, critical infrastructure, and transportation systems besides

leading to the endangerment of species and ecosystems (IPCC, 2022). The impact of climate change differs across regions and it is felt intensively on a local scale. It is the approximately 3.3–3.6 billion people living in West, Central and East Africa, South Asia, Central and South America, small island developing states, and the Arctic who are particularly vulnerable and continue to be disproportionately affected by the consequences of climate change (Interpol, 2022).

As a result of dynamically changing human–environment relations, policing actors are increasingly being brought into the nature, wildlife, and environmental conservation domain to recalibrate and extend the traditional state policing powers (Massé, 2022). Some states are already gradually positioning policing as central in responding to disruptive socio-ecological orders caused by the climate crisis. Such a shift comes with even higher expectations of the police to move beyond their

'traditional' remits and become more strategically and operationally prepared for what is to come (Van Vilet, 2023).

Climate change has different meanings for different (groups of) people and organizations and may be felt in different ways on the ground; however, there is already growing literature suggesting that the nature of policing will be impacted both directly and indirectly by resource scarcity, environmental crimes, climate refugees, and civil unrest arising in response to climate change-related challenges (Abott, 2008; Mutongwizo *et al.*, 2021; Van Vilet, 2023). While the exact implications of these developments for policing are still unknown, over the past two decades criminologists have anticipated that these accelerating effects of climate change will have numerous criminogenic effects that will result in compromised safety and security (Abott, 2008; Mutongwizo *et al.*, 2021).

The way that climate change is frequently articulated and discussed in a policing context reflects a lack of understanding of what climate change means concretely for law enforcement, meaning that the discussion is deprived of concrete examples and direct links to policing work (Interpol, 2022). Therefore, climate change should be seen not only as a risk multiplier of various drivers (e.g. poverty, inequality, displacement) and integrated into already existing risk analysis frameworks (Duffield, 2013; Farrall, 2012; Mena *et al.*, 2022), but also as a phenomenon that brings about a new array of challenges.

A wide range of challenges will confront the police worldwide in the years to come, some of which already have started becoming evident. Because it is difficult to determine whether climate change causes or amplifies these challenges, it is necessary to continue exploring the ways in which the phenomenon is linked with different types and levels of change—from broader structural changes to those felt immediately on the ground. This can help determine which of these changes are affecting policing and the police, respectively, and in what ways. This article aims to establish the precepts necessary to consider when exploring the intersection between climate change and policing.

METHODOLOGY

The article is informed by the outcome of a co-creation workshop held at The Hague University of Applied Sciences, the Netherlands, in September 2022 with 16 practitioners and scholars of diverse backgrounds sought to conceptualize and systematize the existing knowledge about the implications of climate change for the police.¹ The workshop consisted of two rounds of discussions guided by the following questions: (1) what are the three most pressing implications/effects of climate change for the professional practice of the Dutch Police? and (2) what has already been done to address the implications of climate change for the professional practice of the Dutch Police, and what other solutions can be proposed?

Notes were taken during the workshop by four different people,² which were subsequently analysed and thematized.

¹Among the workshop participants were: seven scholars, four representatives of the Dutch Police, two representatives of the private sector, one human security lecturer, one representative of EUROPOL, and one representative of the Dutch Ministry of Justice.

²The two main researchers and two research assistants.

Qualitative analysis of the notes aimed to structure the findings by means of using a thematic approach which is based on identifying, highlighting and describing themes that emerge from the data (Strauss and Corbin, 1998). The literature review then assisted to contextualize and nuance the main workshop themes.

Based on the thematic analysis of the outcomes of the workshop and a critical literature review and synthesis, this article articulates and conceptualizes how climate change will most likely impact the professional practice of the police worldwide. While overlapping and with blurred boundaries, these challenges, with varying degrees of intensity, are observable at three main levels: the societal level, organizational level, and individual level. The levels cannot be separated neatly in practice but we use them as a structuring device for our article, and to illustrate how dynamics on one level impact on the others. The following sections will consider each level in turn.

The perspective presented in this article is bound by our positionality of international scholars living and working in the Netherlands. Although we do acknowledge the growing necessity to study and learn from the scholarship in the Global South, due mainly to reasons to do with ease of access, we still draw our conclusions mostly from the literature and scholars based in the Global North.

Challenges at the societal level

Crimes and harms Agnew (2012), in his criminological analysis, has long suggested that climate change and its effects will increase strains in society, which could be conducive to rising crime rates, an increase in social conflicts, reduced formal and informal social control, weakened social support, the fostering of beliefs and values that can inform criminal acts, as well as a general increase in opportunities to commit crime. A US-based study on the relationship between historical weather patterns and criminal activity provides some quantitative evidence that climate change will have substantial effects on the prevalence of conventional crimes (Ranson, 2014). Weather conditions are considered variables that contribute to successfully committing a crime and escaping undetected, as well as to heightened aggression and loss of control (Ranson, 2014). It is worth noting that the degree to which heat impacts on violence and conflict varies across settings and is contingent on factors such as gun control, gender inequalities, substance abuse, and socioeconomic vulnerability (Chersich *et al.*, 2019).

Furthermore, climate change will produce scarcity and will nurture conditions that support corrupt diversion, illicit markets, profiteering, and food riots (South, 2010, p. 100). The growing importance of green criminology lies in examining complex environmental issues in criminological enquiry that move beyond the narrow confines of individualistic crime, which still dominates the criminological discourse and are the main focus of criminal justice policies. Unlike traditional street and property crimes, environmental crimes frequently have long-lasting and irreversible effects that affect entire communities. Climate change mitigation and adaptation policies and measures (such as the EU's Emissions Trading System), and stricter legislation/mechanisms in these areas, are very likely to also result in bringing about a new set of environmental

crimes and the risk of non-compliance. Yet many environmental crimes are still considered to be on the margins of criminal justice systems and public discourse (Neve, 2023; Nurse, 2022). This is most likely because emerging environmental harms and injustices require a new approach that moves beyond the traditional boundaries of criminology, criminal justice, and responses to harm (Neve, 2023; South, 2010).

Relationship between police and communities The police as a public service profession entails a great deal of engagement with diverse publics, which already constitutes significant 'emotional labour' in their daily practice. The emerging scholarship involving rigorous quantitative research across multiple disciplines suggests that past climatic events have exerted considerable influence on human conflict (Hsiang et al., 2013; Koubi, 2019). However, Mena et al. (2022) warn against considering climate change a stand-alone stream and establishing a quick linear causation between climate change's impact and violent conflicts. There are multiple drivers, such as poverty, inequality, and weak governance, that determine and influence the dynamics and extremities of violent human conflicts.

The prolongation and/or amplification of conflict, with a (possibly sustained) spike in, and the development of, new forms of societal unrest (e.g. climate protests/eco-terrorism), is very likely to contribute to the frequency of civil disobedience and jeopardize the relationship between the police and society at large (see Pali, 2022). In combination with economic, social, and political uncertainties, climate change might increase the risks of conflict and instability, especially under conditions of poor governance. Moreover, the development of climatically less habitable regions in the world will amplify the current trends of migration to Europe. A steady but consistent increase in the number of climate refugees is likely to increase the political preference for enhanced border security. This in turn will magnify the problem of crimmigration³ (as well as diverse public reactions to this challenge), which entails an increasing application of criminal law and the involvement of criminal justice actors to respond to and regulate irregular migration.

African countries, with their climate-dependent economic sectors at risk of violent ethnic conflict, are usually presented in this debate as particularly vulnerable. Adano et al.'s research (2012), based on a case study of two rival communities in Loita and Marsabit (Kenya), invites the opposite perspective as it explores the phenomenon of cooperation to overcome climatic stress. The research demonstrates that it was during droughts that people were more inclined to keep the peace, to cooperate and to use wells together rather than to indulge in violent behaviour. This observation is in line with studies on massive trauma caused by large-scale disasters that can promote solidarity and resilience (Penic et al., 2022; Reimann and König, 2017). Moreover, the Kenyan study also recognizes the importance

of local knowledge and norms in implementing cooperative, non-violent solutions in collective actions and emphasizes that, in a scenario of climate change when the potential threats to the environment are known, coping largely depends on traditional and informal institutional mechanisms invoked by local actors (Adano et al., 2012).

Any possible connections between environmental factors, such as natural resource scarcity, and collective behaviour, such as conflict or civil unrest, should be seen as deeply societally structured. In order to capture the interconnectedness of the factors that lead to conflict and disasters, Mena et al. (2022) suggest seeing climate change as an additional risk factor that could either amplify (force-multiplier) or minimize (force-diminisher) a crisis. Therefore, any future studies on the relationship between climate change and conflicts over natural resources should not have a preconditioned structural or agency approach. The former tends to ignore personal decisions and the opportunistic behaviours of individual actors, while the latter does not take into account pathway-dependent structural variables (Adano et al., 2012).

Eco-protests or eco-terrorism? It is not only the increased frequency, but also the variety of conflicts and civil unrests, particularly the emergence of climate change-related protests that will challenge police legitimacy and operations across the world. For example, in The Netherlands, recently Dutch Police have been responding to a number of different demonstrations; the most prominent ones have been organized on one hand by Dutch farmers against the government's plans to cut nitrate emissions, and on the other hand, by environmental activists (Extinction Rebellion in particular) against the Dutch government's support for fossil fuels (Hayden, 2023). The police response to environmental direct action is often to construct and frame such behaviour as criminal (at best) and/or, at worst, as an example of eco terrorism (Vanderheiden, 2005). The findings from a UK research project on policing two different climate camps suggests that the mobile, fragmented, and possibly transnational nature of climate change-induced protests imply that the police will be forced to pursue different tactics and conflict management methods compared with those they commonly apply, for example to respond to football-related violence (Baker, 2011). While the research reveals the importance of negotiation, mediation, and cooperation with demonstrators as opposed to physical confrontation, police responses and attitudes to the policing of civil unrest are likely to depend on a number of factors, including proximity to main infrastructure points, policing tradition, as well as consistent and transparent communication between the police and the protesters (Baker, 2011).

Challenges at the organizational level

Sustainable and green policing Some law enforcement agencies have already started to think of themselves as environmentally responsible (green policing) and to implement more environmentally friendly and sustainable practices of doing policing work. For example, the College of Policing in the UK identified climate change as one of the ten most significant challenges for policing over the next decade, as a result of which the Association of Police and Crime Commissioners joined forces with its policing partners at the National Police

³The concept of 'crimmigration' was coined to describe the criminalization processes of immigration law, i.e. the intersection of criminal and immigration law that has been taking place on three fronts: (1) the increasing overlaps between the substance of immigration and criminal law, (2) the increasing resemblance of immigration enforcement to criminal law enforcement, and (3) the increasing adoption of criminal procedural elements in the procedural aspects of prosecuting immigration violations (Stumpf, 2006).

Chiefs Council and Bluelight Commercial and announced in November 2021 that they would implement a policing decarbonization programme (APCC, 2022). This sustainability strategy involves a variety of actions, including the reduction of the organization's CO₂ emissions, the introduction of a green fleet, the introduction of sustainability champions and recycling, waste reduction in procurement and operations, the reuse of mobile devices, the introduction of more efficient lighting, and the energy efficient and sustainable design of police stations. Such measures can be replicated and expanded; in particular, police uniforms and gear can be adjusted to better reflect changing climate conditions on the ground. Furthermore, as a result of Scotland's commitment to achieve net zero greenhouse gas emissions by 2045, in 2021 Police Scotland launched its first Environmental Strategy, in which it committed to reducing CO₂ emissions by a further 35% by 2026 (Police Scotland, 2021). Another good example of a strategic overview of recommended actions, undertaken to make green policing operations and services sustainable was commissioned and published by the Vancouver Police Department in 2018 (Konyk, 2018). Similar actions are underway in the Israeli Police (Interpol, 2022) and in the Netherlands (Liezen, 2022; Neve 2023; Sybrandij, 2023). Along with other government organizations, the police in Australia and New Zealand are likely to face heightened pressure to reduce their environmental impact (Van Vilet, 2023).

Lastly, given the significant police staff shortage and high staff turnover across the globe, police organizations will have to strengthen their image of a sustainable institution in order to be able to attract, recruit, and retain younger generations, for many of whom the environmental matters are already a priority (Liezen, 2022; Van Vilet, 2023).

Building capacity for environmental crime investigations Although not all environmental crimes might be considered entirely new crimes, their regulation and criminalization are definitely accelerating (Spapens, 2012). The Australian Government's central legal service (AGS) highlighted that climate change litigation has grown with over 1,000 new cases brought in the past 6 years worldwide (Van Vilet, 2023). For example, the concept of ecocide, which is defined as the destruction and degradation of ecosystems and specific environments, has recently gained significant momentum, and there is the prospect that it will be included as a fifth offence prosecutable by the International Criminal Court. In Belgium, the Federal Parliament recently adopted a resolution aimed at recognizing the crime of ecocide in national and international criminal laws—a move that is most likely to lead to more enforcement actions against crimes harming the environment, promote more environmentally friendly measures and enhance the need for international police cooperation (Interpol, 2022). In the UK, the Environment Agency will normally be the lead agency in prosecuting environmental crimes, although the police may play a supporting part, and will be the lead agency in prosecuting wildlife crimes.⁴

Nonetheless, research from Norway shows that the detection of environmental crimes is often incidental, as it usually occurs while addressing other criminal matters.⁵ The prioritization of

environmental crimes is at risk of being downplayed in favour of crimes that are considered more serious and usually result in harsher sanctions (Runhovde, 2017). In addition, Westernized criminal law (and its operations in the criminal justice system) is largely grounded in simple street-level crimes. Arguably, environmental crimes are more complex and will require more specialized resources for adequate and tailored (and often lengthy) police investigations.⁶ The rapid development and growth of the repertoire of new environmental crimes linked to climate change mitigation or adaptation measures (e.g. carbon credit fraud and greenwashing of so-called phantom forests) will increasingly require the police to acquire new knowledge and tools to investigate such an expanding catalogue of environmental crimes and also to cooperate with others. In addition, in the European Union, these measures are very likely to be strengthened by the impact of the Green Deal and/or revised EU Directive on Environmental Crimes.

The manpower and resources of the police are limited in any democracy, and choices are therefore inevitable (Spapens, 2012). Therefore, investigations into such crimes already consist of a mixed (civil and criminal) approach in one country or a strict criminal approach in another. Climate change has already been affecting our approach to regulation, in favour of market-oriented mechanisms (Farrall, 2012), as is evident in the case of CO₂ emission monitoring (Neve, 2023). The need to police new (climate-related and/or climate-amplified) crimes and enforce climate-related legislation may induce another wave of police reforms and reorganization. Due to the record-breaking droughts in the summer of 2022, French Interior Minister Gérald Darmanin mandated 3,000 'green police/gendarmerie posts' to improve judicial investigations related to environmental damage and to enforce prefectural orders restricting water consumption (Interpol, 2022).⁷ The initiative aimed to reinforce the resources of the Central Office for Combating Environmental Violations (Oclaesp), created in 2004, which has had nine regional offices since 2020, to fight multiple forms of trafficking (e.g. drugs, waste, and wildlife).

Furthermore, the reality of environmental offending is that not only is it frequently committed in corporate settings but also much of the activities under discussion as corporate environmental 'crime' fall within a broader conception of corporate wrongdoing and non-compliant behaviour (Nurse, 2022). Unlike organized environmental offending, corporate environmental crime is a product of opportunity conditioned by poor monitoring regimes and weak enforcement environments (Nurse, 2022). There are political considerations at play when responding to corporate environmental crimes, as there is a tendency to approach corporate wrongdoing as a risk-based regulation, and seek prosecution as a last resort (Nurse, 2022).

⁴The examination of illegal wildlife trade investigations in Norway suggests how these processes can be compromised due to officers' limited understanding of the crime area, inconsistent recording, poor investigative skills for detecting environmental crime, insufficient evidence and lack of prosecutorial capacity, and a general impression within the police organization that illegal wildlife trade is an uncommon and insignificant crime problem (Runhovde, 2017).

⁵We are grateful to the anonymous reviewer 2 for sharing these insights.

⁷While the main duty of the French green police is to raise public awareness, police officers can issue fines of up to 7,500 euros for breaches in regard to water consumption. In 2022 alone, 1,700 inspectors conducted more than 4,000 interventions (Interpol, 2022).

⁴We thank the anonymous reviewer 1 for this point.

Walters (2022), based on her meticulous analysis of the purported inactions and omissions of the Liberal-National Conservative Australian Government in response to the devastating bushfires of the Australian Summer of 2019/2020, argues that the ecocide debate should be influenced by criminological discourse of harm, environmental justice, and political deviance. This resonates with McKinnon's proposal to introduce a new criminal offence of 'postecide' to capture all of the climate change-related criminality of the states and corporations that continue to carry on with extractionism policies implemented in the name of power and profit (McKinnon cited in Mena *et al.*, 2022).

Police responses to humanitarian emergencies In contemporary systems of public safety and security, the practice of policing has become increasingly nodal, fragmented and multi-tiered (Bowling *et al.*, 2016; Laufs and Waseem, 2020; Loader, 2000; Mutongwizdo *et al.*, 2021). Traditionally, the police are a close-knit and target-oriented service. Human emergencies provide a unique context to study plural policing, as public health emergencies and natural disasters create the urgent need to forge multi-agency alliances and force the state (and the police, too) to share authority, legitimacy, and capacity with other bodies (Matczak *et al.*, 2021). An intrinsic part of the response to climate change will be an amplified pluralization of policing roles and tasks and enhanced multi-agency policing work. Similar discussions about rethinking police roles and tasks in order to accommodate the public health agenda, have taken place to reflect on policing of the Covid-19 pandemic (see Chu and Haberfeld, 2023; Mutongwizdo *et al.*, 2021).

Due to the intensifying impact of climate change, police officers will have to develop new skills and capabilities to fulfil additional and non-traditional policing roles and functions. In addition to fulfilling the traditional role of the police as enforcer of the rule of law (including new climate change-related legislation), police officers may also have to act as first responders to crises ranging from asylum centres becoming full to civil unrest and floods. Involvement in humanitarian emergency will require the police to shift from the 'cop' to a 'care mindset' of a first responder.

The increasing risk of humanitarian emergencies requires policing actors to engage with first responders and operators of critical infrastructures, who often do not work together adequately. It is not only the enhanced collaboration between the police, intelligence services,⁸ army, and civil society that will be increasingly anticipated in the future. The increasing implementation of mitigation and adaptation measures will force police services to cooperate with the institutions responsible for, for example, flood defences, water-permeable pavements, smart grids, etc.

More frequent, reoccurring and climate change-induced humanitarian emergencies will have a lasting impact on police operations, finances, and sustainability. The analysis of the Australian police responses to disasters shows that emergency management policing includes a more expansive range of practices,

which contribute to the popularization of resilience within the police service (Van Vilet, 2023). In the UK, the police have a clearly defined role in civil contingencies, set out in The Civil Contingencies Act 2004, in which multi agency collaboration is explicit. The UK police participate in local partnerships, so-called Local Resilience Forums. Police are likely to take the lead in large-scale environmental operations through the Chief Constables' Coordinating Committee, or similar bodies. A good example is the police lead in the response to the large-scale flooding in Gloucestershire in 2007.⁹ Finally, the increased police involvement in disaster relief will require the realization that disasters are often outcomes of human mismanagement and (in)action, rather than resulting from the interaction between hazards and vulnerabilities (Mena *et al.*, 2022).

Challenges at the individual level

It is very likely that the effects of climate change will increase the demands placed on the police as an organization and on police officers as individuals. Police officers will be caught in a vicious circle as all of the aforementioned challenges come to police organizations, which already suffer from exhaustion and work overload (Boulding cited in Interpol, 2022). In addition, many forces suffer from a lack of or poor leadership and unfavourable organizational culture for change initiatives (Haake *et al.*, 2015). A systematic review of the relationship between organizational stressors and the mental wellbeing of police officers confirms that organizational stressors contribute significantly to mental health risks, including occupational stress, anxiety, depression, work-related burnouts, or suicidal ideation (Purba and Demou, 2019). Intrinsic to police work is daily exposure to a variety of intensely demanding situations, which makes this profession one of the most stressful occupations with a heightened risk of physical and mental health morbidities.

The changing weather patterns, heat/cold waves, among many other climate change consequences such as forest and bush fires (with their risk of looting and other criminal activities), will certainly add to the range of these stressors. The review of climate-related exposure and the occupational sectors most likely to be affected by Applebaum *et al.* (2016) suggests that outdoor occupational sectors, including traffic police, are at risk and will increasingly need enhanced protection to reduce their exposure to heat, ozone, polycyclic aromatic hydrocarbons, other chemicals, pathogens, wildfires, and violence. The effects of weather phenomena on the mental and physical health and wellbeing of individual police agents require further investigation; however, the heat-violence nexus has already gained a significant amount of scholarly attention. Research from the USA (Williams *et al.*, 2020) and Japan (Ikegaya and Suganami, 2008) demonstrates not only the increased likelihood of violent human interactions but also how hot weather triggers psychological stress, and consequently contributes to aforementioned higher crime rates and increased police work. Research from India confirms the impact of heat stress on police work; however, it needs to be acknowledged that heat-related vulnerability is highly differentiated by age, socioeconomic status, and occupation. Poor acclimatization, lack of rest periods and food breaks, and clothing type are examples of additional

⁸Or a combination of both as in case of a special environmental unit in Mozambique (Massé, 2022).

⁹We are grateful to anonymous reviewer 1 for sharing these points on the UK police's role and experience.

factors that contribute to police heat stress (Raval *et al.*, 2018). There is an urgent need for discussion on how to incorporate the knowledge about climate change effects in police training and education curricula across the globe.

Moreover, the emergence of the ‘eco-cop’ branch (and mentality) within a police service (environmental policing; Mwanika, 2010) is much desired in order to respond to environmental crimes, and other climate change-induced risks. However, it is equally paramount to understand the risk factors that can affect the physical and mental health of individuals working in the police. With the growing expectation to share policing tasks with other actors in the safety and security landscape and to take on additional tasks in an already growing repertoire, police work in the future will require enhanced levels of physical and mental capacities to respond effectively to climate-related emergencies.

CONCLUSION

Even though climate change can be considered a slow-onset phenomenon, and even though its impact will largely be felt in the decades to come, the process of change has already started. This starts with creating awareness about the possible ways in which it is already impacting the functioning of policing organizations, as well as the longer-term repercussions of this. Much still needs to be done to ensure that the implications of climate change and the subject of policing are better aligned and that climate change is recognized as an immediate challenge experienced on the ground and not treated as a distant, intangible phenomenon with possible future impacts. The advance of climate change will likely decrease rather than increase meaningful, collaborative action as its effects force individuals—and states—to focus on ensuring survival (Agnew, 2012). Putting off acting to mitigate or address the effects of climate change will thus mean that, at some point, actions will no longer have an effect.

In light of the acceleration of climate change and the complex manner in which it manifests, a concerted effort across all domains is required to start understanding what its implications are for our present and future lives and work. This issue still rarely features on the agenda of police leadership; there is not yet a strong sense of urgency about climate change in policing, yet future preparedness starts with awareness (Interpol, 2022). Exploring and mapping the links between climate change and police work across the societal, organizational, and individual levels, and making these explicit, is an important first step in ensuring that the police are ready for the future.

Furthermore, the opportunities provided through digital and communications technologies, in particular social media, have not only influenced the way we live in a ‘digital society’, but also the way we violate norms, commit crimes, fall victim to crimes and participate in justice processes. While scientists have been restlessly drawing our attention to the consequences of climate change, the most alarming resistance comes from those who claim to believe that anthropogenic climate change is not really happening (Uscinski *et al.*, 2017). This ‘climate change denialism’ has been amplified by the explosive development of social media platforms. While the platforms can serve as a very helpful tool during crisis com-

munication, they can also exacerbate lay people’s vulnerability to climate change mis/dis-information. Analyses of the online communication behaviour of the Queensland Police Service in Australia during flooding incidents confirmed how important it is that the police use social media to provide situational information and advice, and to tackle misinformation (Van Vilet, 2023).

We argue that police forces around the world need to invest in leadership and training at all levels, with an emphasis on empowering local police leaders to become resilient leaders, who are willing to engage with researchers and leading disaster risk reduction practitioners (Blaustein cited in Van Vilet 2023). While we observe that there is a tendency among police forces to look for solutions in the military sector, such an approach might amplify the risk of excessive securitization, especially in jurisdictions with a prior history of police militarization.¹⁰ There is growing evidence that restorative justice and therapeutic jurisprudence (which examines the therapeutic properties of law and/or law reform) are more adequate responses to environmental harms (Nurse, 2022; Pali *et al.*, 2022).

Green criminology has already become a prominent area of research that has directed much greater attention to environmental crime and harm than mainstream criminology has done. Green criminology advocates that the justice system accepts the legal and illegal environmental harms and needs to take environmental harm seriously, which requires a reconceptualization of harm that goes beyond conventional understandings of law violations (Whyte, 2012). Climate change does not affect all places in the same way; it is the regions around the equator in Asia, Africa and South America that are being affected first. Therefore, as a matter of urgency and in the spirit of decolonizing curricula, there is a growing need for scholars in the Global North to be more open to the evidence and knowledge from the Global South.

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¹⁰For example, some police departments in the USA are citing climate change as a reason to seek military equipment, which is described by Redden and Kaufman (2021) as a knee-jerk reaction that is not accompanied by any thought-out policing strategy on how to use the equipment in case of a natural disaster.

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