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Gathering Storm: An Introduction to the Special Issue on Climate Change and Terrorism

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Climate change is a potential major driver of future terrorism. It is already recognised by many (if not most) nations as a strategic security threat, though the potential role it can play in igniting, facilitating, or exacerbating terrorist conflict has been relatively unexplored. There are, however, growing signs that climate change—either through direct or indirect impacts—should be considered as a significant macro-level driver of terrorism. It is certainly well established that the causes of terrorism can involve both large-scale geo-political processes and at the same time much more low-key individual level personal factors. Much of the traditional debate around the “root causes” of terrorism has concentrated heavily on macro-level drivers with a particular focus on factors tied to economic, political and historical forces.¹ The relative importance of each factor can vary enormously depending on the perspective taken not only in research terms but also in terms of potential policy interventions. It is critical to acknowledge, however, that not all causes will be present in every case, and those that are present do not always have the same degree of impact. A cause of vital importance in one terrorist conflict might play no detectable role in others.

Given the above, it is inevitable that we face considerable challenges in our efforts to better understand the causes and their impacts. Attempts to do so have to be sophisticated in how “causes” are framed. Causes can work at different levels and it is important to take the trouble to distinguish between these. Similarly, we have to be alert to how research defines “terrorism” and the impact this then has on the data used and the conclusions reached. Only limited data is available on many key issues and care is needed in selecting relevant and reliable sources.² While there may be obstacles to understanding, this does not mean we should abandon the search to comprehend the causes of terrorism. The issue is a critical one and the progress we have seen in recent decades already shows substantial achievements.³

Of particular interest to this special issue are how we approach terrorism’s macro-level causes. These can be seen as the big drivers of terrorist conflict and will be the main factors responsible for future terrorism. Macro-level factors normally relate to systemic conditions at the level of society, state, international relations, and/or trans-national developments.⁴ Examples that have traditionally been looked at include civil war or deep-rooted conflicts, invasion, and occupation by foreign military forces, bad governance and corruption, rapid modernisation or actions by hostile states. Emerging macro-level causes requiring further attention include population growth, social polarisation, migration patterns, and, of particular concern for this issue, climate change.

Climate change: Terrorism’s next wave?

Rapoport famously noted that terrorism comes in waves. In doing so he proposed four great waves of modern terrorism over the last 150 years.⁵ The first struck in the 1870s with the rise of anarchist revolutionaries in Russia and rapidly spread throughout Europe and beyond. This was eventually eclipsed by nationalist terrorism in the aftermath of the First World War. The advent of the Cold War

between the West and Communism brought with it the third wave of left-wing inspired terrorism, often sponsored by Soviet nations. Finally, as the Cold War itself ended, the fourth and current wave emerged—religiously motivated terrorism. While imperfect, the wave model does present a worthwhile starting point in our understanding of the evolution of terrorism.

With such a history, a key question for many is what form will the fifth wave take? It is possible that the current religious wave has already peaked and may already be declining. That may yet still be an optimistic assessment, but one certainty is that the religious wave will decline at some point. Some religiously motivated groups will doubtless persist throughout the twenty-first century—and we may well still be facing Al Qaeda, Daesh or their direct descendants at the dawn of the next century. Similar longevity was seen with some nationalist terrorist groups, who lasted well beyond the culmination of the second wave. That said, it is not inevitable that religiously motivated groups will dominate the rest of the century in the same way that they have dominated its opening decades.

A key element of the wave theory is that all of the great waves were closely tied to major geopolitical world events and processes. The anarchists were born out of the rise of middle classes, the spread of education, and growing intolerance to autocratic rule in the nineteenth century. The nationalist/separatists were inextricably linked to the collapse of the great European colonial empires, which disintegrated with the impact of the world wars. The third wave followed the spread of communist states in the aftermath of World War Two. In the Cold War nuclear stalemate, terrorism became a useful proxy for states who no longer dared engage in direct, conventional conflict. The eventual collapse of the Soviet Union brought that wave to an end and accelerated the rise of religiously motivated terrorism. Globalisation increasingly brought a secular and individualistic Western culture into conflict with more traditional, community-focused and religious ones. The clash crystallised most obviously in the collision between secularism and conservative Islam, though extremist elements of most major religions have been involved to some degree.

Across the different waves, terrorism has been a by-product of bigger forces. Sometimes the rise of terrorism has been deliberate and intentional. Often it has been accidental and unanticipated. Looking ahead, the key question is not simply what form will terrorism take in the future, but rather what are going to be the major global processes driving the new waves of terrorism? What are the international forces and events that will ignite and stir terrorist conflicts in their wake? If we can anticipate what these might be, we will be in a much better position to understand the future of terrorism.

Climate change is increasingly recognised as a strategic security concern for most states and its seriousness in this regard is growing rapidly.⁶ We are already seeing climate change impacting and becoming a significant driver for low intensity and terrorist conflicts in Africa, the Middle East, and Asia. It has contributed to the emergence of terrorist groups like Boko Haram and Islamic State.⁷ Between 2005 and 2010, for example, Syria experienced the worst drought in its recorded history, destroying agriculture in the eastern half of the country. This led to the collapse of rural communities, who abandoned their countryside homes en masse and moved to urban areas in search of new livelihoods. At the same time, Syria experienced an influx of refugees from Iraq as a result of ongoing conflict there. The urban infrastructure of the country could not cope with the surge in population and collapsed. Within a year, there was a popular uprising against the Assad government that is often viewed solely in terms of the Arab Spring in that region and the subsequent rise of Islamic State, with little mention of the potential roles of drought or mass migrations.

Climate change's significance as a factor in terrorism in the coming decades looks set to increase but our understanding of the processes and dynamics involved is in its infancy. How such analysis could feed into thinking around potential policy mitigations and security measures is even more limited. Our thinking around how climate change can drive terrorism is still in its very early stages. There is little systematic analysis to date in terms of how a major macro driver such as climate change can or will impact on terrorism frequency or severity, and no serious consideration yet with regard to potential mitigation approaches.

The focus instead when it comes to terrorism's root causes and what appropriate mitigations should be has remained primarily short-term and national. Thus, the potential role or impact of global long-term trends is not currently being attended to in any systematic or detailed manner. Perhaps it was ever thus, and it is not until a problem unambiguously bites that attention is paid to it. The problem of climate change and terrorism, however, looks set to bite soon and bite hard.

Next steps?

The clearest recommendation in terms of next steps is to improve the quality of the data available on the issues. The current lack of data results in both a reduced awareness of the potential problems and stifles wider debate and engagement. Improved data will allow for more serious engagement with the issues from a wide range of key stakeholders, improved modelling of the potential impacts, and would also significantly improve our readiness to engage with the problem. Instead, we are currently still in the early stages of learning about the problem. We have a considerable distance to travel before serious engagement with many of the issues will be possible.

In considering potential root causes of terrorism and in particular how these may exacerbate terrorism in the coming decades, an obvious follow-on consideration are what are the potential mitigation strategies that can be deployed to reduce the impact of future terrorism? In a context where major geopolitical factors, such as climate change, regional population increase and international migration have all been flagged as likely drivers of future terrorism, this poses an immediate challenge. Given the scale of the issues involved, in terms of responses it is useful to think in terms of mitigation *and* adaptation. Mitigation aims to reduce or prevent the problem, adaptation focuses on adjusting to actual or anticipated changes and reducing vulnerability. This distinction is worth noting with regard to climate change, especially as current assessments are that even with immediate radical measures, due to the long-term momentum entailed in the processes involved, climate change impacts will still continue for decades. Without radical immediate measures the momentum can be expected to only deepen.

The reality is that climate change is a major issue in and of itself, almost certainly *the* major issue facing this generation. The potential impact with regard to terrorism is just one of many challenges it represents. Indeed, despite its seriousness, terrorism may actually be regarded as one of the more minor challenges resulting from it compared to, for example, famine, arable land destruction, major population displacements, increased risks of conventional military conflicts, etc.

There is an urgent need for research to strengthen the evidence base around the potential threats and appropriate mitigation and adaptation responses. Tied in with improving the reliability and validity of the knowledge base, there is also a need to engage in awareness raising to help inform policy at national and international levels. There can be no doubt that a crucial next step is to improve our knowledge and understanding in this area. In particular, there is a need for more sophisticated modelling to better understand how trends in climate change can interact with terrorism trends. This then has been the rationale behind this special issue, which invited a wide range of contributions to explore a variety of issues around how terrorism and climate change can be linked.

The focus of the special issue

The special issue appropriately opens with a critical review by Stefanie Mavrakou, Emelie Chace-Donahue, Robin Oluanaigh, and Meghan Conroy, who analyse the current state of research on the links between climate change and terrorism. Focusing particularly on sub-Saharan Africa, their initial search threw up over 17,000 hits, which was eventually boiled down to twenty-six studies, which met the review's criteria. Their key finding is that the majority of the existing literature is reporting a positive correlation between climate change and terrorism. As Mavrakou et al. note, current research

findings are overwhelmingly reporting that climate change is indirectly leading to terrorism. Most of how this happens relates to climate changes direct impacts on other factors, which have been identified as drivers of terrorism.

The critical review is followed by two articles that focus particularly on how one potential driver of terrorism—mass migration—is being strongly affected by climate change trends. First, John Sullivan and Keeley Townsend provide a qualitative assessment of the literature and geopolitical trends related to climate change, migration, and ethnocentrism in order to evaluate the current situation and future potentials for climate-driven conflict, crime, terrorism, and ethnocentric extremism. Fresh water supply, in particular, is identified as one of the critical issues at play. As the authors stress, water scarcity has massive knock on impacts on food and energy scarcity, simultaneously impacting human survivability and community economic viability. How climate change impacts (directly and indirectly) on vital resources, such as water, will influence conflict, accelerate migration, enable opportunistic crime and terrorism, and fuel ethnocentric tensions. They conclude that as climate change becomes a major driver of environmental degradation, natural disasters, mass migrations, and urbanization, among the serious negative consequences will be an increase in the exploitation of migrants, more extreme anti-migrant politics, and ultimately more violence against migrants.

Justin Schon and Stephen Nemeth build on this theme and draw attention to the role of rural to urban migration driven by climate change. As they note, estimates are that there will be roughly 150 million people internally displaced due to climate change by 2050 and the consequences of cities failing to incorporate new population influxes are serious. Schon and Nemeth also consider a related trend of potential significance: that an increasing share of the world's population are coming to live near international borders. They sensibly highlight the critical importance of developing policies that can help rural areas adapt through new livelihood strategies and to prepare cities for large population influxes.

Next, the focus of the special issue switches to South Asia. The history of political violence in Bangladesh and its shared border with Northeast India is a long and storied one. In their article Andrea Malji, Laurabell Obana, and Cidney Hopkins argue that with the ever-intensifying impact of climate change, the region's vulnerability to political violence is further accentuated. Approximately 50 percent of the population of Bangladesh is employed in agriculture. With this national reliance on agriculture the competition for farmland is likely to increase due to continued erosion and salinization of fresh water. This reduced availability of, or access to, food, water, and farmland has led to increases in internal and cross-border migration, leading to increased violence. The likelihood of further violent escalation is present across the country. However, urban centres, areas near water, and the border regions are seen as those most at risk of climate conflict.

On their own these are cause for concern. However, recent years has seen the arrival of over one million Rohingya refugees into Cox's Bazar in Eastern Bangladesh, near the border with Myanmar, one of the most vulnerable areas to climate hazards as a result of its coastal proximity. Malji et al.'s analysis demonstrates a marked increase in violence in the region since the arrival of hundreds of thousands of Rohingya at the end of 2017. Many of these acts of violence are targeted attacks on the Rohingya refugees, and these in turn have been exploited by Al Qaeda in the Indian Subcontinent and others to recruit both nationally and internationally.

Tamanna Ashraf, Shlomi Dinar, and Jennifer Veilleux keep the focus on South Asia in their article, this time examining terrorism in the context of fresh water infrastructure in India, Pakistan, and Afghanistan. To a considerable extent, this builds on earlier warnings in the special issue around the extreme importance in how climate change is and will impact on fresh water supply. The authors here are in complete agreement with that concern, and highlight that climate change is adding a serious layer of complexity to the nexus between water resources, political grievances, and violence between state and non-state actors. Climate change is already making access to freshwater sources increasingly unpredictable, representing one of its most sensitive and critical impacts at both global and regional levels. The South Asia case studies described clearly demonstrate how water scarcity and extreme natural events, like floods and droughts, are already increasing socio-political instability in the region,

increasing frustration with governments and feeding into the mobilisation of terrorist groups and their ideologies. Significantly, the research finds that a disparate range of terrorist movements can be agitated and mobilised in these contexts. The article provides evidence that important water infrastructure in these regions are increasingly becoming hot spots for violence between states and non-state actors. Ominously, these are trends likely to be replicated in many parts of the world.

One potentially surprising trend to emerge in the special issue is the extent to which climate change is already linked with right wing extremism. This is increasingly being labelled in terms of “eco-fascism,” a nebulous but growing strand of right-wing extremism. This strand first started attracting attention following two extreme right-wing attacks in 2019, first in Christchurch, New Zealand and later in the year in El Paso, Texas. In both cases, the perpetrators published manifestos online before each attack with both partly expounding environmental themes and describing themselves as an “eco-fascists.” The high-profile nature of both attacks helped eco-fascism to gain traction within some quarters of the wider far-right biosphere (though it is worth noting that many far-right strands reject the eco-fascist narrative).

The rising prominence of eco-fascist narratives thus provides some explanation for the presence of two articles in the special issue that examine different elements of this issue. An important emerging debate in our understanding of eco-fascism is the extent to which the ideological framework coalescing around it represents something that is genuinely felt by the perpetrators versus a view that it is little more than an opportunistic lever to exploit wider fears and concerns over the environment to help justify hostility against the far right’s traditional enemies. Both of the articles included in the special issue explore these issues from different perspectives and methodologies. While it is critical to note that the articles agree on some important points—and indeed reach a number of similar conclusions—the two articles can still be partly seen as advocates for somewhat conflicting views, and bring heavy-weight firepower to what is likely to be a notable debate in terrorism studies in the coming years.

Graham Macklin opens with an exploration of the ideological framework espoused by the perpetrators of the Christchurch and El Paso attacks. His article examines how contemporary extreme right groups have reacted to population growth, migration, and climate change and how this has fed directly into some branches of extreme right ideology. Macklin takes seriously this ideological framework, arguing that it is having a genuine impact on some sections in the far right. He draws particular attention to the writings and influence of ideologues, such as Savitri Devi, Ted Kaczynski and Pentti Linkola, and concludes that as climate change driven migration northwards to Europe intensifies, the prominence of their ideas will only deepen further within far right milieus.

In a useful follow-on for readers, Brian Hughes, Dave Jones, and Amarnath Amarasingam take a somewhat more sceptical view of the ideological traction of eco-fascism. As with Macklin, their article also explores elements of the 2019 attacks, and note how the manifestos of both the El Paso attacker, Patrick Crusius, and the Christchurch attacker, echoed similar sentiments. They conclude, however, that there is limited ideological or aesthetic grounding to the claims of both terrorists. Using the El Paso attack as an introductory illustration of contemporary ecofascism, Hughes, Jones, and Amarasingham expertly detail the theoretical literature on the topic before presenting their analysis of related data collected from Twitter and Telegram. In contrast (to an extent) to Graham Macklin, they conclude that ecofascism should not be considered as a coherent ideology, or even less so a political movement. Instead, they argue that it needs to be viewed as an imaginary and cultural expression of mystical, anti-humanist Romanticism. To date, ecofascism has not manifested in a coherent movement. However, it has endured through its online presence on outlets, such as Terrorgram, Iron March, and Fascist Forge.

Hughes et al.’s analysis also uses data collected from ecofascist channels and accounts on Telegram and Twitter between 2019 and 2020. Through their analysis of these data, the authors identified the common recurring themes and thinkers within the online ecofascist circles. This research identified that across these platforms the most popular “thinker” is Ted Kaczynski and also support Macklin’s earlier conclusion about the prominence of other notable ideologues.

Their analysis of influential thinkers is followed by an examination of imagery utilised in the identified postings, which demonstrates the juxtaposition of calls to return to or protection of nature with white supremacist iconography. While there is imagery of visually appealing topography, and megafauna, Hughes et al. found a notable disregard for climate change and its impact on the natural world. This can be attributed to the association of climate change with left-wing politics and ecofascism's rejection of globalisation through their politics of localism. Through their research Hughes et al. demonstrate our need to understand the thinkers and imagery which can, and has, influenced those who self-describe as eco-fascist. While the eco-fascist threat may not have taken hold as a persistent movement yet, there is clear demonstration of the potential threat which it poses.

Overall, the growing threat from the far right in many regions has been one of the most significant terrorism trends over the last decade. In the United States, for example, the most acute threat of domestic political violence certainly now comes from the far right. When considering this threat, it is natural look at the January 6th attacks on the U.S. Capitol in 2021, and the preceding right-wing violence during the Trump presidency. However, contemporary right-wing political violence in the US has a much longer history than this. In their article, Arie Perliger and Mengyan Liu analyse data on over 5,500 instances of right-wing violence between 1990 and 2017. Alongside this they analysed 470 incidents of violent environmental activism in the U.S. between 1976 and 2019. Through their analyses they assess the impact that environmental events have had on these forms of political violence in the United States.

While acknowledging the importance of broader political and demographic factors their research presents some thought-provoking findings. When considering both of these forms of political violence there is a higher prevalence of violence during warmer seasons and extreme warming weather events, such as heat waves. Alongside this there was a strong linkage found between man-made ecological damage, as opposed to natural disaster, and the prevalence of eco-violence incidents. This was most prominent in states with a progressive-liberal culture and high levels of ecological exploitation. This is highlighted by the cases of Washington State, California, and Oregon. While acknowledging the need for further research on this topic their findings demonstrate the necessity of developing our regionally specific understanding of the impact that extreme weather can have on all forms of political violence.

For its conclusion, the special issue steps away from a focus on the far right, and instead re-orientates to consider some of the potential impacts of climate change on left-wing terrorism. As Ashton Kingdon and Briony Gray correctly point out, most of the research on the potential links between terrorism and climate change to date have focused on jihadist groups or far right extremism. In contrast, left-wing movements have been largely ignored. Seeking to address that gap, Kingdon and Gray analyse three case studies of three left-wing insurgent movements: FARC in Colombia, the Shining Path in Peru and Naxalism in India. Their article reveals a range of complex issues, which can underlie climate disasters—such as deforestation, rising sea levels, extreme weather, glacial retreat, drought, famine, water scarcity, and migration—and how these have impacted on left-wing terrorist recruitment and activity. Their assessment that adverse environmental situations have already frequently contributed to the rise and endorsement of left-wing terrorist organisations is a sobering one, particularly in anticipation of increasing environmental crises in the coming decades.

Environmental extremism and climate change: Wherefore art thou?

If one potential surprise of the special issue was an unexpected surfeit of attention focused on the links between climate change and right wing extremism, for some, another may have been the lack of attention focused on climate change and environmental extremism. Climate change has provoked protest activism in many countries and there has been some speculation that this may have the potential to spill over into extremism and terrorism. However, over the time that we developed this special issue and advertised various call for papers, there were no expressions of interest from anyone wanting to write on the topic of environmental extremism or climate activism. In contrast, the major finding from research to date is that climate change's major impacts on terrorism are through its

potential to fuel and exacerbate already significant drivers of political violence. Eco-terrorism, however, has never been a major branch of terrorist violence and over the past 40 years eco-terrorism and environmental extremism have been relatively fringe forms of terrorism. The Global Terrorism Database (GTD), for example, records over 200,000 terrorist incidents since 1970 and barely 0.1% of those were carried out by a group or individual motivated by an environmentally related ideology. Added to this, environmentally motivated terrorism has been a particularly non-lethal form of terrorism. 49.2 percent of all terrorism incidents recorded in the GTD resulted in fatalities. In contrast, just 0.7 percent of the environmentally motivated terrorist incidents in the GTD resulted in at least one fatality. Eco-terrorist attacks are 70 times less likely to result in a death compared to the average GTD terrorist incident. Given that most eco-terrorism attacks involve the use of incendiary or explosive devices the extremely low number of deaths clearly reflects a long-running commitment by the vast majority of eco-terrorists to avoid bloodshed.

Traditionally, the threat posed by environmental extremism has been an eclectic one. “Environmentalism” encompasses a wide range of (sometimes very different) issues. These have included campaigns focused on the protection of the natural environment and natural resources, or campaigns against the transportation and husbandry of livestock, the use of animals in laboratory testing, the maintenance of nuclear power and nuclear weaponry, the globalisation of corporations, and concerns with third world issues. Increasingly, it can also relate to climate change and global warming. While there are large mainstream campaign groups who involve themselves in all or most of these issues, in terms of extremist activity there is instead a tendency for groups and individuals to focus on just one issue. What exists is often a shared cultural and ideological background but with an absence of overarching organisational structures and often quite separate networks and affiliations.

While climate change certainly has a potentially strong ideological resonance with some environmentally motivated terrorism, to date this has not translated into a noticeable increase in attacks from this sector. On the contrary, there is evidence that environmentally motivated terrorism has actually *declined* over the past twenty years. Figure 1 below shows that there were 291 environmentally motivated terrorist incidents between 1975 and 2019.⁸ Across this extensive time period only eight years saw ten or more reported attacks motivated by environmental extremism internationally. The “peak” era for environmentally motivated terrorist attacks occurred in a five-year period between 1999 and 2003. However, even during this relative peak of activity there were at most only twenty-seven attacks recorded in an individual year. Attacks declined substantially following this, and there is

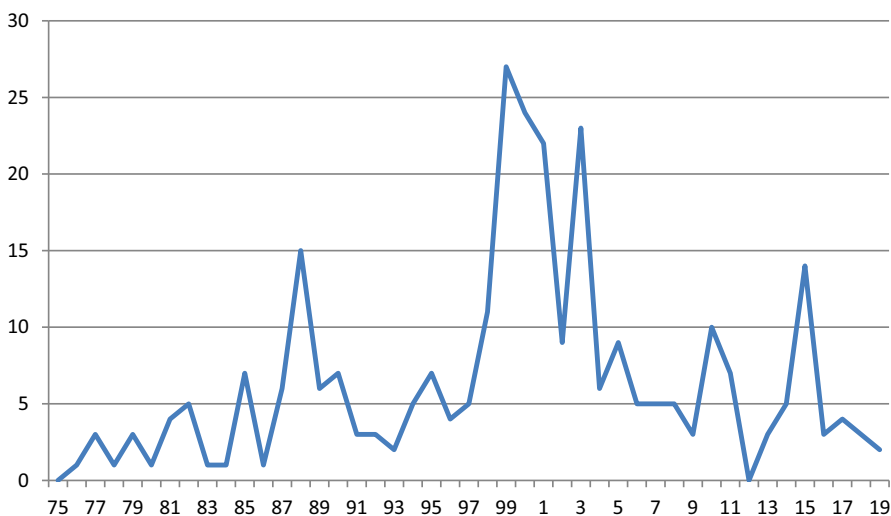


Figure 1. Number of environmentally motivated terrorist attacks 1975–2019.

no sense in the data that wider growing concerns about climate change are so far leading to a growth in eco-terrorism. Given this overall context, the lack of focus on environmentally motivated terrorism among the papers in the special issue becomes more understandable.

Before dismissing the level of eco-terrorism a couple of issues are worth bearing in mind. First, it should be recognised that many (and probably the vast majority) of acts of violence or vandalism carried out by environmentally motivated extremists will not meet the threshold criteria to be classed as terrorism. For example, in 1999 animal rights extremists are believed to have carried out over 1,200 fire bombings, acts of vandalism and physical assaults in the U.K. and caused at least £2.6 million worth of damage to property.⁹ The GTD, however, records no incidents at all carried out by environmentally motivated extremists for the U.K. for that year. Second, we may face an emerging challenge going forward in telling traditional environmentally motivated extremism apart from some new forms of far right extremism. For example, in October 2019 an arson attack was carried out on a mink farm in Sweden. As an attack methodology, this was very typical of many previous animal rights arson attacks, though in this case the perpetrators were right wing extremists who had been inspired by eco-fascist ideas.¹⁰

Though the data suggests that environmental terrorism linked to climate change is not currently a substantial or even growing problem, what does seem clear is that there is a significant amount of concern in many government, policy, and counterterrorism practitioner communities that it *could* become one. This has been clearly demonstrated by recent experiences in the U.K. In late 2019 and early 2020, for example, it emerged that environmentally motivated campaign and protest groups, including long-established mainstream organisations such as Greenpeace and Sea Shepherd, as well as more recent protest groups such as Extinction Rebellion, were being included as organisations of concern in counterterrorism briefing material produced by a number of U.K. police forces.¹¹ This material was typically produced and published as part of the U.K. Prevent counterterrorism strategy, which has an overall aim to “safeguard and support those vulnerable to radicalisation, [and] to stop them from becoming terrorists or supporting terrorism.”¹²

The inclusion of Greenpeace and Extinction Rebellion in the Prevent material, alongside Islamist groups, such as Al Qaeda and Islamic State and extreme right wing and neo-Nazi groups, such as Combat 18, inevitably gave a clear perception that the environmentally motivated groups were seen by the authorities as extremist organisations with potential links to terrorism. However, when news of the inclusion of the environmental groups in the Prevent literature broke in the U.K.'s mainstream media, the relevant police forces soon backtracked, recalling the material and issuing statements that they did not view Greenpeace, Extinction Rebellion, etc., as extremist groups.¹³

Indications followed, however, that the U.K. government continued to view at least some of the environmentally-motivated groups with caustic eyes. At a speech to senior police officers in September 2020, the Home Secretary, Priti Patel, singled out Extinction Rebellion as “criminals” and an “emerging threat” who “must be stopped.”¹⁴ Also that month, government briefings to the media suggested Extinction Rebellion should or could be classified as an “organised crime group.” Such enmity would eventually crystallise more firmly within the Police, Crime, Sentencing and Courts Bill which at the time of writing the U.K. government is attempting to pass into law. Among a range of measures proposed, the Bill explicitly targets many of the tactics strongly associated with Extinction Rebellion (and related groups) including criminalising the use of glue or other measures to “lock on” to another person or object during a protest. The Bill also proposes to increase police powers in relation to preventing and controlling protests, lowers the criteria on which behaviour can be assessed as criminal, and increases prison sentences for those convicted of such offences. Already in 2021, at least eighteen climate protestors were imprisoned in the U.K. as a result of involvement in protests and the Police Crime, Sentencing, and Courts Bill offers the potential for a significant increase on such numbers.¹⁵

Concerns have been raised in some quarters that if the government seriously restricts or prevents what are currently legitimate protest practices, that this will have the potential to encourage some activists to adopt more extreme violent methods “given the severe consequences for even minor nonviolent

activity.”¹⁶ Overall, it is worth noting that the U.K. government approach has attracted fierce criticism from a range of sources and there is some evidence that the government is arguably out of step with wider public attitudes, as evidenced by a number of recent acquittals in criminal cases where environmental protestors have been found not guilty by juries.¹⁷ In these cases, the protestors have not denied that they committed the offences they were charged with, but have instead argued that the acts were morally justified by the cause. Crucially, this defence has been accepted by some juries who have refused to find them guilty. These cases illustrate a general point that the majority of the population in the U.K. (and many other countries) often feel a significant degree of sympathy and empathy with environmental activists. The Police, Crime, Sentencing, and Courts Bill has also faced stiff resistance, with many of the specific protest-related measures being defeated repeatedly within the House of Lords. The result is that it is far from certain that the more hard-line measures desired by the government will eventually make it into law, though they do reflect the current hostile government perspective on climate protestors.

Conclusions

Ultimately, we must continue to strive to develop our understanding of the causes of terrorism, alongside the knowledge of what exacerbates it. At the moment, we are seeing a gradual awakening to the potential role that climate change can play in terrorist conflicts and a growing recognition that major problems lie ahead. A lack of a good research and data is currently the biggest obstacle we face in assessing the relationship between climate change and terrorism. The hope is that this special issue will help to start addressing this blind-spot and we argue that going forward, researchers and policy-makers will need to work together to understand how climate change can impact on the threat of terrorism and what will really work when we think about mitigation in such contexts.

We hope that this special issue will provide a useful introduction to this critical area and flag how the potential interactions between climate change and terrorism are complex and that our approach to understanding these interactions needs to be sophisticated. Our understanding of what causes terrorism has transformed over the past ten years, benefiting enormously from a wealth of fresh data-led research. In many areas, we have a clearer understanding of the range of factors connected to terrorism and how they can interact to increase risk. Work continues, and it is very likely that the coming years will allow us to refine our insights further, particularly with regard to the micro factors connected to radicalisation. Important questions remain to be addressed and in particular we now need greater understanding around the impact of emerging concerns such as climate change.

Further research is an essential foundation. Consideration needs to be given to a wide range of issues. Next steps should include efforts to scope out the research questions most relevant to the continued exploration of the impact of climate change on terrorism. Dialogue and engagement on these issues needs to be developed further within terrorism studies. Thinking within the field is still in its very early stages. In order to develop a more coherent strategic approach, this needs to be stimulated and facilitated in order to increase awareness and create momentum for research and knowledge generation.

Linked to this, the research community will have an important role to play in increasing wider awareness of how climate change can impact on terrorism risk. Climate change is rightly already widely recognised as a major issue for governments and societies, though not in relation to how it can impact on terrorism. Going forward, we can do much to improve risk awareness with regard to the terrorism impacts of climate change, and to facilitate informed advice and guidance on mitigation and adaptation within a terrorism context.

Disclosure statement

No potential conflict of interest was reported by the authors.

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8. Two hundred and seventy-six incidents were recorded in the GTD connected to environmentally motivated terrorism. Fifteen additional incidents connected to Theodore Kaczynski bring the total to 291. The GTD incidents were identified through the search term “environmentalist” as well as the following list of specific perpetrator group names:
 1. Animal Rights Militia
 2. Animal Defense League
 3. Animal Liberation Front (ALF)
 4. Angry Foxes Cell
 5. Coalition to Save the Preserves (CSP)
 6. Commandos Against Self Destruction of the Universe
 7. Committee of action against bull fights
 8. Coordination of Anti-atomic Power Plant Saboteurs
 9. Dark Harvest
 10. Earth First!
 11. Earth Liberation Front (ELF)
 12. Earth Night Action Group
 13. Ecology and Antinuclear Revolutionary Party (CRAE)
 14. Ecosocialist Forces
 15. Environmental Life Force
 16. Evan Mecham Eco-Terrorist International Conspiracy
 17. Farm Animal Revenge Militia (FARM)
 18. Fighting Ecologist Movement
 19. Individuals Tending Toward Savagery
 20. Initiative de Resistance Internationaliste
 21. Militant Forces Against Huntingdon
 22. Pacifist and Ecologist Committee
 23. Pagan Sect of the Mountain

24. Party for Democracy anti-nuclear-test protesters
 25. Peace Conquerors
 26. People's Brigade For A Healthy Genetic Future
 27. Provisional RSPCA
 28. Revenge of the Trees
 29. Revolutionary Cells-Animal Liberation Brigade
 30. Sea Shepherd Conservation Society
 31. The Justice Department.
9. BBC News, "Animal Rights, Terror Tactics," August 30, 2000, http://news.bbc.co.uk/1/hi/english/uk/newsid_902000/902751.stm.
 10. https://www.europol.europa.eu/cms/sites/default/files/documents/tesat_2021_0.pdf.
 11. <https://www.theguardian.com/uk-news/2020/jan/17/greenpeace-included-with-neo-nazis-on-uk-counter-terror-list>.
 12. HM Government, *CONTEST: The United Kingdom's Strategy for Countering Terrorism* (London: Her Majesty's Stationery Office, 2018), 10, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/716907/140618_CCS207_CCS0218929798-1_CONTEST_3.0_WEB.pdf.
 13. <https://www.theguardian.com/uk-news/2020/jan/10/xr-extinction-rebellion-listed-extremist-ideology-police-prevent-scheme-guidance>.
 14. <https://www.theguardian.com/environment/2020/sep/08/extinction-rebellion-criminals-threaten-uks-way-of-life-says-priti-patel>.
 15. <https://www.theguardian.com/environment/2021/dec/28/at-least-18-peaceful-environmental-protesters-jailed-in-uk-this-year>.
 16. <https://www.theguardian.com/uk-news/2022/jan/15/psychiatrists-warn-of-police-and-bills-impact-on-young-people>.
 17. <https://www.theguardian.com/uk-news/2021/dec/10/jury-clears-extinction-rebellion-activists-who-targeted-commuters>.