Climate Change, Environmental Terrorism, Eco-Terrorism and Emerging Threats

Paola Andrea Spadaro
University of Buenos Aires, Faculty of Economics, paolaspadaro@yahoo.com.au

Climate Change, Environmental Terrorism, Eco-Terrorism and Emerging Threats

Abstract

The footprint of human advancement has accelerated a climate variability with no precedents, further driving devastating natural and social events. The decrease in basic resources like water, has already been identified as a driver of violent conflicts, which have given way to the strengthening of terrorist organizations that used the environment as a tool of coercion. The damage caused to the earth's ecosystem has additionally raised a wave of defensive activism that was initially considered as eco-terrorism. While the original eco-movements had not induced fatalities, recent extremist organizations are showing a more violent anti-progress and pro-environment agenda. Added to these, the response of the states against environmental activism initiatives, has spiked some concerns over the repression of civil liberties, which may have the potential to fuel the angering of extreme individuals, who can be prompted to take radicalized action. Using open source data, this article shows that environmental terrorism represents an increasing security threat, which in the future, might be worsened by the individual radicalization of marginalized environmental extremists.

Acknowledgements

Introduction

The evolution of human civilization has come at the expense of the natural world. The unsustainable exploitation of natural resources and modern humans' creation of scarcity have unleashed unprecedented climate variability and ecosystems collapse.[1] As humans compete for increasingly limited recourses, there is now a broader consensus that the effects of climate change will contribute with an increase in internal conflicts.[2] This could resonate with the Malthusian discourse, which states that the weight of population will be greater than the power of the environment to produce sustainable resources.[3] In such scenario, the shortages of water, food, or land could fuel internal fights and political violence.[4] The effects of climate change are effectively driving mass migration of climate refugees, which together with the escalation of internal conflicts are largely favoring terrorism activities.[5] This appears to be setting seeding grounds for terrorists' development, nurturing a feedback loop of increased environmental insecurity followed by an intensification in the security threat of these actors.[6]

In response to States' climate inaction and animal rights, a movement of civil activism has arose in recent years, which engaged in radical practices that have been termed as eco-terrorism.[7] These environmental extremists have been associated with organizations as the Earth Liberation Front (ELF) and the Animal Liberation Front (ALF), whose actions da Silva and Liddick linked to an eco-terrorism wave.[8] As these groups do not generally seek harming human life, but only property, which they consider as ecologically destructive, their actions align more with those of ecotage that is violence against inanimate objects and not directly with terrorism.[9] Many have argued therefore, that while the activities of these groups matched illegal behaviors as sabotage, arson or trespassing, their intentions significantly differed with those of terrorism.[10] Yet, they have been considered terrorists due to the uncritical acceptance of the term eco-terrorism, and its application to these kinds of illegal activities.[11]

On the other hand, the rise of organizations with more radical agendas, such as the Individualities Towards the Savagery (ITS), which disregards human life and holds violent ideologies against progress and technologies, may challenge that proposition.[12] As more developed democracies are moving towards considering environmentalists as a security threat, there are concerns about an increased state led oppression of civil liberties against climate change activists.[13] These

58

policies can prompt further popular discontent and push the most extreme activists towards radicalized movements such as the ITS.

Most international organizations, as the United Nations, the European Community, and the G7, have come now to recognize the effects of climate change as a security threat.[14] The United States National Security Strategy report of 2014, had already acknowledged that climate change was going to be a catalyst for political violence and a general security threat multiplier.[15] In line with those concerns, groups such as the Islamic State of Iraq and Syria (ISIS) for example, have already shown their capacity to leverage the environment, by targeting water resources as tools to manipulate the population.[16] Therefore, the tactics used by ISIS in Syria and Iraq, where they target the environment to induce fear for political goals, represents another example of environmental terrorism.

It follows, that climate change has been linked to two different forms of terrorism. First, eco-terrorism, where individuals used violence against properties and civil rights in defense of the environment or to direct changes in environmental policy. Second, environmental terrorism, where the destruction of the environment, either through war or acts of terror, was used to exert fear in the population to achieve organizational aims.

Using publicly available data, this article examined the basic evidence for links between climate stress and terrorism. The existence of an eco-terrorism movement and the strategic use of environmental resources by already stablished terrorist organizations were explored. This article concludes that there is not enough evidence to claim the existence of a current threat of eco-terrorism; however, extreme groups such as the ITS may be of concern. There is instead a more consistent body of literature exposing that stressed resources, and increased conflicts due to climate change, provide terrorists with the opportunity to develop new strategies and to extend grounds for recruitment. This would be in line with the current development of environment terrorism. Additionally, the states' increasing repression on environmental activism may have the potential to trigger these actors into a radicalized stage that could eventually develop in a violent anti-progress extremism.

The Links between Climate Change and Terrorism

Climate Change and its Environmental Effects

In about 200 years, the human population grew from just over 1 billion to nearly 8 billion (Figure 1-A), and most of this growth was placed in urban areas (Figure 1-B).[17] While the yearly population change slowed down from the late 80s onward (Figure 1-A), people density per square kilometer has continued to climb during the same period (Figure 1-B).[18] The footprint of these trends followed by a considerable increase in the average carbon dioxide concentrations in the atmosphere, particularly from the 1960s onward (Figure 1-C).[19] Similarly, a marked temperature rise, for both, land and oceans, were noted since 1980 (Figure 1-D).[20]

Figure 1. Population Trends and Greenhouse Gas Emissions and Temperature Change.
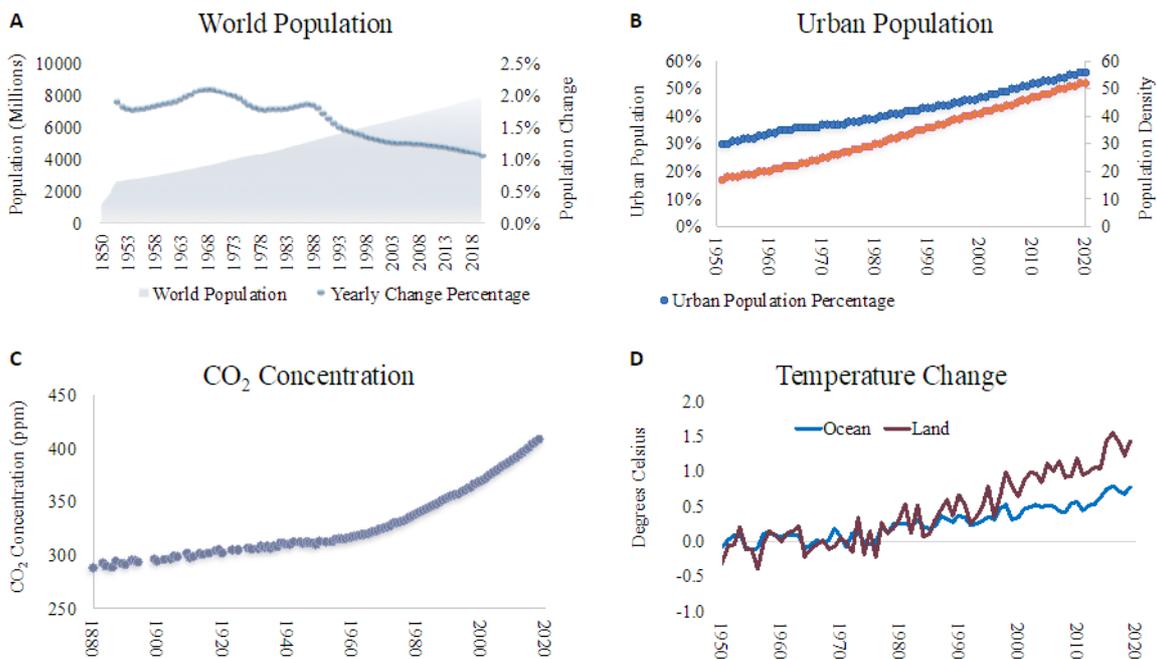
A) Source: Data from Worldometer information website (2020).[21] Note: Over the last 170 years, the world population has increased from about 1 billion to close to 8 billion people. However, the annual rate of increase has been in decline since the end of the 60s. B) Source: Data from Worldometer information website (2020).[22] Note: Over the last 70 years, people have increasingly chosen to live in urban areas, where there has been a rise in population density per square kilometer. C) Source: Data from Global Monitoring Laboratory, by Pieter Tans, NOAA/GML (www.esrl.noaa.gov/gmd/ccgg/trends/) and Ralph Keeling, Scripps Institution of Oceanography (scrippsco2.ucsd.edu/).[23] Note: There has been a trend of increase in the average emissions of carbon dioxide since the begging of the past century, which has intensified from 1950 onwards. D) Source:

60

Data from NOAA National Centers for Environmental information, Climate at a Glance: Global Time Series. https://www.ncdc.noaa.gov/cag/global/time-series/globe/land_ocean/ytd/12/1880-2019.[24] Note: Both land and ocean water temperatures, have risen considerably since the late 70s, were the land temperature has shown a sharper increase of close to 2 degrees Celsius since then.

The changes in temperature and human activities, are placing an unsustainable pressure on natural resources, amongst which, water is the absolute irreplaceable element for human survival. Over the last century, the sheer volume of human water usage, has contributed with an exacerbated trend of fresh water consumption (Figure 2-A).[25] Renewable internal flow, including river water flows and groundwater from rainfall represents a good indicator of water security and scarcity in relation to population measures.[26] Recent reports show that the per capita availability of renewable freshwater resources has fallen sharply since the 1960s (Figure 2-A), sending regions such as North Africa, Middle East and South Asia into extremely high levels of water stress.[27] Data collected by the Pacific Institute Project on the world's water resources conflicts, further exposes a sharp increase in the number of conflicts in recent years, which doubled in the last decade compared to the previous one (Figure 2-B).[28] The vast majority of the conflicts that took place from 2010 to 2019 were located in Western Asia, Sub-Saharan Africa, and Southern Asia (totalizing over 70 percent of all conflicts).[29]

Figure 2. Water Resources and Related Conflicts.
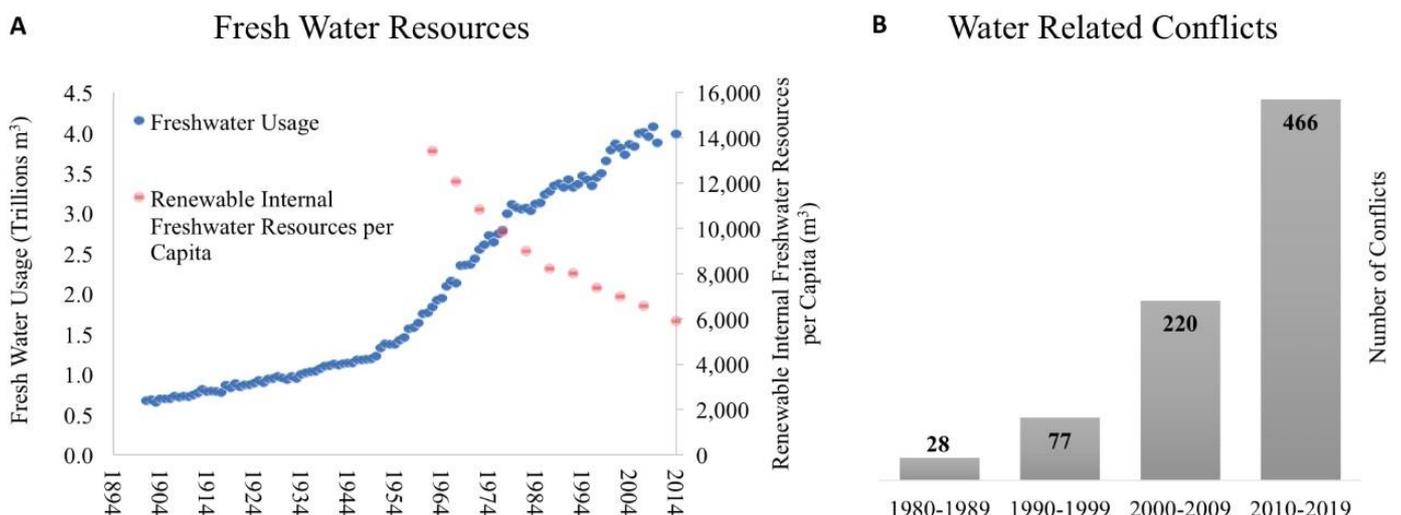
A) Source: Data from Hannah Ritchie and Max Roser, "Water Use and Stress," *Published online at OurWorldInData.org,* 2017, first published in 2015, revised July 2018. https://ourworldindata.org/water-use-stress.[30] Note: Worldwide fresh water

use has increased sharply for the last 100 years, and this has been followed by a strong decline in renewable internal freshwater resources. B) Source: Pacific Institute. 2019. The Water Conflict Chronology. Oakland, California. https://www.worldwater.org/water-conflict/.[31] Note: The number of water related conflicts has more than doubled over the last decade, as compared with the previous one, overall exposing a strong trend of increase since 1980.

These environmental changes are triggering a negative chain effect, given by, for example,

- The rise in the ocean temperature and CO_2 precipitations, are driving an increased concentration of carbon dioxide per volume water, at such an unprecedented pace that is resulting in the acidification of the oceans and is affecting its ecosystems.[32]
- Ocean water temperature rise has also been demonstrated to decrease fisheries availability, which, if not managed, can alter the marine food-web supply.[33] The upsurge in temperatures will additionally contribute to ocean's surface water evaporation, altering the overall water cycle and further influencing fresh water evaporation patterns.[34]
- Drier environments, combined with anthropogenic deforestation will increase the likelihood of weakened forests resilience to climate stress.[35]
- Crop production of major commodities as wheat and maize were previously shown to be sensitive to climate change, and crops decline in some regions can offset the increase in yields normally achieved through technological advancements and fertilizers.[36]
- Extreme weather events will drive a risk escalation and uncertainty in global food systems, where food inequality and insecurity will likely increase; affecting more on countries that are already suffering hunger.[37]

Overall, climate change leads to a fragility risk profile that comprises local resources competition, livelihood insecurity and migration, extreme weather disasters, volatile food prices and provision, transboundary water management, sea-level rise and costal degradation and unintended effects of climate policies.[38] Should such events continue to unfold, they will have the potential to drive humankind into a competition for resources, which will affect the overall security environment. Left uncontrolled, this could set the grounds for the development of climate change linked-terrorism.

Environmental-Linked Terrorism

62

During the Gulf War in 1991, the Iraqi forces led to large oil spills in the Persian Gulf and the torching and sabotaging of multiple oil wells that prompted significant smoke and oily clouds that obscured the area for days.[39] Then president George Bush soon classified these acts as environmental terrorism.[40] More generally, they denoted a methodical military strategy in disrupting the environment to use it as tool of war, which was more akin to an environmental warfare.[41] The events nonetheless, sparked a debate within the already contested conceptualization of terrorism, as to define which actions could be considered in the realm of environmental terrorism.[42]

While there are still many arguments around defining terrorism, a general view is that terrorism requires a "deliberate use or threat to use violence against civilians in order to attain political, ideological, or religious aims."[43] In line with this take, it was outlined that the objectives of terrorism are directed to coerce a political course of action, whereas its means always include "the use or threat of use of violence… that is directed at a symbolic target."[44] What differentiate terrorism from other forms of violence, is the fear of that symbolic violence against the larger population.[45] Thereafter, environmental terrorism takes place when the symbolic violence disrupts the environment.[46]

In consequence, environmental terrorism requires an intentional act, or threat, of violence directly against the environment, through either war or terror. Such violence creates indiscriminate fear, due to the pernicious consequences of the destruction of the environment, which will eventually cause direct harm to the population. Lastly, the overall objective of the attacks is to force political decisions.

The Threat of Eco-Terrorism

The debate over the classification of environmental terrorism soon turned into the construction of an eco-terrorism threat. The Animal and Earth Liberation Movement (AELM), which included several environmentalists and animal's rights groups, came to be considered part of a so-called eco-terrorism surge.[47] The Animal Liberation Front (ALF) and the Earth Liberation Front (ELF) appeared to be the most distinctive organizations in this movement.

The ELF may represent a blend of anarchists and apocalyptic extremists whose philosophies are rooted in Marxism, socialism,

feminism, postmodernism and Eastern religions, and who strived for the end of modern civilization.[48] The organization's views were further linked to the likes of Theodore Kaczynski, and it was signaled as a threat to nuclear facilities.[49] The ALF instead, drifted from groups such as Greenpeace and was more concerned with animal rights issues, but was considered to act in solidarity with the ELF.[50] Both groups were further argued as the main drivers of an overlooked wave of Eco-Terrorism threat, which extended from 1980 to 2012.[51] It was also suggested, that organizations such as the ELF and the ALF could be equated to Al-Qaeda and ISIS ideological war, which were matched by a cult of nature and antagonizing stand against western democracies based on a "bi-centric vision with equally violent means."[52] The Global Terrorism Database (GTD) produced by the National Consortium for the Study of Terrorism and Responses to Terrorism (START), University of Maryland, contains records of worldwide terrorist events since 1970.[53] From that dataset, it becomes apparent that the comparison might not be as linear, considering that both, Al-Qaeda, and its affiliates and ISIS, lunched a total 8,445 attacks causing at least 54,164 deaths from 1992 to 2018.[54] Yet, such narratives propelled a strong official countering intelligence response in the United States, which eventually suffocated these movements.[55]

For others, these groups were considered part of a movement of movement that pursued the defense of the environment and animal rights by committing crimes of economic sabotage, but who rejected violence against individuals and did not intend to provoke a sense of fear.[56] In this view, the modus operandi and history of behavior of the ELF for example, was wrongly interpreted as eco-terrorism, as it only amounted to an unlawful form of political militancy.[57] It was further stated that the coining of the term ecoterrorism itself, was unjustly built in the United States through by private corporative lobbies, mass media bias, and global warming deniers, which overall staged a vilification of radical environmentalists and permeated the government response.[58] From all of the ALF and ELF incidents noted from 1979 to 2010, none resulted in physical injuries or fatalities, and yet they were met with a strong intelligence joint task force and a counter-terrorism strategy that was largely led by the U.S. Federal Bureau of Intelligence (FBI).[59]

The GTD data verifies the activity of the organizations involved in the eco-terrorism movement (Figure 3).[60] The ALF has allegedly claimed a recent number of vandalism acts in the United States.[61]

Notwithstanding those claims, the latest attacks recorded by the GTD, were in 2016, and 2015 for the ELF (Figure 3).[62] The two groups combined launched 189 attacks from 1984 to 2016, but those attacks did not provoke any fatalities.[63] This justifies the debate that the acts performed by these kinds of groups relate to illegal activities against property such as vandalism, sabotage, or trespassing, which may not directly equate to acts of terrorism.[64] However, the broadening of the concept of domestic terrorism by the FBI in 2002, which included attacks on property, and the uncritical acceptance of the term eco-terrorism instead of ecotage, led to the treatment of these environmental activists as terrorists.[65]

Other organizations related to the ALEM movement, however, have shown to adopt creeds that are violent. The Justice Department (JD), a group that resonated in 1999 with 14 attacks (Figure 3), was effectively a splinter from the ALF, but different from the central group, it aspired to utilize violence against people.[66] Whereas the JD went virtually extinct in 2010, the Animals Right Extremists (ARE), a similarly violent organization resurged in 2017 (Figure 3).[67]

A reviving trend for the ARE and the ITS was also recorded in recent years (Figure 3). The ITS has already caused 37 deaths since 2011, and together with the ARE, they remain the only extreme environmentalism organizations to have ever caused casualties.[68] This already suggests that these actors may pose a different threat as that of the original ALEM movement.

Originated in Mexico in 2011, the ITS was part of an international eco-anarchist movement, which had a violent profile and an inclination to use low reach bombs against pro-nuclear lobbies and scientists.[69] Inspired by winds of eco-fascism and the Ted Kaczynski's manifests, the ITS openly declared its decision to take violent action against people that were advancing technology and destroying the wilderness.[70] The group continues to pledge for indiscriminate violence against progress, and while is now active in Chile and Mexico, it has recently claimed responsibility for attacks in Greece.[71]

The Deep Green Resistance (DGR) is another young organization holding radical anti-civilization - anti-progress agendas that is also rapidly expanding.[72] Its methodical strategic plan, and its tendency towards violence, have catapulted this green-anarchist group, together

with the ITS, as a worrying bioterrorism threat.[73] However, this organization does not register attacks on the GTD.

Figure 3. Terrorist Attacks Linked to the Eco-Terrorism Movement.
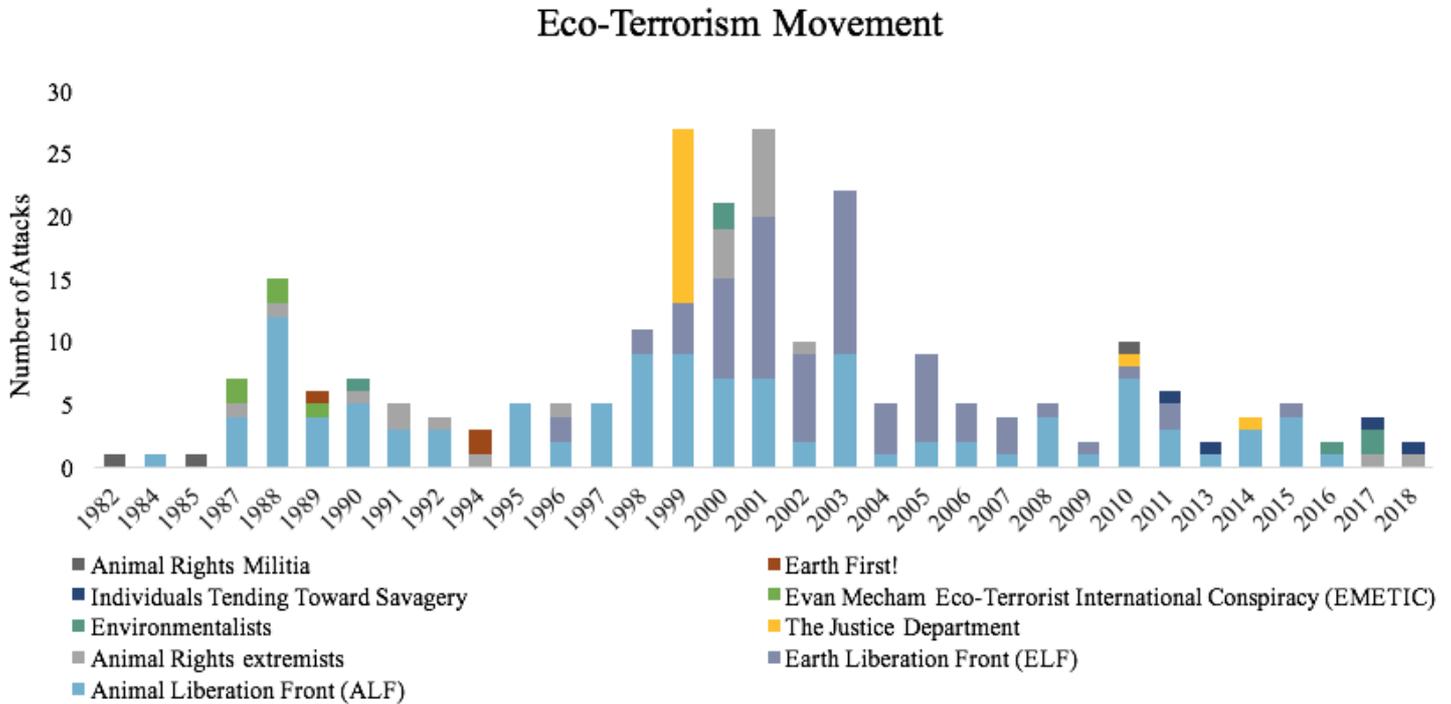
Source: Data from Global Terrorism Database, (GTD, 2019), START, University of Maryland. https://www.start.umd.edu/gtd/.[74] Note: The groups included within the Eco-Terrorism movement showed a heightened activity during the years 1998 to 2005, but showed a significantly lower number of attacks for the last five years. (The data used for the groups considered, included the words: Environment, Eco, Wild, Earth, Animal and Justice Department, with at least 3 attacks from 1970 to 2018, or at least 1 attack since 2014).

There is also a current increase in extreme right violence, coupled with the rise of groups based on eco-fascists, or anarcho-primitivism views.[75] In attention to this, the coming of an ecologically justified neo-fascism trend, identified as the Avocado Politics, may become a climate change related threat.[76] Under this view, the green rhetoric of climate change and the environmental emergency, may justify an agenda that includes white restricted opportunities, the need for preservation of a perceived superior race, hoarding of the powerful and a justification for exclusion.[77] Considering that the ITS shares some of those views, the momentum could re-ignite a transnational radical movement with the potential to grow into the once trumpeted eco-terrorism threat.

Overall, the movement linked with eco-terrorism has traditionally engaged in illegal acts of ecotage to pursue environmental policy

66

changes. The movement has caused damage to civil rights and properties they considered ecologically destructive, but has not been characterized by targeting the environment, nor any human lives. While the classification of its participants as terrorists might be contested, the development of groups such as the ITS warrants its monitoring.

Looming Threats

The lack of consistency in defining eco-terrorism or environmental terrorism has given oxygen to ill constructed policies and State responses. Other academics seemingly challenged the initial ecoterrorism perceptions nurtured within the United States, and considered ecoterrorism to represent a minority of the actions exerted by radical environmentalists that were not central to the movement's objectives.[78] The Institute for Economic & Peace (IEP), which yearly reviews the Global Terrorism Index based on the GTD records, recognizes only three broad categories of terrorism, namely: Political, nationalist or separatist and religious.[79] The IEP further notes that environmental terrorists are more likely to be affiliated to a specific terrorist group, their activity overlaps with the main types of terrorism, and that they are unlikely to target the loss of life as a main goal.[80]

Yet, the hardening of the state's policies against environmental activists has been re-ignited across the globe, and the increasing influence of international corporations into state powers has further encouraged aggressive expansionist politics at a potential cost for civil rights.[81] This is leaving a diminished capacity for a system of control to private ambitions, which may only encourage radical forms of reactive activism.[82] States are now resonating the term eco-terrorism to avert potential dangerous environmental activism, targeting protestors as terrorists with extreme outcomes for the protection of civil liberties.[83]

For example, at least a dozen of environmental activists were deported back, or denied entry to Poland, in occasion of the 2018 United Nations Climate conference in Katowice, because they were considered a threat to the national security.[84] During 2019, forty-six environmental activists were killed in the Philippines, because these people were categorized as terrorists in light of the anti-terrorism bill passed by the government of Duterte in 2019.[85] This followed the decision of president Duterte in 2018 to place 600 indigenous and environmental right advocates, which included a United Nations special

representative, into a terrorist list.[86] In the United States, corporative lobbies influencing congress members seem to be claiming that environmental militants and indigenous protestors should be treated as terrorists.[87] These lobbies further pushed for the passing of a bill that would curtail these dangerous actions and stop terrorism.[88]

In line with these views, the United Kingdom has recently included Greenpeace and Extinction Rebellion, alongside various extremist right wing groups, in the police counter-terrorism guide used in an anti-radicalization campaigns across the country.[89] While this was seen by some as a sign of a worsened persecution of environmental activists, Australia has engaged in a similar trend including in its 2015 counter-terrorism booklet, examples of environmental activism as a road to radicalization.[90] The UK police have further used reproachable tactics of infiltration and incapacitating protest policing strategies against environmental activists, exposing the inadequacy and exaggerated moniker of domestic extremism opposed to these groups.[91] This is an ominously development which might see the reactions of climate change activists being met with an asymmetrical state response and the repression of civil liberties, all in the name of counter terrorism.

IEP experts have declared that government's inaction and lack of trust in democratic process may see those behind a climate change movement to reach a tipping point and retort to violence.[92] The recent comeback from the ITS, which also visits the lines of the likes of the Freedom Club organization, inspired in Ted Kaczynski legacy, could turn into a beacon for eco-fascist groups.[93] While eco-movements were traditionally linked to the left, in times of an increased threat from right wing activism, these actors can notice the rhetoric of anti-immigration and militarization of resources in response to the climate crisis, and potentially engage in environmental linked-extremism.[94]

Accordingly, this tipping point, could be reached from the left and right extreme of the ideological spectrum. The problem of climate change is therefore a common ground for potentially radicalized individuals from both extremes, who have negative views against progress, technologies, increased population trends, and immigration movements. For some, this tendency may also represent a future risk for the rise of a dangerous ideology identified as bioconservatism.[95]

In times of generalized popular upset, the role of negative climate policies can be of concern. As reviewed by others, dominant groups

68

within a society may have privileged access to resources, a situation that some states may protect by marginalizing minorities.[96] These ostracized members may then engage in violence to restore the discriminative grievance, overall exposing the importance of equality before the law and the protection of civil rights to avoid setting the grounds for domestic terrorism in modern states.[97]

Consequently, increasing state repression and loss of civil rights coupled with the decline in essential resources availability can potentially exacerbate popular turmoil as a last resort against governments' climate inactions. These conflicts can potentially set the grounds for radical individuals to tip the point and trigger a form of ideological terrorism based on an environmental creed. As these individuals target the preservation of the environment, this threat may take a new form of eco-terrorism, where not only property, but also lives could be at risk.

Conflicts and Environmental Terrorism

Climate change and the stress it places in environmental resources, has been linked to conflicts of various nature. For some, this relationship has smaller effects within country-armed conflicts, as compared to other drivers of conflicts.[98] Others have shown that climate stressors are linked to increased opportunity for violence and conflicts in areas of low living standards and poor governance.[99]

However, climate change has now been recognized to fuel greater political instability and conflicts due to resources competition and increasing global insecurity that places the most affected areas at the mercy of insurgencies, organized crime, and terrorism recruitment.[100] In support of that concept, extreme temperature deviations in the Sub-Saharan region have been linked to an increased risk of political violence in the form of protesting and rioting.[101] Similarly, broad temperature increase patters were further correlated to an increased risk of conflicts, and a potential worsening of climate change adaptability.[102]

The resources affected by climate change are multiples, yet the struggle for water, is at the forefront of this race. The lack of water, particularly in already highly stressed areas as Syria, Iraq and Afghanistan, is giving terrorists tactical advantages who, by cutting its supply or contaminating its sources, are employing a form of environmental.[103]

These strategic advantages have been exploded by different terrorist organizations. Al-Shabaab, for example, has moved from a weakened position due to government retaliation, to exert control over water supply chains to the cities, reinstating by these means a demonstration of authority without even holding those cities.[104] The group has learnt that losing its strategic power over water supply points may mean their demise, and therefore it maintains effective control over the rivers surrounding cities and routes of access to fresh water.[105]

The Sahel region of Africa is a hotspot for climate change-linked instability, and it is anticipated to give local terrorist organizations further opportunities for development. Groups such as Boko Haram, Al-Qaeda in the Islamic Maghreb (AQIM), the Movement for Oneness and Jihad in West Africa (MOJWA, also known by its French acronyms, MUJAO) may have an increased prospect to radicalize the population against the states further.[106] This is a prime region for water related conflicts, where for the struggles surrounding the Lake Chad Basin for example, have set climate change consequences as a conflict risk multiplier.[107] Resources insecurity has pushed the northeast region of Nigeria to fall under an extreme risk of famine, and placed 7 million people at emergency levels of food insecurity, rising political grievance, and conflicts over water and land.[108] In such scenarios, Boko Haram has not missed the opportunity to explode the inhabitants around the main river basins and added focal risk factors for the regional hydropower resources.[109]

Temperature changes alone can be a concerning risk for the development of terrorism in some countries within the Sahel. It has been shown that an increase in mean temperatures, particularly in Nigeria, has an incremental effect on the probability of terror events, where by every 1 centigrade increase the likelihood of Islamism terrorism surges by 4 to 6 percent.[110] These authors argued that escalating ethnic/religious heterogeneity is a factor in the surge of violence and conflicts, which in the case of Nigeria; it also increases the State's odds for the occurrence of terror events.[111] These are not issues only linked to Africa. The dawn of the Arab Spring in Syria, has exposed the menace of environmental and provided evidence for the possible security consequences of climate change.

Water scarcity and extended droughts have been cited amongst major factor in driving the political instability that resulted in the Syrian civil war.[112] For years, Syrians were ravaged by droughts and water shortage

that significantly hurt crops yields and destroyed the livelihood of hundreds of thousands of farmers, affecting 1.3million Syrians and leaving other 2 to 3 million living in extreme poverty.[113] The Assad regime did not support the affected areas, mismanaged the water, and cut subsidies to farmers, which led to the internal displacement of rural inhabitants towards the cities, where they were only met with rising unemployment and government neglect.[114] Most of these so-called climate refugees were relegated to the outskirts of cities such as Aleppo and Damascus, or were stablished in Dara, where the pro-democratic movement of the Arab Spring and the uprising against the government started.[115] The civil unrest was followed by a power vacuum that gave room to rise of ISIS, which soon after learnt to use the environment on its favor.[116] During the conflict, ISIS targeted water installations and deviated water flows to exert control over the provision of services, which became a tool of political dominance and a psychological terrorism strategy.[117] In 2014, ISIS extended these strategies to Iraq where the group closed local dams, effectively leaving large areas under draught stress, and threatened the Shiite community with cutting water supply to their regions.[118]

Water stress has not been the only resource to be weaponized by ISIS. The group has also noted the spread of wild fires in already stressed environments as a climate change led strategy.[119] In Syria and Iraq, ISIS has taken advantage of the dry, hot, and windy climate to use extended arson wildfires, driving the destruction of crops and agricultural resources of local farmers.[120] During 2019, ISIS prompted the use of fire in Syria and Iraq to punish the alleged lack of tax payments by regional farmers, and recently, the group used this menace as a propaganda for terror, encouraging its followers to note before them the "millions of acres… to burn."[121] The use of common arson warfare technic at the hands of terrorists, in these increasingly stressed environments, may only turn already extended catastrophic fire seasons in a completely new menace of its own.

The states fragility and natural resources vulnerability, have not escaped the attention of other terrorist groups outside Syria, showing that these may not be isolated events, but an escalating trend in the use of the environment for terrorism.[122] The roadmap to the Yemeni civil war involves a similarly complex web of actors and the setting of proxy wars.[123] In such scenario, for example, increased water scarcity provided tactic advantages to both, the states and non-state operators. Submerged in a conflict since 2015, Yemen has been identified as one

of the most water-stressed countries worldwide, situation that has been aggravated due to failed government policies, increasing climate change pressure and operating actors blocking either its delivery or its access.[124] In fragrant violation of the international laws of war, by 2018, the coalition forces led by Saudi Arabia and the United Arab Emirates attacked the Yemeni civil water and electrical infrastructures more than 100 times. [125] This contributed with a persistent outbreak of cholera, the displacement of 1.3 million people and a health care system collapse.[126] In this ravaged scenario, the Houthi rebels have blockaded the cities under their control, allegedly confiscating water at checkpoints or withholding its access to enemies.[127] Conversely, Al-Qaeda in the Arabian Peninsula (AQAP) implemented a servicing strategy of providing security by refurbishing water wells and mains.[128] Displaced Yemeni individuals further reported that water and energy scarcity started after the conflict began. [129] Water supply then fell under local governments or formalized groups, providing an example of how climate change can relate to conflict-induced resources scarcity, where water can be used as a weapon or a tool of control.[130]

Conflicts and people's marginalization from peace and resources have further become the marks for a spiraling road to terrorism recruitment. The lack of trust in the government to solve the hydrological crisis in Nigeria for instance, has sent people to a journey of frustration and helplessness, which has taken many in the search of alternative livelihoods to join Boko Haram.[131] The negative effects that lowered living conditions due to intensifying droughts can inflict at a personal level have also been shown to influence individual motivations and bolster the likelihood of a personal decision to join political violence.[132] State failure to provide for human security, including basic civil rights and god governance, has equally been linked to the ability of terrorist groups, as Boko Haram, to polarize individuals towards joining their organizations.[133] The areas most affected by extreme weather events and increased scarcity of resources therefore, become vulnerable spots for recruitment, where terrorist groups can offer means of life, economic viability and grievance appeasement.[134]

These precedents demonstrate an increased targeting of the environment to induce fear in the population as to achieve political goals. In such context, attacks to an already challenged environment, characterizes environmental terrorism. The future shaping of this threat may take unpredictable forms as climate change consequences continue to unfold.

Conclusion

Climate change is an associated factor to the increase of violent conflicts and regional destabilization, which may only worsen as temperature continue to rise. The escalating scarcity of basic resources such as water, the increased desertification of agricultural regions, and the overall rise in temperatures have all shown to bolster political instability and state fragility. The link between climate change and terrorism is, now, one defined by the evolution of strategies and the opportunity for recruitment using the environment stress as a form of control. This is a strategy likely to be applied by state and non-state actors alike, and includes the damage of the environment by acts of war or terror, which leads to Environmental terrorism. Eco-terrorism, which traditionally included acts of ecotage in defense of the environment, and the promotion of related environmental policy changes, does not appear to be a current threat. However, environmental activists are being increasingly categorized and targeted as terrorists by well stablished democracies. The exacerbated role of these states may fuel a sense of injustice and desperateness capable of compelling radical individuals to join the likes of the ITS, or to drive themselves a new terrorism threat. This could trigger a security risk effect at the heart of advanced regions, where not yet the scarcity of water, but the loss of civil rights would potentiate the rise of a new form of eco-terrorism. Thereafter, the conditions linked to climate change have provided both, opportunity for environmental terrorism developments in areas of resources scarcity, and a potential platform for new form of terrorism born from extreme anti-progress ideologies.

Endnotes

1 Courtney Work, "Climate Change and Conflict: Global Insecurity and the Road Less Traveled," *Geoforum* 102, (June 2019): 222-225, https://doi.org/10.1016/j.geoforum.2018.11.004.

2 Charlotte Collins, *Climate Change and Global Security: Planning for Potential Conflict* (Washington DC: Climate Institute, 2019), http://climate.org/wp-content/uploads/2019/09/Climate-Change-and-Global-Security-Planning-for-Potential-Conflict.pdf.

3 Thomas Malthus, *An Essay on the Principle of Population* (London: Cambridge University Press. Electronic Scholarly Publishing Project, 1998), 4-12, http://old.esp.org/books/malthus/population/malthus.pdf.

4 Andrew Telford, "A Climate Terrorism Assemblage? Exploring the Politics of Climate Change-Terrorism-Radicalisation Relations," *Political Geography* 79 (2020): 102-150, https://doi.org/10.1016/j.polgeo.2020.102150.

5 Charles B. Strozier and Kelly A. Berkell, "How Climate Change Helped ISIS," *Huffington Post,* November 29 2014, accessed June 22, 2020, https://www.huffpost.com/entry/how-climate-change-helped_b_5903170.

6 Katharina Nett, and Lukas Rüttinger, *Insurgency, Terrorism and Organised Crime in a Warming Climate: Analysing the Links Between Climate Change and Non-*

State Armed Groups (Berlin: Adelphi, 2016), accessed June 1, 2020, https://www.adelphi.de/en/publication/insurgency-terrorism-and-organised-crime-warming-climate.

7 Don Liddick, *Eco-Terrorism: Radical Environmental and Animal Liberation Movements* (California: Greenwood Publishing Group, 2006), 1-21. Bogdan-George Rădulescu, "Eco-Terrorism – Psychological Terror and Destruction for the Glorifying of Mother Nature," Researchgate, March 2020, https://www.researchgate.net/publication/339817119_Eco-terrorism_-_Psychological_terror_and_destruction_for_the_glorifying_of_Mother_Nature.

8 João Raphael da Silva, "The Eco-Terrorist Wave," *Behavioral Sciences of Terrorism and Political Aggression* 12, no. 3 (2020): 203-216, https://doi.org/10.1080/19434472.2019.1680725. Liddick, *Eco-Terrorism*, 1-21.

9 Steve Vanderheiden, "Eco-terrorism or Justified Resistance? Radical Environmentalism and the "War on Terror,"" *Politics & Society* 33, no. 3 (2005): 425-447, https://doi.org/10.1177/0032329205278462.

10 Michael Loadenthal, "Deconstructing "Eco-Terrorism": Rhetoric, Framing and Statecraft as Seen Through the Insight Approach," *Critical Studies on Terrorism* 6, no. 1 (2013): 92-117, https://doi.org/10.1080/17539153.2013.765702.

11 David Thomas Sumner and Lisa M. Weidman, "Eco-terrorism or Ecotage: An Argument for the Proper Frame," *ISLE: Interdisciplinary Studies in Literature and Environment* 20, no. 4 (2013): 855-876, https://doi.org/10.1093/isle/ist086.

12 David Grimm, "Animal Rights Extremists Increasingly Targeting Individuals," *Science*, March 12, 2014, accessed June 17, 2020, https://www.sciencemag.org/news/2014/03/animal-rights-extremists-increasingly-targeting-individuals. "Communiques of ITS," The Anarchist Library, April 27, 2011, accessed June 6, 2020, https://theanarchistlibrary.org/library/individualists-tending-toward-the-wild-communiques.

13 Letta Tayler, Cara Schulte and Katharina Rall, "Targeted: Counterterrorism Measures Take Aim at Environmental Activists," *Human Rights Watch*, November 28, 2019, accessed June 12, 2020, https://www.hrw.org/news/2019/11/28/targeted-counterterrorism-measures-take-aim-environmental-activists. Justine Calma and Paola Rosa Aquino, "The Term 'Eco-Terrorist' is Back and it's Killing Climate Activists," *Grsit,* January 2, 2019, accessed June 12, 2020, https://grist.org/article/the-term-eco-terrorist-is-back-and-its-killing-climate-activists/. Vikram Dodd and Jamie Grierson, "Greenpeace Included with Neo-Nazis on UK Counter-Terror List," *The Guardian*, January 18, 2020, accessed June 12, 2020, https://www.theguardian.com/uk-news/2020/jan/17/greenpeace-included-with-neo-nazis-on-uk-counter-terror-list.

14 Dodd and Grierson, "Greenpeace Included with Neo-Nazis on UK Counter-Terror List."

15 Office of the Director of National Intelligence, *The National Intelligence Strategy of the United States of America, 2014 Report*, Unites States, 2014, accessed May 25, 2020, https://www.dni.gov/files/documents/2014_NIS_Publication.pdf.

16 Marcus DuBois King, "The Weaponization of Water in Syria and Iraq," *The Washington Quarterly* 38, no. 4 (2015): 153-169, https://doi.org/10.1080/0163660X.2015.1125835. Peter H. Gleick, "Water, Drought, Climate Change, and Conflict in Syria," *Weather, Climate, and Society* 6, no. 3 (2014): 331-340, https://doi.org/10.1175/WCAS-D-13-00059.1. Scott Somers, "How Terrorists Leverage Climate Change*," Wilson Center,* September 9, 2019, accessed May 26, 2020, https://www.newsecuritybeat.org/2019/09/terrorists-leverage-climate-change.

17 Data from the Worldometer information website, accessed June 1, 2020, https://www.worldometers.info/world-population/world-population-by-year/.

18 Data from the Worldometer information website, 2020.

19 Data from the Global Monitoring Laboratory. By Pieter Tans, NOAA/GML (www.esrl.noaa.gov/gmd/ccgg/trends/) and Ralph Keeling, Scripps Institution of Oceanography (scrippsco2.ucsd.edu/), accessed May 29, 2020, https://www.esrl.noaa.gov/gmd/ccgg/trends/data.html.

20 Data from the NOAA National Centers for Environmental information, Climate at a Glance: Global Time Series, accessed June 4, 2020,

https://www.ncdc.noaa.gov/cag/global/time-series/globe/land_ocean/ytd/12/1880-2019.

[21] Data from the Worldometer information website, 2020.

[22] Data from the Worldometer information website, 2020.

[23] Data from the Global Monitoring Laboratory. By Pieter Tans, NOAA/GML (www.esrl.noaa.gov/gmd/ccgg/trends/) and Ralph Keeling, Scripps Institution of Oceanography (scrippsco2.ucsd.edu/), accessed May 29, 2020, https://www.esrl.noaa.gov/gmd/ccgg/trends/data.html.

[24] Data from the NOAA National Centers for Environmental information, Climate at a Glance: Global Time Series, accessed June 4, 2020, https://www.ncdc.noaa.gov/cag/global/time-series/globe/land_ocean/ytd/12/1880-2019.

[25] Data from Hannah Ritchie and Max Roser, "Water Use and Stress," *Published online at OurWorldInData.org,* 2017, first published in 2015, revised July 2018, accessed June 4, 2020, https://ourworldindata.org/water-use-stress.

[26] Data from Hannah Ritchie and Max Roser, online at Our World in Data, "Water Use and Stress."

[27] Data from Hannah Ritchie and Max Roser, online at Our World in Data, "Water Use and Stress."

[28] Data from the Pacific Institute, "Water Conflict Chronology," Pacific Institute, Oakland, CA, 2019, accessed June 11, 2020, http://www.worldwater.org/water-conflict/.

[29] Data from the Pacific Institute, "Water Conflict Chronology."

[30] Data from Hannah Ritchie and Max Roser, online at Our World in Data, "Water Use and Stress."

[31] Data from the Pacific Institute, online at Our World in Data, "Water Conflict Chronology."

[32] Scott C. Doney et al., "Ocean Acidification: The Other CO2 Problem," *Annual Review of Marine Science* 1 (2009): 169-192, https://doi.org/10.1146/annurev.marine.010908.163834.

[33] Christopher M. Free et al., "Impacts of historical warming on marine fisheries production," *Science* 363, no. 6430 (2019): 979-983. https://DOI: 10.1126/science.aau1758.

[34] Matthew Collins, Reto Knutti, Julie Arblaster, Jean-Louis Dufresne, Thierry Fichefet, Pierre Friedlingstein, Xuejie Gao et al, "Long-Term Climate Change: Projections, Commitments and Irreversibility," In *Climate Change 2013-The Physical Science Basis: Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, (New York: Cambridge University Press, 2013), 1029-1136, https://researchmgt.monash.edu/ws/portalfiles/portal/154950020/153843133_oa.pdf.

[35] Matthew Collins, Reto Knutti, Julie Arblaster, Jean-Louis Dufresne, Thierry Fichefet, Pierre Friedlingstein, Xuejie Gao et al., "Long-Term Climate Change: Projections, Commitments and Irreversibility," 1029-1136.

[36] David B. Lobell, Wolfram Schlenker, and Justin Costa-Roberts, "Climate Trends and Global Crop Production Since 1980," *Science* 333, no. 6042 (2011): 616-620, http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.978.4631&rep=rep1&type=pdf.

[37] Tim Wheeler, and Joachim Von Braun, "Climate Change Impacts on Global Food Security," *Science* 341, no. 6145 (2013): 508-513, http://DOI: 10.1126/science.1239402.

[38] Lukas Rüttinger et al., *A New Climate for Peace: Taking Action on Climate and Fragility Risks: An Independent Report Commissioned by the G7 Members* (Germany: Adelphi, 2015), https://www.newclimateforpeace.org/#report-top.

[39] Roy Popkin, "Responding to Eco-Terrorism," *U.S. Environmental Protection Agency, EPA Journal*, (July/August 1991), accessed July 6, 2020, https://archive.epa.gov/epa/aboutepa/responding-eco-terrorism.html.

[40] Daniel M. Schwartz, "Environmental Terrorism: Analyzing the Concept," *Journal of Peace Research* 35, no. 4 (1998): 483-496, http://doi.org/10.1177/0022343398035004005.

41 Marc A. Ross, "Environmental Warfare and The Persian Gulf War: Possible Remedies to Combat Intentional Destruction of the Environment," *Dickinson Journal of International Law* 10, no. 3 (1991): 515, https://elibrary.law.psu.edu/cgi/viewcontent.cgi?referer=https://scholar.google.com.au/&httpsredir=1&article=1301&context=psilr.

42 Schwartz, "Environmental Terrorism," 483-496.

43 Boaz Ganor, "Defining Terrorism: is One Man's Terrorist Another Man's Freedom Fighter?," *Police Practice and Research* 3, no. 4 (2002): 287-304. https://doi.org/10.1080/1561426022000032060.

44 Schwartz, "Environmental Terrorism," 483-496.

45 Schwartz, "Environmental Terrorism," 483-496.

46 Schwartz, "Environmental Terrorism," 483-496.

47 Michael Loadenthal, ""Eco-Terrorism": An Incident-Driven History of Attack (1973–2010)." *Journal for the Study of Radicalism* 11, no. 2 (2017): 1-34, https://www.jstor.org/stable/10.14321/jstudradi.11.2.0001.

48 Don Liddick, *Eco-terrorism*, 1-21.

49 Stefan H. Leader, and Peter Probst, "The Earth Liberation Front and Environmental Terrorism," *Terrorism and Political Violence* 15, no. 4 (2003): 37-58, https://doi.org/10.1080/09546550390449872.

50 Leader, and Probst, "The Earth Liberation Front and Environmental Terrorism," 37-58.

51 da Silva, "The Eco-Terrorist Wave," 203-216.

52 Rădulescu, "Eco-terrorism."

53 National Consortium for the Study of Terrorism and Response to Terrorism (START), University of Maryland. The Global Terrorism Database (GTD) [Data File 2019], (2019), October 20, 2020, https://www.start.umd.edu/gtd/.

54 National Consortium for the Study of Terrorism and Response to Terrorism (START), University of Maryland. [GTD. Data File 2019], accessed October 20, 2020, https://www.start.umd.edu/gtd/.

55 Sivan Hirsch-Hoefler and Cas Mudde, ""Ecoterrorism": Terrorist Threat or Political Ploy?," *Studies in Conflict & Terrorism* 37, no. 7 (2014): 586-603, https://doi.org/10.1080/1057610X.2014.913121;

Allen Brown, "The Green Scare," *The Intercept*. March 23, 2019, accessed June 10, 2020, https://theintercept.com/2019/03/23/ecoterrorism-fbi-animal-rights/.

56 Michael Loadenthal, "Eco-Terrorism? Countering Dominant Narratives of Securitisation: A Critical, Quantitative History of the Earth Liberation Front (1996-2009)," *Perspectives on Terrorism* 8, no. 3 (2014): 16-50, https://www.jstor.org/stable/26297171.

57 Loadenthal, "Eco-Terrorism? Countering Dominant Narratives," 16-50.

58 Rebecca K. Smith, "Ecoterrorism: a Critical Analysis of the Vilification of Radical Environmental Activists as Terrorists," *Environmental Law* 38 (2008): 537, https://cldc.org/wp-content/uploads/2012/02/Ecoterrorism-article-1.pdf.

59 Michael Loadenthal, "Activism, Terrorism, and Social Movements: The "Green Scare" as Monarchical Power," In *Narratives of Identity in Social Movements, Conflicts and Change (Research in Social Movements, Conflicts and Change, Volume 40)*, (United Kingdom: Emerald Group Publishing Limited, 2016): 189-226, https://doi.org/10.1108/S0163-786X20160000040007.

60 National Consortium for the Study of Terrorism and Response to Terrorism (START), University of Maryland. [GTD. Data File 2019], accessed October 20, 2020, https://www.start.umd.edu/gtd/.

61 Murphy Esme, "People Are Going to Get Injured, or Worse: Animal Rights Activists Claim Responsibility for Wis. Deer Stands Vandalism," *CBS Minnesota*, November 11, 2019, June 1, 2020, https://minnesota.cbslocal.com/2019/11/11/deer-stands-vandalized-in-western-wisconsin/.

62 National Consortium for the Study of Terrorism and Response to Terrorism (START), University Spaford of Maryland. [GTD. Data File 2019], accessed October 20, 2020, https://www.start.umd.edu/gtd/.

63 National Consortium for the Study of Terrorism and Response to Terrorism (START), University of Maryland. [GTD. Data File 2019], accessed October 20, 2020, https://www.start.umd.edu/gtd/.

[64] Vanderheiden, "Eco-terrorism or Justified Resistance?," 425-447. Loadenthal, "Deconstructing "Eco-Terrorism": Rhetoric, Framing and Statecraft as Seen Through the Insight Approach," 92-117.

[65] Sumner and Weidman, "Eco-terrorism or Eco-tage: An Argument for the Proper Frame," 855-876.

[66] Loadenthal. "Eco-Terrorism," 1-34. National Consortium for the Study of Terrorism and Response to Terrorism (START), University of Maryland. [GTD. Data File 2019], accessed October 20, 2020, https://www.start.umd.edu/gtd/.

[67] Grimm, "Animal Rights Extremists Increasingly Targeting Individuals." National Consortium for the Study of Terrorism and Response to Terrorism (START), University of Maryland. [GTD. Data File 2019], accessed October 20, 2020, https://www.start.umd.edu/gtd/.

[68] National Consortium for the Study of Terrorism and Response to Terrorism (START), University of Maryland. [GTD. Data File 2019], accessed October 20, 2020, https://www.start.umd.edu/gtd/.

[69] Leigh Phillips, "Anarchists Attack Science," *Nature* 485, no. 7400 (2012): 561, https://www.researchgate.net/profile/Leigh_Phillips2/publication/225094886_A narchists_attack_science/links/58c047d545851500618fec4e/Anarchists-attack-science.pdf. The Anarchist Library, "Communiques of ITS."

[70] The Anarchist Library, "Communiques of ITS."

[71] "Qué es el Grupo Ecoterrorista Individualistas Tendiendo a lo Salvaje, que Atentó Contra el Presidente del Metro de Santiago de Chile," *Infobae*, Mayo 10, 2019, (What is the Individualist Ecoterrorist Group Tendiendo a lo Salvaje, which attacked the President of the Santiago de Chile Metro, Infobae, May 10, 2019), accessed June 16, 2020, https://www.infobae.com/america/america-latina/2019/05/10/que-es-el-grupo-ecoterrorista-individualistas-tendiendo-a-lo-salvaje-que-atento-contra-el-presidente-del-metro-de-santiago-de-chile/; "El Plan Terrorista Para Atentar Contra El Metro Se Inició en 2014," *El Librero*, Octubre 30, 2019, (The Terrorist Plan to Attack the Metro Began in 2014, El Librero, October 30, 2019), accessed June 16, 2020, https://ellibero.cl/actualidad/el-plan-terrorista-para-atentar-contra-el-metro-se-inicio-en-2014/; "Comunicados de ITS," Maldición Eco-Extremista, Mayo 6, 2020 (ITS Press Releases, Eco-Extremist Curse, May 6, 2020, accessed June 16, 2020, http://maldicionecoextremista.altervista.org/tag/comunicados-de-its/?doing_wp_cron=1592289038.5113019943237304687500.

[72] Neil King and Gabriel Borrud, "Radical Environmentalism: 'We Need to Be Ready to Risk Our Lives'." *DW*, June 9, 2020, accessed June 22, 2020, https://www.dw.com/en/radical-environmentalism-we-need-to-be-ready-to-risk-our-lives/a-53729503. "Guiding Principles of Deep Green Resistance," Deep Green Resistance, accessed June 22, 2020, https://deepgreenresistance.org/en/who-we-are/guiding-principles-of-deep-green-resistance.

[73] Zachary Kallenborn and Philipp C. Bleek, "Avatars of the Earth: Radical Environmentalism and Chemical, Biological, Radiological, and Nuclear (CBRN) Weapons," *Studies in Conflict & Terrorism* 43, no. 5 (2020): 351-381, https://doi.org/10.1080/1057610X.2018.1471972.

[74] National Consortium for the Study of Terrorism and Response to Terrorism (START), University of Maryland. [GTD. Data File 2019], accessed October 20, 2020, https://www.start.umd.edu/gtd/.

[75] Manuel R. Torres-Soriano, and Mario Toboso-Buezo, "Five Terrorist Dystopias," *The International Journal of Intelligence, Security, and Public Affairs* 21, no. 1 (2019): 49-65, https://doi.org/10.1080/23800992.2019.1598094.

[76] Nils Gilman, "The Coming of the Avocado Politics," The Breakthrough Institute, February 7, 2020, accessed September 28, 2020, https://thebreakthrough.org/journal/no-12-winter-2020/avocado-politics.

[77] Gilman, "The Coming of the Avocado Politics."

[78] Hirsch-Hoefler and Mudde, ""Ecoterrorism": Terrorist Threat or Political Ploy?," 586-603.

[79] Institute for Economics & Peace, *Global Terrorism Index 2019. Measuring the Impact of Terrorism*, (Sydney, November 2019), accessed May 20, 2020, http://visionofhumanity.org/app/uploads/2019/11/GTI-2019web.pdf.

80 Institute for Economics & Peace, *Global Terrorism Index 2019. Measuring the Impact of Terrorism.*

81 Jared S. Goodman, "Shielding Corporate Interests from Public Dissent: an Examination of the Undesirability and Unconstitutionality of Eco-Terrorism Legislation," *Journal of Law and Policy,* 16, no.2 (2009): 823, https://brooklynworks.brooklaw.edu/cgi/viewcontent.cgi?article=1179&context=jlp.

82 Carl Boggs, "Corporate Power, Ecological Crisis, and Animal Rights," *Fast Capitalism* 2, no. 2 (2019), http://doi.org/10.32855/fcapital.200701.002.

83 Letta, Schulte and Rall, "Targeted: Counterterrorism Measures. Calma and Aquino."

84 Katharina Rall, "Poland Denies Entry to Environmental Activists to Attend Climate Talks," *Human Rights Watch*, December 7, 2018, accessed June 12, 2020, https://www.hrw.org/news/2018/12/07/poland-denies-entry-environmental-activists-attend-climate-talks. Megan Rowling, "Activists Denied Access to Poland for U.N. Climate Talks, Green Groups Say," *Reuters*, December 9, 2018, accessed June 12, 2020, https://www.reuters.com/article/us-climatechange-accord-civilliberties/activists-denied-access-to-poland-for-u-n-climate-talks-green-groups-say-idUSKBN1O70N6.

85 Katreena Cabico Gaea, "Threats Against Environmental Defenders Seen to Worsen with Anti-Terror Bill," *Philstar Global*, June 9, 2020, accessed June 12, 2020, https://www.philstar.com/headlines/2020/06/09/2019734/threats-against-environmental-defenders-seen-worsen-anti-terror-bill.

86 Letta and Rall, "Targeted: Counterterrorism Measures."

87 Letta and Rall, "Targeted: Counterterrorism Measures."

88 Minnesota Senate Republican Caucus, "Sen. Utke Responds to Minnesota Logging Company Lawsuit Against Eco-Terrorists Who Harassed Staff and Destroyed Equipment," January 29, 2020, accessed June 12, 2020, https://www.mnsenaterepublicans.com/sen-utke-responds-to-minnesota-logging-company-lawsuit-against-eco-terrorists-who-harassed-staff-and-destroyed-equipment/.

89 Dodd and Grierson, "Greenpeace Included with Neo-Nazis on UK Counter-Terror List."

90 Marc Hudson, "Extinction Rebellion: 'Terror Threat' is a Wake-Up Call for How the State Treats Environmental Activism," *The Conversation*, January 14, 2020, accessed June 12, 2020, https://theconversation.com/extinction-rebellion-terror-threat-is-a-wake-up-call-for-how-the-state-treats-environmental-activism-129804. Clive Hamilton, "Tree spiking = Beheading Ergo Environmentalism = Terrorism," *The Conversation*, October 15, 2020, accessed June 12, 2020, https://theconversation.com/tree-spiking-beheading-ergo-environmentalism-terrorism-48568.

91 Raphael Schlembach, "Undercover Policing and the Spectre of 'Domestic Extremism': The Covert Surveillance of Environmental Activism in Britain," *Social Movement Studies* 17, no. 5 (2018): 491-506, https://doi.org/10.1080/14742837.2018.1480934.

92 Daniel Sanderson, "Climate Activists 'May Turn to Violence', Experts Fear," *The National*, January 15, 2020, accessed June 12, 2020, https://www.thenational.ae/uae/climate-activists-may-turn-to-violence-experts-fear-1.964916.

93 "Communiques of ITS," The Anarchist Library.

94 Nils Gilman, "Beware the Rise of Far-Right Environmentalism," *Berggruen Institute,* October 17, 2019, accessed June 18, 2020, https://www.berggruen.org/the-worldpost/articles/beware-the-rise-of-far-right-environmentalism/.

95 Torres-Soriano and Toboso-Buezo, "Five Terrorist Dystopias," 49-65.

96 Sambuddha Ghatak, Aaron Gold, and Brandon C. Prins, "Domestic Terrorism in Democratic States: Understanding and Addressing Minority Grievances," *Journal of Conflict Resolution* 63, no. 2 (2019): 439-467, https://doi.org/10.1177/0022002717734285.

97 Ghatak, Gold, and Prins, "Domestic Terrorism in Democratic States," 439-467.

98 Katharine J. Mach, Caroline M. Kraan, W. Neil Adger, Halvard Buhaug, Marshall Burke, James D. Fearon, Christopher B. Field et al, "Climate as a Risk Factor for Armed Conflict," *Nature* 571, no. 7764 (2019): 193-197, https://ore.exeter.ac.uk/repository/bitstream/handle/10871/37969/Mach-2019-Nature.pdf?sequence=1.

99 John O'Loughlin, Andrew M. Linke, and Frank D.W. Witmer, "Effects of Temperature and Precipitation Variability on The Risk of Violence in Sub-Saharan Africa, 1980–2012," *Proceedings of the National Academy of Sciences* 111, no. 47 (2014): 16712-16717, https://doi: 10.1073/pnas.1411899111.

100 Nett, and Rüttinger, *Insurgency, Terrorism and Organised Crime*. Collins, *Climate Change and Global Security: Planning for Potential Conflict*. Torres-Soriano and Toboso-Buezo, "Five Terrorist Dystopias," 49-65.

101 O'Loughlin, Linke, and Witmer, "Effects of Temperature and Precipitation," 16712-16717.

102 Stijn van Weezel, "Local Warming and Violent Armed Conflict in Africa," *World Development* 126 (2020): 104708, https://doi.org/10.1016/j.worlddev.2019.104708.

103 Christina Kohler, Carlos Denner dos Santos, and Marcel Bursztyn, "Understanding Environmental Terrorism in Times of Climate Change: Implications for Asylum Seekers in Germany," *Research in Globalization* 1 (2019): 100006, https://doi.org/10.1016/j.resglo.2019.100006.

104 "Al-Shabaab's 'Water Terrorism' is Yielding Results and Tragedy in Somalia's Civil War," *The World*, August 12, 2014, accessed June 13, 2020, https://www.pri.org/stories/2014-08-08/how-al-shabaab-using-water-tool-terrorism.

105 "Al-Shabaab's 'Water Terrorism' is Yielding Results and Tragedy in Somalia's Civil War."

106 Alec Crawford, "Climate Change and State Fragility in the Sahel," *FRIDE Policy Brief no. 205* (2015), https://www.iisd.org/sites/default/files/publications/climate-change-and-state-fragility-in-the-Sahel-fride.pdf.

107 Cedric De Coning and Florian Krampe, *Multilateral Cooperation in the Area of Climate-Related Security and Development Risks in Africa Report* (Norway: Norwegian Institute of International Affairs, 2020), 25-28, accessed June 27, 2020, https://nupi.brage.unit.no/nupi-xmlui/bitstream/handle/11250/2651944/NUPI_Report_4_2020_deConing_Krampe%2B%2B-%2BMultilateral%2Bcooperation%2Bin%2Bthe%2Barea%2Bof%2Bclimate-related%2Bsecurity%2Band%2Bdevelopment%2Brisks%2Bin%2BAfrica.pdf?sequence=1.

108 Mervyn Piesse, "Boko Haram: Exacerbating and Benefiting from Food and Water Insecurity in the Lake Chad Basin," *Future Directions International*, September 17, 2017, http://www.futuredirections.org.au/wp-content/uploads/2017/09/Boko-Haram-Exacerbating-and-Benefiting-From-Food-and-Water-Insecurity-in-the-Lake-Chad-Basin.pdf.

109 Mohammed A. Al Amin, "Hydropower Resources as Target of Terrorism: Case Study of Selected Water Bodies in Northern Nigeria," *The International Journal of Engineering and Science* 2, no. 11 (2013): 52-61, http://www.theijes.com/papers/v2-i11/Part.2/H021102052061.pdf.

110 Gregory N. Price, and Juliet U. Elu, "Global Warming and Cross-State Islamist Terrorism in Nigeria," *Department of Economics, Morehouse College, Atlanta GA* 30314 (2016), https://www.researchgate.net/profile/Gregory_Price2/publication/307957422_Global_Warming_And_Cross-State_Islamist_Terrorism_In_Nigeria/links/57d32a8b08ae6399a38da13a/Global-Warming-And-Cross-State-Islamist-Terrorism-In-Nigeria.pdf.

111 Price, and Elu, "Global Warming and Cross-State Islamist Terrorism in Nigeria."

112 Gleick, "Water, Drought, Climate Change, and Conflict in Syria," 331-340.

113 Samantha Wilson, "Climate Change and the Rise of Terrorism in Northeastern Syria," *ESSAI* 15, no. 1 (2017): 37, https://dc.cod.edu/essai/vol15/iss1/37. Suzanne Saleeby, "Sowing the Seeds of Dissent: Economic Grievances and the Syrian Social

Contract's Unraveling," *Beta*, February 16, 2016, accessed June 12, 2020, https://www.jadaliyya.com/Details/25271/Sowing-the-Seeds-of-Dissent-Economic-Grievances-and-the-Syrian-Social-Contract%E2%80%99s-Unraveling.

[114] Wilson, "Climate Change and the Rise of Terrorism in Northeastern Syria," 37.

[115] Strozier and Berkell, "How Climate Change Helped ISIS," *Huffington Post*.

[116] Nett, and Rüttinger, *Insurgency, Terrorism and Organised Crime*.

[117] DuBois King, "The Weaponization of Water in Syria and Iraq," 153-169. Gleick, "Water, Drought, Climate Change, and Conflict in Syria," 331-340.

[118] Mohanad Hage Ali, "ISIS' Path of Destruction Drains Iraq and Syria's Water Supplies," *Al Arabiya*, June 21, 2014, accessed June 18, 2020, https://english.alarabiya.net/en/perspective/analysis/2014/06/21/ISIS-path-of-destruction-drains-Iraq-and-Syria-s-water-supplies.

[119] Nett, and Rüttinger, *Insurgency, Terrorism and Organised Crime*.

[120] Bridget Johnson, "ISIS Claims Escalating Use of Wildfire Arson as Terror Tactic," *GTSC Homeland Security Today*, May 28, 2019, accessed June 25, 2020, https://www.hstoday.us/subject-matter-areas/counterterrorism/isis-claims-escalating-use-of-wildfire-arson-as-terror-tactic/.

[121] Johnson, "ISIS Claims Escalating Use of Wildfire Arson as Terror Tactic."

[122] Nett, and Rüttinger, *Insurgency, Terrorism and Organised Crime*.

[123] Zachary Laub and Kali Robinson, "Yemen in Crisis," *Council on Foreign Relations*, April 27, 2020, accessed June 22, 2020, https://www.cfr.org/backgrounder/yemen-crisis.

[124] Mohamed Hadil, Moosa Elayah, and L. Schulpen, "Yemen Between the Impact of the Climate Change and the Ongoing Saudi-Yemen War: A Real Tragedy," *Centre for International Development Issues, Nijmegen, The Netherlands* (2017), accessed June 30, 2020, https://www.kpsrl.org/sites/default/files/2018-03/a_real_tragedy%20%285%29.pdf.

[125] Gleick, "Water, Drought, Climate Change, and Conflict in Syria," 331-340.

[126] Gleick, "Water, Drought, Climate Change, and Conflict in Syria," 331-340.

[127] Hadil, Elayah, and Schulpen, "Yemen Between the Impact of the Climate Change and the Ongoing Saudi-Yemen War: A Real Tragedy."

[128] Michael Horton, "Fighting the Long War: The Evolution of al-Qaida in the Arabian Peninsula," *CTC Sentinel*, 10 no. 1 (2017), accessed June 22, 2020, https://ctc.usma.edu/fighting-the-long-war-the-evolution-of-al-qaida-in-the-arabian-peninsula/.

[129] Kohler, dos Santos, and Bursztyn, "Understanding Environmental Terrorism in Times of Climate Change: Implications for Asylum Seekers in Germany," 100006.

[130] Kohler, dos Santos, and Bursztyn, "Understanding Environmental Terrorism in Times of Climate Change: Implications for Asylum Seekers in Germany," 100006.

[131] Piesse, "Boko Haram: Exacerbating and Benefiting from Food and Water Insecurity in the Lake Chad Basin."

[132] Jonas Vestby, "Climate Variability and Individual Motivations for Participating in Political Violence," *Global Environmental Change* 56 (2019): 114-123, https://doi.org/10.1016/j.gloenvcha.2019.04.001.

[133] Philips O. Okolo and Pally Agidi Ejime, "Governance Failure and Terrorism in Nigeria," *EBSU Journal of Social Sciences and Humanities* 8, no. 1 (2018).

[134] Peter Schwartzstein, "Climate Change and Water Woes Drove ISIS Recruiting in Iraq," *National Geographic*, November 14, 2017, accessed June 17, 2020, https://www.nationalgeographic.com/news/2017/11/climate-change-drought-drove-isis-terrorist-recruiting-iraq/.