

# A primer on climate security

*The dangers of militarising  
the climate crisis*



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Published by the Transnational Institute,  
Amsterdam, October 2021

Updated with Q16, May 2023

**ACKNOWLEDGEMENTS:** Thanks to Simon Dalby, Tamara Lorincz,  
Josephine Valeske, Niamh Ní Bhriain, Wendela de Vries,  
Deborah Eade, Ben Hayes, Dafne Yeltekin

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# 1. What is climate security?

Climate security is a political and policy framework that analyses the impact of climate change on security. It anticipates that the extreme weather events and climate instability resulting from rising greenhouse gas emissions (GHGs) will cause disruption to economic, social and environmental systems – and therefore undermine security. The questions are: whose and what kind of security is this about?

The dominant drive and demand for 'climate security' comes from a powerful national security and military apparatus, in particular that of the wealthier nations. This means that security is perceived in terms of the 'threats' it poses to their military operations and 'national security', an all-encompassing term that basically refers to a country's economic and political power.

In this framework, climate security examines the perceived *direct* threats to a nation's security, such as the impact on military operations – for example, the rise in sea level affects military bases or extreme heat impedes army operations. It also looks at the *indirect* threats, or the ways climate change may exacerbate existing tensions, conflicts and violence that could spill into or overwhelm other nations. This includes the emergence of new 'theatres' of war, such as the Arctic where melting ice is opening up new mineral resources and a major jostling for control among major powers. Climate change is defined as a 'threat multiplier' or a 'catalyst to conflict'. Narratives on climate security typically anticipate, in the words of a US Department of Defense strategy, 'an era of persistent conflict ... a security environment much more ambiguous and unpredictable than that faced during the Cold War'.

Climate security has been increasingly integrated into national security strategies, and been embraced more widely by international organisations such as the United Nations and its specialised agencies, as well as civil society, academia and the media. In 2021 alone, President Biden [declared climate change a national security priority](#), NATO drew up an action plan on climate and security, the UK declared it was moving to a system of 'climate-prepared defence', the United Nations Security Council held a high-level debate on climate and security, and climate security was a major agenda item at the COP26 conference. COP26 was hosted by the repressive regime of Egypt that uses the language of 'climate security' to prevent activists from organising. On the first day of the summit, the government decided to shut down event spaces dedicated to civil society groups.

As this primer explores, framing the climate crisis as a security issue is deeply problematic as it ultimately reinforces a militarised approach to climate change that is likely to deepen the injustices for those most affected by the unfolding crisis. The danger of security solutions is that, by definition, they seek to secure what exists – an unjust status quo. A security response views as 'threats' anyone who might unsettle the status quo, such as refugees, or who oppose it outright, such as climate activists. It also precludes other, collaborative solutions to instability. Climate justice, by contrast requires us to overturn and transform the economic systems that caused climate change, prioritising communities at the frontlines of the crisis and putting their solutions first.

## 2. How has climate security emerged as a political priority?

Climate security draws on a longer history of environmental security discourse in academic and policy-making circles, which since the 1970s and 1980s has examined the interlinkages of environment and conflict and at times pushed for decision-makers to integrate environmental concerns into security strategies.

Climate security entered the policy – and national security – arena in 2003, with a Pentagon-commissioned study by Peter Schwartz, a former Royal Dutch Shell planner, and Doug Randall of the California-based Global Business Network. They warned that climate change could lead to a new Dark Ages: 'As famine, disease, and weather-related disasters strike due to the abrupt climate change, many countries' needs will exceed their carrying capacity. This will create a sense of desperation, which is likely to lead to offensive aggression in order to reclaim balance ... Disruption and conflict will be endemic features of life'. The same year, in less hyperbolic language, the European Union (EU) 'European Security Strategy' flagged up climate change as a security issue.

Since then climate security has been increasingly integrated into defence planning, intelligence assessments, and military operational plans of a growing number of wealthy countries including the US, the UK, Australia, Canada, Germany, New Zealand and Sweden as well as the EU. It differs from countries' climate action plans with their focus on military and national security considerations.

For military and national security entities, the focus on climate change reflects the belief that any rational planner can see that it is worsening and will affect their sector. The military is one of the few institutions that engage in long-term planning, to ensure its continued capacity to engage in conflict, and to be ready for the changing contexts in which they do so. They also are inclined to examine worst-case scenarios in a way that social planners do not – which may be an advantage on the issue of climate change.

US Defense Secretary Lloyd Austin summed up US military consensus on climate change in 2021: 'We face a grave and growing climate crisis that is threatening our missions, plans, and capabilities. From increasing competition in the Arctic to mass migration in Africa and Central America, climate change is contributing to instability and driving us to new missions'.

Indeed, climate change is already directly affecting the armed forces. A 2018 Pentagon report revealed that half of 3,500 military sites were suffering the effects of six key categories of extreme weather events, such as storm surge, wildfires and droughts.

This experience of the impacts of climate change and a long-term planning cycle has sealed off national security forces from many of the ideological debates and denialism concerning

climate change. It meant that even during Trump's presidency, the military continued with its climate security plans while downplaying these in public, to avoid becoming a lightning rod for denialists.

The focus of national security regarding climate change is also driven by its determination to achieve ever more control of all potential risks and threats, which means it seeks to integrate all aspects of state security to do this. This has led to increases in [funding to every coercive arm of the state](#) in for several decades. Security scholar Paul Rogers, Emeritus Professor of Peace Studies at the University of Bradford, calls the strategy 'liddism' (that is, keeping the lid on things) – a strategy that is 'both pervasive and accumulative, involving an intense effort to develop new tactics and technologies that can avert problems and suppress them'. The trend has accelerated since 9/11 and with the emergence of algorithmic technologies, has encouraged national security agencies to seek to monitor, anticipate and where possible control all eventualities.

While national security agencies lead the discussion and set the agenda on climate security, there is also a growing number of non-military and civil society organisations (CSOs) advocating for greater attention to climate security. These include foreign policy thinktanks such as the Brookings Institute and the Council on Foreign Relations (US), the International Institute for Strategic Studies and Chatham House (UK), Stockholm International Peace Research Institute, Clingendael (Netherlands), French Institute for International and Strategic Affairs, Adelphi (Germany) and the Australian Strategic Policy Institute. A leading advocate for climate security worldwide is the US-based Center for Climate and Security (CCS), a research institute with close ties to the military and security sector and the Democratic party establishment. A number of these institutes joined forces with senior military figures to form the International Military Council on Climate and Security in 2019.



*US troops driving through floods in Fort Ransom in 2009. Credit: U.S. Army photo/Senior Master Sgt. David H. Lipp*

## BOX 1: Timeline of Key Climate Security Strategies

**2003:** An Abrupt Climate Change Scenario and Its Implications for United States National Security. First Pentagon-commissioned paper that predicted dystopian scenarios of climate change and its impacts on national security. Seen as overwrought but set the tone for future strategies.

**2007:** Age of Consequences: The Foreign Policy and National Security Implications of Global Climate Change. Influential report, produced by key military and security strategists, foreign policy experts and Democratic insiders, which outlined possible scenarios for impacts based on possible global temperature increases of 1.3°C, 2.6°C, and 5.6°C.

**2008:** Climate Change and International Security. The EU follows US lead in declaring climate change as a 'threat multiplier' which will exacerbate existing tensions and conflicts and instability and poses 'political and security risks that directly affect European interests'.

**2008:** Global Trends 2025: A Transformed World (DNI). National Intelligence Council identifies climate change, along with geopolitical shifts, demography and energy transitions, as creating a world of scarcity and instability.

**2010 and 2014:** Quadrennial Defense Review. The 2010 QDR identified 'energy security and climate change' as one of four issues requiring imperative action, saying that climate change would act as 'an accelerant of instability or conflict, placing a burden to respond on civilian institutions and militaries around the world'.

**2015:** UK National Security Strategy and Strategic Defence and Security Review. Calls climate change a driver of instability.

**2016:** White Paper on German Security Policy and the Future of the Bundeswehr.

**2016:** Australian Defence White Paper labels climate change as a risk-multiplier and predicts instability in countries in the South Pacific.

**2018:** New Zealand's Strategic Defence Policy.

**2020:** EU Climate Change and Defence Roadmap. Examines capabilities for EU missions under extreme weather conditions and advocates better integration of climate change and environmental aspects into planning and implementation of EU missions.

**2021:** UK Ministry of Defence Climate Change and Sustainability Strategic Approach. Produced as part of UK government's self-promotion pre-COP26, promotes the UK defence sector as a key player to solve climate change and security risks.

**2021:** NATO Climate Change and Security Action Plan. Proposes strategies to better assess climate risks and prepare assets and operations for the impacts of climate change, along with weak promises to address military carbon emissions.

**2022:** NATO established a new Climate Change and Security Centre of Excellence headquartered in Montreal

### 3. How are national security agencies planning for and adapting to climate change?

The national security agencies, particularly the military and intelligence services, of the wealthy industrialised nations are planning for climate change in two key ways: researching and predicting future scenarios of risks and threats based on different scenarios of temperature increase; and implementing plans for military climate adaptation. The US sets the trend for climate security planning, by virtue of its size and dominance (the US [spends more on defence than the next 10 countries combined](#)).

#### 1. Researching and predicting future scenarios

This involves all the relevant security agencies, particularly the military and intelligence, to analyse existing and expected impacts on a country's military capabilities, its infrastructure and the geopolitical context in which the country operates. Towards the end of his mandate in 2016, President Obama went further in [instructing all of its departments and agencies](#) 'to ensure that climate change-related impacts are fully considered in the development of national security doctrine, policies, and plans'. In other words, making the national security framework central to its entire climate planning. This was rolled back by Trump, but Biden has picked up where Obama left off, instructing the Pentagon to collaborate with the Department of Commerce, the National Oceanic and Atmospheric Administration, the Environmental Protection Agency, the Director of National Intelligence, the Office of Science and Technology Policy and other agencies to develop a Climate Risk Analysis.

A variety of planning tools are used, but for long-term planning, the military has long relied [on the use of scenarios](#) to assess different possible futures and then assess whether the country has the necessary capabilities to deal with the various levels of potential threat. The influential 2008 *Age of Consequences: The Foreign Policy and National Security Implications of Global Climate Change* report is a typical example as it outlined three scenarios for possible impacts on US national security based on possible global temperature increases of 1.3°C, 2.6°C, and 5.6°C. These scenarios draw both on academic research – such as the Intergovernmental Panel on Climate Change (IPCC) for climate science – as well as intelligence reports. Based on these scenarios, the military develops plans and strategies and is starting to [integrate climate change into its modeling, simulation and war gaming exercises](#). So, for example, the US European Command is preparing for increased geopolitical jostling and potential conflict in the Arctic as sea-ice melts, allowing oil drilling and international shipping in the region to increase. In the Middle East, US Central Command has factored water scarcity into its future campaign plans.



Other wealthy nations have followed suit, adopting the US lens of seeing climate change as a 'threat multiplier' while emphasising different aspects. The EU, for example, which has no collective defence mandate for its 27 member states, emphasises the need for more research, monitoring and analysis, more integration into regional strategies and diplomatic plans with neighbours, building up of crisis-management and disaster-response capacities, and strengthening migration management. The UK's Ministry of Defence 2021 strategy sets as its primary goal 'to be able to fight and win in ever more hostile and unforgiving physical environments', but is also keen to emphasise its international collaborations and alliances.

## 2. Preparing the military for a climate changed world

As part of its preparations, the military is also seeking to ensure its operability in a future marked by extreme weather and sea-level rise. This is no small feat. The US military [has identified 1,774 bases subject to sea-level rise](#). One base, Norfolk Naval Station in Virginia, is one of the world's biggest military hubs and suffers annual flooding.

As well as [seeking to adapt its facilities](#), the US and other military forces in the NATO alliance have also been keen to show their commitment to 'greening' their facilities and operations. This has led to greater installation of solar panels at military bases, alternative fuels in shipping and renewable energy-powered equipment. The British government says it has set targets to 50% 'drop ins' from sustainable fuel sources for all military aircraft and has committed its Ministry of Defence to 'net zero emissions by 2050'.

But although these efforts are trumpeted as signs that the military is 'greening' itself (some reports look very much like corporate greenwashing), the more pressing motivation to adopt renewables is the [vulnerability that dependence on fossil fuel](#) has created for the military. The transport of this fuel to keep its hummers, tanks, ships and jets running is one of the biggest logistical headaches for the US military and was a source of major vulnerability during the campaign in Afghanistan as oil tankers supplying US forces were frequently attacked by Taliban forces. A [US Army study found one casualty for every 39 fuel convoys in Iraq and one for every 24 fuel convoys in Afghanistan](#). In the long term, energy efficiency, alternative fuels, solar-powered telecommunication units and renewable technologies overall present the prospect of a less vulnerable, more flexible and more effective military. Former US Navy secretary Ray Mabus [put it frankly](#): 'We are moving toward alternative fuels in the Navy and Marine Corps for one main reason, and that is to make us better fighters'.

It has, however, proved rather more difficult to replace the use of oil in military transport (air, navy, land vehicles) that makes up the vast majority of military use of fossil fuels. In 2009, the US Navy announced its '[Great Green Fleet](#)', committing itself to a goal of halving its

energy from non-fossil-fuel sources by 2020. But the initiative soon unravelled, as it became clear that there were simply not the necessary supplies of agrofuels even with massive military investment to expand the industry. Amid spiralling costs and political opposition, the initiative was killed off. Even if it had been successful, there is considerable evidence that biofuel use has environmental and social costs (such as increases in food prices) that undermine its claim to be a 'green' alternative to oil.

Beyond military engagement, national security strategies also deal with the deployment of 'soft power' – diplomacy, international coalitions and collaborations, humanitarian work. So most national security strategies also use the language of human security as part of their objectives and talk about preventive measures, conflict prevention and so on. The UK 2015 national security strategy, for example, even talks about the need to deal with some of the root causes of insecurity: 'Our long-term objective is to strengthen the resilience of poor and fragile countries to disasters, shocks and climate change. This will save lives and reduce the risk of instability. It is also much better value for money to invest in disaster preparedness and resilience than to respond after the event'. These are wise words, but are not evident in the way resources are marshalled. In 2021, the UK government cut its overseas aid budget by £4 billion from 0.7% of its gross national income (GNI) to 0.5%, supposedly on a temporary basis in order to reduce the volume of borrowing to cope with the COVID-19 crisis – but shortly after increasing its military spending by £16.5 billion (a 10% annual increase).



*The military depends on high levels of fuel-use as well as deploys weapons with lasting environmental impacts.  
Credit: Cpl Neil Bryden RAF/Crown Copyright 2014*

## 4. What are the main problems with describing climate change as a security issue?

The fundamental problem with making climate change a security issue is that it responds to a crisis caused by systemic injustice with 'security' solutions, hardwired in an ideology and institutions designed to seek control and continuity. At a time when limiting climate change and ensuring a just transition requires a radical redistribution of power and wealth, a security approach seeks to perpetuate the status quo. In the process, climate security has six main impacts.

**1. Obscures or diverts attention from the causes of climate change, blocking necessary change to the unjust status quo.** In focusing on responses to the impacts of climate change and the security interventions that might be required, they divert attention from the causes of the climate crisis – the [power of corporations](#) and nations that have contributed most to causing climate change, the role of the military that is one of the biggest institutional GHG emitters, and the economic policies such as free trade agreements that have made so many people even more vulnerable to climate-related changes. They ignore the violence embedded in a globalised extractive economic model, implicitly assume and support the continued concentration of power and wealth, and seek to stop the resulting conflicts and 'insecurity'. They also do not question the role of security agencies themselves in upholding the unjust system – so while climate security strategists may point to the need to address military GHG emissions, this never extends to calls for closing down military infrastructure or to radically reducing military and security budgets in order to pay for existing commitments to provide climate finance to developing countries to invest in alternative programmes such as a Global Green New Deal.

**2. Strengthens a booming military and security apparatus and industry that has already gained unprecedented wealth and power in the wake of 9/11.** Predicted climate insecurity has become a new open-ended excuse for military and security spending and for emergency measures that bypass democratic norms. Nearly every climate security strategy paints a picture of ever-increasing instability, which demands a security response. As Navy Rear Admiral [David Titley put it](#): 'it's like getting embroiled in a war that lasts 100 years'. He framed this as a pitch for climate action, but it is also by default a pitch for ever more military and security spending. In this way, it follows a long pattern of the military [seeking new justifications for war](#), including to combat drug use, terrorism, hackers and so on, which has led to [booming budgets for military and security spending](#) worldwide. State calls for security, embedded in a language of enemies and threats, is also used to justify emergency measures, such as the deployment of troops and enactment of emergency legislation that bypasses democratic bodies and constrains civil liberties. [Recent data by SIPRI \(2023\)](#) shows that global military spending has increased dramatically, especially in the wake of the Ukraine war, reaching \$2.24 trillion in 2022.

**3. Shifts responsibility for the climate crisis to the victims of climate change, casting them as ‘risks’ or ‘threats’.** In considering the instability caused by climate change, climate security advocates warn of the dangers of states imploding, places becoming uninhabitable, and people becoming violent or migrating. In the process, those who are the least responsible for climate change are not only the most affected by it, but are also viewed as ‘threats’. It is a triple injustice. And it follows a long tradition of security narratives where the enemy is always elsewhere. As scholar Robyn Eckersley notes, ‘environmental threats are something that foreigners do to Americans or to American territory’, and they are never something caused by US or Western domestic policies.

**4. Reinforces corporate interests.** In colonial times, and sometimes earlier, national security has been identified with defending corporate interests. In 1840, UK Foreign Secretary Lord Palmerston was unequivocal: ‘It is the business of the Government to open and secure the roads for the merchant’. This approach still guides most nations’ foreign policy today – and is reinforced by the growing power of corporate influence within government, academia, policy institutes and intergovernmental bodies such as the UN or the World Bank. It is reflected in many climate-related national security strategies that express particular concern about the impacts of climate change on shipping routes, supply chains, and extreme weather impacts on economic hubs. Security for the largest transnational companies (TNCs) is automatically translated as security for a whole nation, even if those same TNCs, such as oil companies, might be the chief contributors to insecurity.

**5. Creates insecurity.** The deployment of security forces usually creates insecurity for others. This is evident, for example, in the 20-year US-led and NATO-supported military invasion and occupation of Afghanistan, launched with the promise of security from terrorism, and yet ended up fuelling endless war, conflict, the return of the Taliban and potentially the rise of new terrorist forces. Similarly, policing in the US and [elsewhere](#) has often created increased insecurity for marginalised communities who face discrimination, surveillance and death in order to keep wealthy propertied classes secure. Programmes of climate security led by security forces will not escape this dynamic. As [Mark Neocleous sums up](#): ‘All security is defined in relation to insecurity. Not only must any appeal to security involve a specification of the fear which engenders it, but this fear (insecurity) demands the counter-measures (security) to neutralize, eliminate or constrain the person, group, object or condition which engenders fear’.

**6. Undermines other ways of dealing with climate impacts.** Once security is the framing, the question is always what is insecure, to what extent, and what security interventions might work – never whether security should even be the approach. The issue becomes set in a binary of a threat vs security, requiring state intervention and often justifying

extraordinary actions outside the norms of democratic decision-making. It thus rules out other approaches – such as those that seek to look at more systemic causes, or centred on different values (e.g. justice, popular sovereignty, ecological alignment, restorative justice), or based on different agencies and approaches (e.g. public health leadership, commons-based or community-based solutions). It also represses the very movements calling for these alternative approaches and challenging the unjust systems that perpetuate climate change.

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See also: Dalby, S. (2009) *Security and Environmental Change*, Polity.

<https://www.wiley.com/en-us/Security+and+Environmental+Change-p-9780745642918>



*US troops watch burning oil fields in wake of US invasion in 2003.  
Credit: Arlo K. Abrahamson/US Navy*



## BOX 2: Patriarchy and climate security

Underlying a militarised approach to climate security lies a patriarchal system that has normalised military means to resolve conflict and instability. Patriarchy is deeply embedded in military and security structures. It is most evident in the male leadership and domination of military and para-military state forces, but it is also inherent in the way security is conceptualised, the privilege given to the military by political systems, and the way military spending and responses is barely even questioned even when it is failing to deliver on its promises.

Women and LGBT+ persons are disproportionately impacted by armed conflict and militarised responses to crises. They also carry a disproportionate burden of dealing with the impacts of crises such as climate change.

Women are notably also at the forefront of both the climate and peace movements. That is why we need a feminist critique of climate security and look to feminist solutions. As Ray Acheson and Madeleine Rees of the Women's International League for Peace and Freedom argue, 'Knowing that war is the ultimate form of human insecurity, feminists advocate for long-term solutions to conflict and support a peace and security agenda that protects all peoples'.

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See also: Acheson R. and Rees M. (2020). 'A feminist approach for addressing excessive military spending' in *Rethinking Unconstrained Military Spending*, UNODA Occasional Papers No. 35, pp 39–56 <https://front.un-arm.org/wp-content/uploads/2020/04/op-35-web.pdf>



Displaced women carrying their belongings arrive in Bossangoa, Central African Republic, after fleeing violence.  
Credit: UNHCR/B. Heger

## 5. Why are civil society and environmental groups advocating for climate security?

Despite these concerns, a number of environmental and other groups have pushed for climate security policies, such as the [World Wildlife Fund](#), the Environmental Defense Fund and Nature Conservancy (US) and E3G in Europe. The grassroots direct-action group Extinction Rebellion Netherlands even invited a leading Dutch military general to write about climate security in their 'rebel' handbook.

It is important to note here that different interpretations of climate security means that some groups may not be articulating the same vision as national security agencies. Political scientist Matt McDonald identifies four different visions of climate security, which vary based on whose security they are focused: 'people' (human security), 'nation-states' (national security), 'the international community' (international security) and the 'ecosystem' (ecological security). Overlapping with a mix of these visions are also emerging programmes of [climate security practices](#), attempts to map and articulate policies that could protect human security and prevent conflict.

The demands of civil society groups reflect a number of these different visions and are most often concerned with human security, but some seek to engage the military as allies and are willing to use 'national security' framing to achieve this. This seems to be based on the belief that such a partnership can achieve cuts in military GHG emissions, help recruit political support from often more conservative political forces for bolder climate action, and so push climate change into the [powerful 'security' circuits of power where it will finally be properly prioritised](#).

At times, government officials, notably the Blair government in the UK (1997-2007) and the Obama administration in the US (2008-2016) also seen 'security' narratives as a strategy for getting climate action from reluctant state actors. As UK Foreign Secretary Margaret Beckett [argued](#) in 2007 when they organized the first debate on climate security in the UN Security Council, "when people talk about security problems they do so in terms qualitatively different from any other type of problem. Security is seen as an imperative not option. ...flagging up the security aspects of climate change has a role in galvanizing those governments who yet have to act."

However in doing so, very different visions of security get blurred and merged. And given the hard power of the military and national security apparatus, which far supercedes any other, this ends up reinforcing a national security narrative – often even providing a politically useful 'humanitarian' or 'environmental' gloss to military and security strategies and operations as well as the corporate interests they seek to protect and defend.

## 6. What problematic assumptions do military climate security plans make?

Military climate security plans incorporate key assumptions that then shape their policies and programmes. One set of assumptions inherent in most climate security strategies is that climate change will cause *scarcity*, that this will cause *conflict*, and that *security* solutions will be necessary. In this Malthusian framework, the world's poorest peoples, particularly those in tropical regions such as most of sub-Saharan Africa, are seen as the most likely source of conflicts. This Scarcity>Conflict>Security paradigm is reflected in countless strategies, unsurprisingly for an institution designed to see the world through threats. The result, however, is a strong dystopian thread to national security planning. A typical [Pentagon training video warns](#) of a world of 'hybrid threats' emerging from the dark corners of cities that armies will be unable to control. This also plays out in reality, as was witnessed in New Orleans in the wake of Hurricane Katrina, where people attempting to survive in absolutely desperate circumstances were [treated as enemy combatants](#) and shot at and killed rather than rescued.

As Betsy Hartmann has pointed out, this [fits into a longer history of colonialism and racism](#) that has deliberately pathologised peoples and entire continents – and is happy to project that into the future to justify continued dispossession and military presence. It precludes other possibilities such as [scarcity inspiring collaboration](#) or conflict being resolved politically. It also, as pointed out earlier, deliberately avoids looking at the ways that scarcity, even during times of climate instability, is caused by human activity and reflects the maldistribution of resources rather than absolute scarcity. And it justifies the repression of movements that [demand and mobilise for system change as threats](#), as it assumes that anyone opposing the current economic order presents a danger by contributing to instability.

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See also: Deudney, D. (1990) 'The case against linking environmental degradation and national security', *Millennium: Journal of International Studies*. <https://doi.org/10.1177/03058298900190031001>



## 7. Does climate crisis lead to conflict?

The assumption that climate change will lead to conflict is implicit in national security documents. The US Department of Defense's 2014 review, for example, says that the impacts of climate change '... are threat multipliers that will aggravate stressors abroad such as poverty, environmental degradation, political instability, and social tensions—conditions that can enable terrorist activity and other forms of violence'.

A superficial look suggests links: 12 of the 20 countries most vulnerable to climate change are currently experiencing armed conflicts. While correlation is not the same as cause, a survey of over [55 studies on the subject by Californian professors Burke, Hsiang and Miguel](#) attempted to show causal links, arguing for every 1°C increase in temperature, interpersonal conflict increased by 2.4% and intergroup conflict by 11.3%. Their methodology has [since been widely challenged](#). A 2019 [report in Nature concluded](#): 'Climate variability and/or change is low on the ranked list of the most influential conflict drivers across experiences to date, and the experts rank it as the most uncertain in its influence'.

In practice, it is difficult to divorce climate change from other causal factors leading to conflict, and there is little evidence that the impacts of climate change will necessarily lead people to resort to violence. Indeed, sometimes scarcity may reduce violence as people are forced to collaborate. Research in the drylands of Marsabit District in Northern Kenya, for example, found that during drought and water scarcity violence was less frequent as poor herding communities were even less inclined to start conflicts at such times, and also had strong but flexible common property regimes governing water that helped people adjust to its scarcity.

What is clear is that what most determines the eruption of conflicts is both the underlying inequities inherent in a globalised world ([legacy of Cold War and deeply inequitable globalisation](#)) as well the problematic political responses to situations of crisis. Ham-fisted or manipulative responses by elites are often some of the reasons why difficult situations turn into conflicts and ultimately wars. An [EU-funded study of conflicts in the Mediterranean, Sahel and Middle East](#) showed, for example, that the principal causes of conflict across these regions were not hydro-climatic conditions, but rather democratic deficits, distorted and unjust economic development and poor efforts to adapt to climate change that end up worsening the situation.

Syria is another case in point. Many military officials recount how drought in the region due to climate change led to rural–urban migration and the resulting civil war. Yet those [who have more closely studied the situation](#) have shown that it was Assad's neoliberal measures

of cutting agricultural subsidies had a far greater impact than the drought in causing rural-urban migration. Yet you will be hard-pressed to find a military analyst blaming the war on neoliberalism. Moreover, there is no evidence that migration had any role in the civil war. Migrants from the drought-affected region were not extensively involved in the spring 2011 protests and none of the protesters' demands related directly to either drought or migration. It was Assad's decision to opt for repression over reforms in response to calls for democratisation as well as the role of external state actors including the US that turned peaceful protests into a protracted civil war.

There is also evidence that reinforcing a climate-conflict paradigm may increase the likelihood of conflict. It helps fuel arms races, distracts from other causal factors leading to conflict, and undermines other approaches to conflict resolution. The growing recourse to [military and state-centred rhetoric and discourse](#) concerning transboundary water flows between India and China, for example, has undermined existing diplomatic systems for water-sharing and made conflict in the region more likely.

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See also: 'Rethinking Climate Change, Conflict and Security', *Geopolitics*, Special Issue, 19(4). <https://www.tandfonline.com/toc/fgeo20/19/4>

Dabelko, G. (2009) 'Avoid hyperbole, oversimplification when climate and security meet', *Bulletin of the Atomic Scientists*, 24 August 24.



*Syria's civil war is simplistically blamed on climate change with little evidence. As in most conflict situations, the most important causes arose from the Syrian government's repressive response to the protests as well as the role of external players in fomenting conflict. Photo of Azaz, Syria. Credit: Christiaan Triebert*

## 8. What is the impact of climate security on borders and migration?

Narratives on climate security are dominated by the perceived 'threat' of mass migration. The influential 2007 US report, [Age of Consequences: The Foreign Policy and National Security Implications of Global Climate Change](#), describes large-scale migration as 'perhaps the most worrisome problem associated with rising temperatures and sea levels', warning it will 'trigger major security concerns and spike regional tensions'. A 2008 EU report [Climate change and international security](#) listed climate-induced migration as the fourth most significant security concern (after conflict over resources, economic damage to cities/coasts, and territorial disputes). It called for 'further development of a comprehensive European migration policy' in light of 'environmentally-triggered additional migratory stress'.

These warnings have bolstered the [forces and dynamics in favour of militarisation of borders](#) that even without climate warnings had become hegemonic in border policies worldwide. Ever more draconian responses to migration have led to the systematic undermining of the international right to seek asylum, and have caused untold suffering and cruelty to displaced peoples who face increasingly dangerous journeys as they flee their home countries to seek asylum, and ever more 'hostile' environments when they succeed.

Fear-mongering about 'climate migrants' has also dovetailed with the Global War on Terror that has fuelled and legitimised a constant ratcheting-up of government security measures and expenditure. Indeed, many climate security strategies equate migration with terrorism, saying that migrants in Asia, Africa, Latin America and Europe will be fertile ground for radicalisation and recruitment by extremist groups. And they reinforce narratives of migrants as threats, suggesting that migration is likely to intersect with conflict, violence and even terrorism and that this will inevitably create failed states and chaos against which the wealthy nations will have to defend themselves.

They fail to mention that climate change may in fact restrict rather than cause migration, as extreme weather events undermine even the basic conditions for life. They fail also to look at the structural causes of migration and the responsibility of many of the world's richest countries for forcing people to move. War and conflict is one of the prime causes of migration along with structural economic inequality. Yet climate security strategies evade discussion of the economic and trade agreements that create unemployment and the loss of reliance in food staples, such as NAFTA in Mexico, the wars fought for imperial (and commercial) objectives such as in Libya, or the devastation of communities and the environment caused by TNCs, such as Canadian mining firms in Central and South America – all of which fuel migration. They fail also to highlight how countries with the most financial resources also host the least number of refugees. Of the world's top ten refugee-receiving countries in proportional terms, only one, Sweden, is a wealthy nation.

The decision to focus on military solutions to migration rather than structural or even compassionate solutions has led to a massive increase in funding and militarisation of borders worldwide in anticipation of a huge increase in climate-induced migration. The border industrial complex is expected to grow globally by an annual rate of seven percent. US border and migration spending has gone from \$9.2 billion to \$26 billion between 2003 and 2021. The EU's border guard agency Frontex has had its budget increased from €5.2 million in 2005 to €460 million in 2020 with €5.6 billion reserved for the agency between 2021 and 2027. Borders are now 'protected' by 63 walls worldwide.

And military forces are ever more engaged with responding to migrants both at national borders and increasingly further from home. The US frequently deploys navy ships and US coastguard to patrol the Caribbean, the EU has since 2005 deployed its border agency, Frontex, to work with member states' navies as well as with neighbouring countries to patrol the Mediterranean, and Australia has used its naval forces to prevent refugees landing on its shores. India has deployed increasing numbers of Indian Border Security Force (BSF) agents permitted to use violence on its eastern border with Bangladesh making it one of the world's deadliest.

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See also: TNI's series on border militarisation and the border security industry: Border Wars <https://www.tni.org/en/topic/border-wars>

Boas, I. (2015) Climate Migration and Security: Securitisation as a Strategy in Climate Change Politics. Routledge. <https://www.routledge.com/Climate-Migration-and-Security-Securitisation-as-a-Strategy-in-Climate/Boas/p/book/9781138066687>



*The European Union has increased its border spending by more than 7000% since 2005, leading to violent pushbacks on its borders and a rising death toll particularly in the Mediterranean. Photo of Frontex and Greek border officers. Credit: Sara Prestianni*

## 9. What is the role of the military in creating the climate crisis?

Rather than looking to the military as a solution to the climate crisis, it is more important to examine its role in contributing to the climate crisis due to the high levels of GHG emissions and its pivotal role in upholding the fossil-fuel economy.

According to a US Congressional report, [the Pentagon is the single largest organisational user of petroleum](#) in the world, and yet under current rules is not required to take any drastic action to reduce emissions in line with scientific knowledge. A [study in 2019](#) estimated that the Pentagon's GHG emissions were 59 million tonnes, greater than the entire emissions in 2017 by Denmark, Finland and Sweden. [Scientists for Global Responsibility](#) have calculated UK military emissions to be 11 million tonnes, equivalent to 6 million cars, and EU emissions to be 24.8 million tonnes with France contributing to a third of the total. These studies are all conservative estimates given the lack of transparent data. Five arms companies based in EU member states (Airbus, Leonardo, PGZ, Rheinmetall, and Thales) were also found to have together produced at least 1.02 million tonnes of GHGs.

The high level of military GHG emissions is due to sprawling infrastructure (the military is often the largest landowner in most countries), the expansive global reach – particularly of the US, which has more than 800 military bases worldwide, many of which are involved in fuel-dependent counter-insurgency operations – and the high fossil-fuel consumption of most military transport systems. One F-15 fighter jet, for example burns 342 barrels (14,400 gallons) of oil an hour, and is almost impossible to replace with renewable energy alternatives. Military equipment like planes and ships have long life-cycles, locking in carbon emissions for many years to come.

The bigger impact on emissions, however, is the dominant purpose of the military which is to secure its nation's [access to strategic resources](#), ensure the smooth operation of capital and to manage the instability and inequities it causes. This has led to the militarisation of resource-rich regions like the Middle East and Gulf States, and the shipping lanes around China, and has also made the military the coercive pillar of an economy built on the use of fossil-fuels and committed to limitless economic growth.

Finally, the military affects climate change through the opportunity cost of investing in the military rather than investing in preventing climate breakdown. Military budgets have almost doubled since the end of the Cold War even though they provide no solutions to the biggest crises of today such as climate change, pandemics, inequality and poverty. At a time when the planet needs the biggest possible investment in economic transition to

mitigate climate change, the public is frequently told there are not the resources to do what climate science demands. In Canada, for example Prime Minister Trudeau boasted of its climate commitments, yet his government spent \$27 billion on the Department of National Defence, but only \$1.9 billion on the Department of Environment & Climate Change in 2020. Twenty years ago, Canada spent **\$9.6 billion for defence and only \$730 million** for environment & climate change. So over the past two decades as the climate crisis has got much worse, countries are spending more on their militaries and weapons than on taking action to prevent catastrophic climate change and to protect the planet.

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See also: Lorincz, T. (2014), [Demilitarisation for deep decarbonisation](#), IPB.

Meulewaeter, C. et al. (2020) *Militarism and Environmental Crisis: a necessary reflection*, Centre Delas. <http://centredelas.org/publicacions/miilitarismandenvironmentalcrisis/?lang=en>

## 10. How is the military and conflict tied up with the oil and extractive economy?

Historically, war has often emerged from the struggle of elites to control access to strategic energy sources. This is especially true of the oil and fossil fuel economy which has sparked international wars, civil wars, the rise of paramilitary and terrorist groups, conflicts over shipping or pipelines, and intense geopolitical rivalry in key regions from the Middle East to now the Arctic ocean (as ice melt opens up access to new gas reserves and shipping lanes).

One study shows that [between one-quarter and one-half of interstate wars](#) since the beginning of the so-called modern oil age in 1973 were related to oil, with the 2003 US-led invasion of Iraq being an egregious example. Oil has also – literally and metaphorically – lubricated the arms industry, providing both the resources and the reason for many states to go on arms-spending sprees. Indeed, there is [evidence that arms sales are used by countries to help secure and maintain access to oil](#). The UK's biggest ever arms deal – the 'Al-Yamamah arms deal' – agreed in 1985, [involved](#) the UK supplying a arms over many years to Saudi Arabia – no respecter of human rights – in return for 600,000 barrels of crude oil per day. BAE Systems earned tens of billions from these sales, which helps subsidise the UK's own arms purchases.

Globally, rising demand for primary commodities has led to the [expansion of the extractive economy to new regions and territories](#). [This has threatened communities' very existence and sovereignty and therefore led to resistance](#) and conflict. The response has been often brutal police repression and paramilitary violence, which in many countries work closely



with local and transnational businesses. In Peru, for example, [Earth Rights International](#) (ERI) has brought to light 138 agreements signed between extractive companies and the police during the 1995–2018 period ‘that allow the Police to provide private security services within the facilities and other areas ... of extractive projects in return for profit’. The case of the murder of the indigenous Honduran activist Berta Cáceres by state-linked paramilitaries working with the dam company Desa, is one of many cases worldwide where the nexus of global capitalist demand, extractive industries and political violence are creating a deadly environment for activists and community members who dare to resist. Global Witness has been tracking this [rising tide of violence](#) globally – it reported a record 212 land and environmental defenders were killed in 2019 – an average of more than four a week.

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See also: Orellana, A. (2021) [Neoextractivism and state violence: Defending the defenders in Latin America](#), *State of Power 2021*. Amsterdam: Transnational Institute.



*Berta Cáceres famously said ‘Our Mother Earth – militarized, fenced-in, poisoned, a place where basic rights are systematically violated – demands that we take action.’ Credit: coulloud/flickr*

## BOX 3: Militarism and oil in Nigeria

Perhaps nowhere is the connection between oil, militarism and repression more evident than in Nigeria. Governing colonial regimes and successive governments since independence used force to ensure the flow of oil and wealth to a small elite. In 1895, a British naval force burned down Brass to ensure that the Royal Niger Company secured a monopoly over palm-oil trade on the Niger River. An estimated 2,000 people lost their lives. More recently, in 1994 the Nigerian government set up the Rivers State Internal Security Task Force to suppress peaceful protests in Ogoniland against the polluting activities of Shell Petroleum Development Company (SPDC). Their brutal actions in Ogoniland alone led to the death of over 2,000 people and the flogging, raping and human-rights violations of many more.

Oil has fuelled violence in Nigeria, first by providing resources for military and authoritarian regimes to take power with the complicity of multinational oil firms. As one Nigerian Shell corporate executive famously remarked, 'For a commercial company trying to make investments, you need a stable environment ... Dictatorships can give you that'. It is a symbiotic relationship: the companies escape democratic scrutiny, and the military are emboldened and enriched by providing security. Second, it has created the grounds for conflict over distributing the oil revenue as well as in opposition to the environmental devastation caused by the oil companies. This exploded into armed resistance and conflict in Ogoniland and a fierce and brutal military response.

Although a fragile peace has been in place since 2009 when the Nigerian government agreed to pay ex-militants monthly stipends, the conditions for the re-emergence of conflict remain and is a reality in other regions in Nigeria.

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This is based on Basse, N. (2015) '*We thought it was oil, but it was blood: Resistance to the Corporate-Military wedlock in Nigeria and Beyond*', in the collection of essays that accompanied N. Buxton and B. Hayes (Eds.) (2015) *The Secure and the Dispossessed: How the Military and Corporations are Shaping a Climate-Changed World*. Pluto Press and TNI.



*Oil pollution in the Niger Delta region. Credit: Ucheke/Wikimedia*



## 11. What impact do militarism and war have on the environment?

The nature of militarism and war is that it prioritises national security objectives to the exclusion of everything else, and it comes with a form of exceptionalism that means the military is often given leeway to [ignore even limited regulations](#) and restrictions to protect the environment. As a result, both military forces and wars have left a largely devastating environmental legacy. Not only have the military used high levels of fossil fuels, they have also deployed deeply toxic and polluting weapons and artillery, targeted infrastructure (oil, industry, sewage services etc) with lasting environmental damage and left behind landscapes littered with toxic exploded and unexploded ordnance and weapons.

The history of US imperialism is also one of environmental destruction including the ongoing nuclear contamination in the Marshall Islands, the deployment of Agent Orange in Vietnam and the use of depleted uranium in Iraq and the former Yugoslavia. [Many of the most contaminated sites in the US are military facilities](#) and are listed on the Environmental Protection Agency's National Priority Super Fund list.

Countries affected by war and conflict also suffer long-term impacts from the breakdown of governance that undermines environmental regulations, forces people into destroying their own environments to survive, and foments the rise of paramilitary groups that often extract resources (oil, minerals etc) using extremely destructive environmental practices and violating human rights. Not surprisingly, war is sometimes called '[sustainable development in reverse](#)'.

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See also: [Conflict and Environment Observatory primer: How does war damage the environment](#)

## 12. Aren't the military needed for humanitarian responses?

A major justification for investment in the military at a time of climate crisis is that they will be needed to respond to climate-related catastrophes, and many nations are already deploying the military in this way. In the aftermath of Typhoon Haiyan that caused devastation in the Philippines in November 2013, the US military [deployed at its peak](#), 66 military aircraft and 12 naval vessels and nearly 1,000 military personnel to clear roads, transport aid workers, distribute relief supplies and evacuate people. During flooding in Germany in July 2021, the German army [*Bundeswehr*] helped bolster flood defences, rescue people and clean up as

waters receded. In many countries, particularly in low- and middle-income countries, the military currently may be the only institution with the capacity, personnel and technologies to respond to disastrous events.

The fact that the military may play humanitarian roles does not mean it is the best institution for this task. Some military leaders oppose armed forces involvement in humanitarian efforts believing it distracts from preparations for war. Even if they embrace the role, there are dangers of the military moving into humanitarian responses, particularly in conflict situations or where humanitarian responses coincide with military strategic objectives. As US foreign policy expert Erik Battenberg openly admits in the congressional magazine, *the Hill* that 'military-led disaster relief is not only a humanitarian imperative – it can also serve a larger strategic imperative as a part of U.S. foreign policy'.

This means humanitarian aid comes with a more hidden agenda – at minimum projecting soft power but often seeking to actively shape regions and countries to serve a powerful country's interests even at the cost of democracy and human rights. The US has a long history of using aid as part of counter-insurgency efforts several 'dirty wars' in Latin America, Africa and Asia before, during and since the Cold War. In the last two decades, US and NATO military forces have been very involved in military–civilian operations in Afghanistan and Iraq that deploy weapons and force alongside aid efforts and reconstruction. This has more often than not led them to do the opposite of humanitarian work. In Iraq, it led to military abuses such as the [widespread abuse of detainees in Bagram military base in Iraq](#). Even at home, the deployment of troops to [New Orleans led them to shoot desperate residents fuelled by racism and fear](#).

Military involvement may also undermine the independence, neutrality and safety of civilian humanitarian aid workers, making them more likely to be the targets of military insurgent groups. Military aid often ends up being more costly than civilian aid operations, diverting limited state resources to the military. The [trend has caused deep concern](#) among agencies like the Red Cross/Crescent and Doctors without Borders.

Yet, the military imagines a more expansive humanitarian role in a time of climate crisis. A 2010 report by the Center for Naval Analysis, [Climate Change: Potential Effects on Demands for US Military Humanitarian Assistance and Disaster Response](#), argues that climate change stresses will not only require more military humanitarian assistance, but also require it to intervene to stabilise countries. Climate change has become the new justification for permanent war.

There is no doubt that countries will need effective disaster-response teams as well as international solidarity. But that doesn't have to be tied to the military, but could instead involve a strengthened or new civilian force with a sole humanitarian purpose that does not have conflicting objectives. Cuba, for example, with limited resources and under conditions of a blockade, has [developed a highly effective Civil Defence structure](#) embedded in each community that combined with effective state communications and expert meteorological advice has helped it survive many hurricanes with fewer injuries and deaths than its wealthier neighbours. When Hurricane Sandy hit both Cuba and the US in 2012, only 11 people died in Cuba yet 157 died in the US. Germany too has a civilian structure, *Technisches Hilfswerk/THW* (Federal Agency for Technical Relief) mostly staffed by volunteers that is usually used for disaster response.



*A number of survivors were shot by police and the military in the wake of Hurricane Katrina in the midst of racist media hysteria about looting. Photo of coastguard overlooking flooded New Orleans. Credit: NyxoLyno Cangemi/USCG*

### 13. How are arms and security companies seeking to profit from the climate crisis?

'I think [climate change] is a real opportunity for the [aerospace and defence] industry', said Lord Drayson in 1999, then UK Minister of State for Science and Innovation and Minister of State for Strategic Defence Acquisition Reform. He wasn't wrong. The arms and security industry has boomed in recent decades. Total arms industry sales, for example, [doubled between 2002 and 2018](#), from \$202 billion to \$420 billion, with many large arms industries such as [Lockheed Martin and Airbus moving their business significantly into all arenas of security from border management](#) to domestic surveillance. And the industry expects that climate change and the insecurity it will create will boost it even further. In a May 2021 report, [Marketandmarkets predicted booming profits for homeland security industry](#) because of 'dynamic climatic conditions, rising natural calamities, government emphasis on safety policies'. The border security industry is [expected to grow each year by 7%](#) and the broader [homeland security industry by 6% annually](#).

The industry is profiting in different ways. First, it is seeking to cash in on attempts by the major military forces to develop new technologies that do not rely on fossil fuels and which are resilient to the impacts of climate change. For example, in 2010, Boeing won a \$89 million contract from the Pentagon to develop the so-called 'SolarEagle' drone, with QinetiQ and the Centre for Advanced Electrical Drives from the University of Newcastle in the UK to build the actual plane – which has the advantage of both being seen as a 'green' technology and also the capacity to stay aloft longer as it does not have to refuel. Lockheed Martin [in the US is working with Ocean Aero to make solar powered submarines](#). Like most TNCs, arms companies are also keen to promote their efforts to reduce environmental impact, at least according to their annual reports. Given the environmental devastation of conflict, their greenwashing becomes surreal at points with the Pentagon in 2013 investing [\\$5 million to develop lead-free bullets](#) that in the words of a US army spokesperson 'can kill you or that you can shoot a target with and that's not an environmental hazard'.

Second, it anticipates new contracts due to governments' increased budgets in anticipation of future insecurity arising from the climate crisis. This boost sales of arms, border and surveillance equipment, policing and homeland security products. In 2011, the second Energy Environmental Defence and Security (E2DS) conference in Washington, DC, was jubilant about the potential business opportunity of expanding the defence industry into environmental markets, claiming that they were eight times the size of the defence market, and that 'the aerospace, defence and security sector is gearing up to address what looks set to become its most significant adjacent market since the strong emergence of the civil/

homeland security business almost a decade ago'. Lockheed Martin in [its 2018 sustainability report](#) heralds the opportunities, saying 'the private sector also has a role in responding to geopolitical instability and events that can threaten economies and societies'.

## 14. What is the impact of climate security narratives internally and on policing?

National security visions are never just about external threats, they are also [about internal threats](#), including to key economic interests. The British Security Service Act of 1989, for example, is explicit in mandating the security service the function of 'safeguard[ing] the economic well-being' of the nation; the US National Security Education Act of 1991 similarly makes direct links between national security and the 'economic well-being of the United States'. This process accelerated after 9/11 when the police were seen as the first line of homeland defence.

This has been interpreted to mean the management of civic unrest and preparedness for any instability, in which climate change is seen as a new factor. It has therefore been another driver for increased funding for security services from policing to prisons to border guards. This has been subsumed under a new mantra of 'crisis management' and 'inter-operability', with attempts to better integrate state agencies involved in security such as public order and 'social unrest' (the police), 'situational awareness' (intelligence gathering), resilience/preparedness (civil planning) and emergency response (including first responders, counter-terrorism; chemical, biological, radiological and nuclear defence; critical infrastructure protection, military planning, and so on) under new 'command-and-control' structures.

Given that this has been accompanied by an increased militarisation of internal security forces, this has meant that coercive force is increasingly aiming inwards as much as outwards. In the US, for example, the Department of Defense has [transferred over \\$1.6 billion worth of surplus military equipment](#) to departments across the country since 9/11, through its 1033 programme. The equipment includes more than 1,114 mine-resistant, armoured-protective vehicles, or MRAPs. Police forces have also bought increasing amounts of surveillance equipment including drones, [surveillance planes](#), [cellphone-tracking technology](#).

The militarisation plays out in the response of police. SWAT raids by the police in the US have rocketed from [3000 a year in the 1980s to 80,000 a year in 2015](#), mostly for [drug searches and disproportionately targeted people of colour](#). Worldwide, as explored earlier police and private security firms are often involved in repressing and killing environmental activists. The fact that militarisation increasingly targets climate and environmental activists, dedicated

to stopping climate change, underlines how security solutions not only fail to tackle the underlying causes but may deepen the climate crisis.

This militarisation seeps into emergency responses too. The Department of Homeland Security [funding for terrorism preparedness in 2020](#) allows the same funds to be used for 'enhanced preparedness for other hazards unrelated to acts of terrorism'. The European [Programme for Critical Infrastructure Protection \(EPCIP\)](#) also subsumes its strategy for protecting infrastructure from the impacts of climate change under a 'counter-terrorism' framework. Since the early 2000s, many wealthy nations have passed emergency power acts that could be deployed in the event of climate disasters and which are wide-ranging and limited in democratic accountability. The 2004 UK's Civil Contingencies Act 2004, for example defines an 'emergency' as any 'event or situation' which 'threatens serious damage to human welfare' or 'to the environment' of 'a place in the UK'. It allows ministers to introduce 'emergency regulations' of virtually unlimited scope without recourse to parliament – including allowing the state to prohibit assemblies, ban travel, and outlaw 'other specified activities'.

## 15. How is the climate security agenda shaping other arenas such as food and water?

The language and framework of security have seeped into every area of political, economic and social life, in particular in relation to the governance of key natural resources such as water, food and energy. Like with climate security, the language of resource security is deployed with different meanings but has similar pitfalls. It is driven by the sense that climate change will increase vulnerability of access to these critical resources and that providing 'security' is therefore paramount.

There is certainly strong evidence that access to food and water will be affected by climate change. The IPCC's 2019 [special report on Climate Change and Land](#) predicts an increase of up 183 million additional people at risk of hunger by 2050 due to climate change. The [Global Water Institute](#) predicts 700 million people worldwide could be displaced by intense water scarcity by 2030. Much of this will take place in tropical low-income countries that will be most affected by climate change.

However, it is noticeable that many prominent actors warning of food, water or energy 'insecurity' [articulate similar nationalistic, militaristic and corporate logics](#) that dominate debates on climate security. Security advocates assume scarcity and warn of the dangers of national shortages, and often promote market-led corporate solutions and sometimes

defend the use of military to guarantee security. Their solutions to insecurity follow a standard recipe focused on maximising supply– expand production, encourage more private investment and use new technologies to overcome obstacles. In the area of food, for example, this has led to the emergence of Climate-Smart Agriculture focused on increasing crop yields in the context of changing temperatures, being introduced through alliances like AGRA, in which major agroindustry corporations play a leading role. In terms of water, it has fuelled the financialisation and privatisation of water, in the belief that the market is best placed to manage scarcity and disruption.

In the process, existing injustices in energy, food and water systems are ignored, not learnt from. Today's lack of access to food and water is less a function of scarcity, and more a result of the way that corporate-dominated food, water and energy systems prioritise profit over access. This system has allowed overconsumption, ecologically damaging systems, and wasteful global supply chains controlled by a small handful of companies serving the needs of a few and denying access completely to the majority. In a time of climate crisis, this structural injustice will not be resolved by increased supply as that will merely widen the injustice. Just four companies ADM, Bunge, Cargill and Louis Dreyfus for example control 75–90 per cent of the global grain trade. Yet not only does a corporate-led food system despite massive profits fail to address hunger affecting 680 million, it is also one of the biggest contributors to emissions, now making up between 21–37% of total GHG emissions.

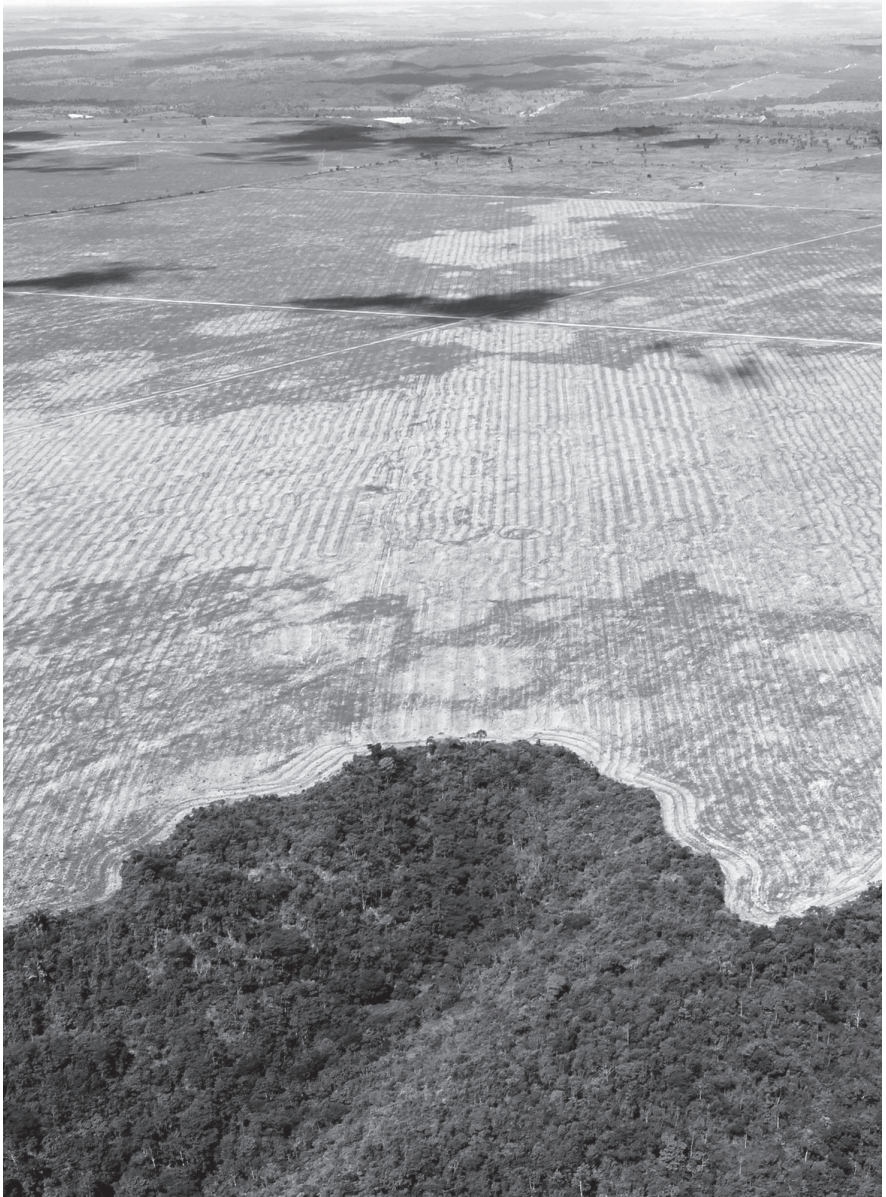
The failures of a corporate-led vision of security has led many citizens' movements on food and water to call for food, water and *sovereignty, democracy and justice* in order to address head-on the issues of equity that are needed to ensure equal access to key resources, particularly at a time of climate instability. Movements for food sovereignty, for example, are calling for the right of peoples to produce, distribute and consume safe, healthy and culturally appropriate food in sustainable ways in and near their territory – all issues ignored by the term 'food security' and largely antithetical to a global agroindustry's drive for profits.

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See also: Borras, S., Franco, J. (2018) [Agrarian Climate Justice: Imperative and opportunity](#), Amsterdam: Transnational Institute.

Hands off the Land (2016), [Cooling the planet: Frontline communities lead the struggle: Voices from the Global Convergence of Land and Water Struggles](#)





*Deforestation in Brazil is fueled by industrial agricultural exports.  
Credit: Felipe Werneck – Ascom/Ibama*



## 16. How are climate security approaches being adopted by low and middle income countries (L&MICs)?

While the drive to emphasise climate change as a security concern has largely been driven by wealthy countries, there is an emerging trend of low and middle-income countries (L&MICs) – particularly those with a large military apparatus and/or authoritarian regime – integrating climate-security narratives, and more broadly a militarised response to climate impacts, into their national security and international strategies. This comes in the context of a [significant increase in military spending](#) among L&MICs.

When the topic of climate security first emerged in the UN, L&MICs state actors had, to some degree, a unified voice as they mostly opposed the securitisation of climate change but this has changed in the last 15 years. Many now use the language of ‘climate security’, although for different purposes and with different meanings: to seek to accelerate climate action, to legitimise their own national military expansion, to justify foreign influence and intervention, and more positively to advance peace-building efforts. The structural power and resources of military and security forces means, however, that more militarised approaches often prevail. For instance, in May 2022 Prime Minister Mustafa Madbouly launched [Egypt’s National Climate Change Strategy \(NCCS\) 2050](#), adding climate change to its long list of threats to national security, which also includes anyone who criticises the regime and which has been used to solidify military control of the country, with the support of the US, Russia and the EU.

The power of the richest countries also influences climate-security agendas in L&MICs through funded partnerships and agreements, development aid, and climate finance, which results in foreign military initiatives, border militarisation, and the ‘securitisation of development aid’. For instance, the UK was the first to push the UN to hold a meeting in the UNSC on climate change and urged the UNFCCC to take action on climate security concerns in 2007. In 2011, the then UK Department for International Development (DFID) committed to spending 30% of its aid in fragile and conflict-affected states by 2014–15, an increase from 22% from 2010. Similarly, the Swedish International Development Cooperation Agency (Sida) defines climate change as a threat and allocates its funding in ‘conflict-affected areas’, particularly in sub-Saharan Africa. European states’ climate security funding also dovetails with their increased investment in [border externalisation](#), in which the EU funds border security forces in neighbouring countries, in particular North Africa, to attempt to prevent any refugees and migrants reaching European shores. Due to [the lack of consistent and transparent information](#) on climate finance, it is still difficult to quantify how much climate

finance and development aid is tied to militaries, police, and border forces in L&MICs under the agenda of addressing 'climate instability'.

The focus on security that increasingly permeates development aid, border militarisation and authoritarian regimes suggests that climate adaptation in L&MICs could become increasingly militarised. It obscures how colonialism, extractivism, deep economic structural inequality, racism and decades of neoliberal economic policies have contributed to countries' vulnerability to climate change. The establishment of [Loss and Damage Finance Facility \(LDFF\)](#) and the cancellation of [sovereign debt](#) would be far more effective strategies to support low-income countries to tackle the impacts of climate change impacts for which they bear little to no responsibility.

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Based on TNI's [Militarised adaptation? How the Global South is adopting climate-security approaches](#)

## 17. Can we rescue the word security?

Security will of course be something that many will call for as it reflects the universal desire to look after and protect the things that matter. For most people, security means having a decent job, having a place to live, having access to healthcare and education, and feeling safe. It is therefore easy to understand why civil society groups have been reluctant to let go of the word 'security', seeking [instead to broaden its definition to include and prioritise real threats](#) to human and ecological wellbeing. It is also understandable at a time when almost no politicians are responding to the climate crisis with the seriousness it deserves, that environmentalists will seek to find new frames and new allies to try and secure necessary action. If we could replace a militarised interpretation of security with a people-centred vision of human security this would certainly be a major advance.

There are groups attempting to do this such as the UK [Rethinking Security](#) initiative, the Rosa Luxemburg Institute and its work on visions of a left security. TNI has also done some work on this, articulating an [alternative strategy to the war on terror](#). However it is difficult terrain given the context of stark power imbalances worldwide. The blurring of meaning around security thus often serves the interests of the powerful, with a state-centred militaristic and corporate interpretation winning out over other visions such as human and ecological security. As International Relations professor Ole Weaver puts it, 'in naming a certain development a security problem, the "state" can claim a special right, one that will, in the final instance, always be defined by the state and its elites'.

Or, as anti-security scholar Mark Neocleous argues, ‘Securitizing questions of social and political power has the debilitating effect of allowing the state to subsume genuinely political action concerning the issues in question, consolidating the power of the existing forms of social domination, and justifying the short-circuiting of even the most minimal liberal democratic procedures. Rather than securitizing issues, then, we should be looking for ways to politicize them in non-security ways. It is worth remembering that one meaning of “secure” is “unable to escape”: we should avoid thinking about state power and private property through categories which may render us unable to escape them’. In other words, there is a strong argument to leave security frameworks behind and embrace approaches that provide lasting just solutions to the climate crisis.

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See also: Neocleous, M. and Rigakos, G.S. eds., 2011. *Anti-security*. Red Quill Books.

## 18. What are the alternatives to climate security?

It is clear that without change, the impacts of climate change will be shaped by the same dynamics which caused the climate crisis in the first place: concentrated corporate power and impunity, a bloated military, an increasingly repressive security state, rising poverty and inequality, weakening forms of democracy and political ideologies that reward greed, individualism and consumerism. If these continue to dominate policy, the impacts of climate change will be equally inequitable and unjust. In order to provide security for everyone in the current climate crisis, and especially the most vulnerable, it would be wise to confront rather than strengthen those forces. This is why many social movements refer to climate justice rather than climate security, because what is required is systemic transformation – not merely securing an unjust reality to continue into the future.

Most of all, justice would require an urgent and comprehensive programme of emission reductions by the richest and most-polluting countries along the lines of a Green New Deal or an Eco-Social Pact, one that recognises the climate debt that they owe to the countries and communities of the Global South. It would require a major redistribution of wealth at national and international levels and a prioritisation of those most vulnerable to the impacts of climate change. The paltry climate finance the richest nations have pledged (and yet to deliver) to low- and middle-income countries is completely inadequate to the task. Money diverted from the current [\\$1,981 billion global expenditure on the military](#) would be a first good step towards a more solidarity-based response to the impacts of climate change. Similarly, a tax on offshore corporate profits [could raise \\$200–\\$600 billion a year](#) towards supporting vulnerable communities most affected by climate change.

Beyond redistribution, we need fundamentally to start tackling the weak points in the global economic order that could make communities particularly vulnerable during escalating climate instability. [Michael Lewis and Pat Conaty](#) suggest seven key characteristics that make a community a 'resilient' one: diversity, social capital, healthy ecosystems, innovation, collaboration, regular systems for feedback, and modularity (the latter means designing a system where if one thing breaks, it doesn't affect everything else). Other research has shown that the most equitable societies are also much more resilient during times of crisis. All of this points to the need to seek fundamental transformations of the current globalised economy.

Climate justice requires putting those who will be most affected by climate instability at the forefront and leadership of solutions. This is not just about ensuring that solutions work for them, but also because many marginalised communities already have some of the answers to the crisis facing us all. Peasant movements, for example, through their agroecological methods are not only practising systems of food production that are proven to be more resilient than agroindustry to climate change, they are also storing more carbon in the soil, and building the communities that can stand together in difficult times.

This will require a democratisation of decision-making and the emergence of new forms of sovereignty that would necessarily require a reduction in power and control of the military and corporations and an increase in power and accountability towards citizens and communities.

Finally, climate justice demands an approach centered around peaceful and non-violent forms of conflict resolution. Climate security plans feed off narratives of fear and a zero-sum world where only a certain group can survive. They assume conflict. Climate justice looks instead to solutions that allow us to collectively thrive, where conflicts are resolved non-violently, and the most vulnerable protected.

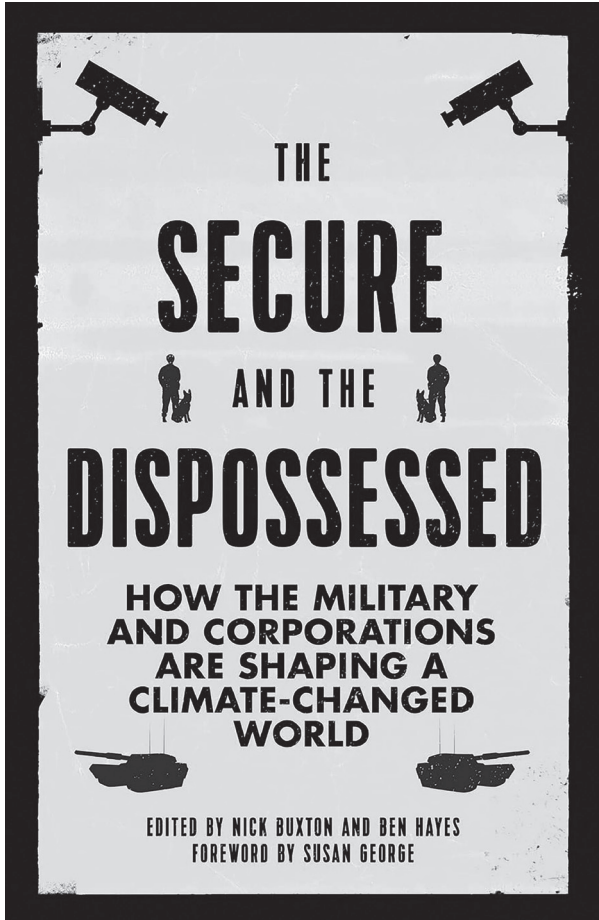
In all of this, we can draw on hope that throughout history, catastrophes have often brought out the best in people, creating mini, ephemeral utopian societies built on precisely the solidarity, democracy and accountability that neoliberalism and authoritarianism have stripped from contemporary political systems. Rebecca Solnit has catalogued this in [Paradise in Hell](#) in which she examined five major disasters in depth, from the 1906 San Francisco earthquake to the 2005 flooding of New Orleans. She notes that while such events are never good in themselves, they also can 'reveal what else the world could be like – reveals the strength of that hope, that generosity and that solidarity. It reveals mutual aid as a default operating principle and civil society as something waiting in the wings when it's absent from the stage'.



*Communities that are on the frontline of climate change are calling for solutions embedded in climate justice.*

For more on all these subjects, buy the book: N. Buxton and B. Hayes (Eds.) (2015)  
*The Secure and the Dispossessed: How the Military and Corporations  
are Shaping a Climate-Changed World.*

Pluto Press and TNI.



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