Climate change and security research: conflict, securitisation and human agency

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(2023) Climate change and security research: conflict, securitisation and human agency. PLOS Climate, 2 (3). e0000072. ISSN 2767-3200 doi: https://doi.org/10.1371/journal.pclm.0000072 Available at https://centaur.reading.ac.uk/110372/

PLOS CLIMATE

REVIEW

Climate change and security research: Conflict, securitisation and human agency

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Abstract

Climate change has increasingly been understood as a security problem by researchers, policymakers and media commentators. This paper reviews two strands of work that have been central to the development of this understanding–namely 1) the links between global heating and violent conflict and 2) the securitisation of climate change–before outlining an agency-oriented perspective on the climate-security nexus. While providing sophisticated analyses of the connections between climate change and security, both the conflict and securitisation strands have encountered several epistemological challenges. I argue that the climate security concept can be revitalised in a progressive manner if a more dynamic, relational approach to understanding security is taken. Such an approach recognises people's everyday capacities in managing their own safety as well as the security challenges involved in responding to a continually evolving threat such as climate change.

Citation: Arnall A (2023) Climate change and security research: Conflict, securitisation and human agency. PLOS Clim 2(3): e0000072. https://doi.org/10.1371/journal.pclm.0000072

Editor: Anamika Barua, Indian Institute of Technology Guwahati, INDIA

Published: March 2, 2023

Funding: The authors received no specific funding for this work.

Competing interests: The authors have declared that no competing interests exist.

1. Introduction

In recent decades, climate change has increasingly been understood as a security problem by a range of political actors, media commentators and researchers [1]. Part of a long-standing convention of securitising non-traditional threats, such as HIV/AIDS and transnational crime, that began in the late 1990s, climate change has, in the last 20 years, been lifted to the realms of 'high politics', such as those of the UN General Assembly and US military establishment. In general, there is consensus among researchers that climate change has the potential to undermine the securities of nation states and people. In addition, the existing insecurities that these entities experience (for example, due to political conflict or lack of economic opportunity) might be worsened by global heating [2]. However, how security is understood, the pathways and mechanisms via which it is connected to climate change, and what climate security (or lack of it) means for affected populations are issues of ongoing contention.

One of the complexities of these debates is that security means different things to different people [3] and organisations [4]. In general, security is defined as the condition of being free from danger or threat, either at a personal or collective level [5]. Threats can be real or imagined, imminent or in the future. Some researchers differentiate between 'hard security', referring to the actions of the military and related institutions, and 'soft security', which concerns how people access resources such as food and water [6]. Most common in climate change debates, however, is the division of security into 'state security' and 'human security' [7]. State

security involves the capacities of countries "to manage climate-related threats to safeguard their sovereignty, military strength, and power in the international system" [8, p.3]. Climate change risks undermining these capacities, threatening the opportunities and services that help people to sustain their lives and livelihoods. In the most extreme cases, climate change threatens the survival of entire countries, such as small island states located in the Pacific and Indian Oceans [9]. In contrast, human security "covers a variety of concerns ranging from the economy, the environment, the community, to health, the body and personal safety" [3, p.92]. Human security does not just refer to physical needs but also to social and psychological ones, as well as the symbolic and cultural elements of identity [10].

The growth of interest in climate security can be traced back to wider concerns about environmental security that emerged in the 1980s, anxieties that were encapsulated by the World Commission on Environment and Development's 1987 publication Our Common Future [11]. These concerns were accompanied by the reorientation of world powers at the end of the Cold War and the threat of global environmental change replacing the immediate dangers of nuclear war [12]. Since this time, climate change and security work has gained traction along two main strands. The first strand, according to Oels [13], concerns the risk of catastrophic climate change due to a failure of the international community to keep global heating below +2 degrees Celsius. Interest in this strand peaked in 2007 when the security implications of climate change were debated by the UN Security Council [14,15] and examined in reports produced by the US and UK security establishments [16]. The second strand, which emerged in the 1990s, concerns human security and, as outlined above, places greater emphasis on the wellbeing of people than on the security of states [17]. The human security strand was initially advanced through the UNDP's 1994 Human Development Report [18] and culminated in the production of the IPCC's Fifth Assessment Report in 2014, which contained an entire chapter on human security [19].

In the last 20 years, work along these two strands has resulted in a plethora of academic papers and government reports. It is not my intention in this present paper, however, to provide a broad review of all studies produced to date. Instead, my approach is to highlight two areas of climate security research that have received considerable attention in recent years and to discuss some of the challenges that these bodies of work have encountered. The first area concerns the possibility of global heating leading to intercommunal or interstate conflict. Epistemologically, researchers in this area take a positivist approach, viewing human or state security as a pre-existing condition that is capable of being located and measured through empirical examination. However, as I will argue, while this approach has been a focus of considerable scientific endeavour in recent years, there is as yet little consensus among researchers on the extent to which climate change is leading (or will lead) to changes in human propensity to violence [20], with some expressing doubts that a direct link can, or should, be established at all [21].

In contrast to positivism, researchers working in the second area take a constructivist approach to understanding the climate-security nexus, seeking to explain how security problems and solutions are established, represented and acted upon in society and towards what purposes. This approach is exemplified by the so-called 'Copenhagen School', which focuses on the discursive links between security threats and extreme remedies and countermeasures. Under this School, researchers claim that climate change has been 'securitised', which risks producing a series of perverse outcomes including the militarisation, technicalisation or depoliticization of climate change policy. However, I will argue that, despite the influence of this critique in academic circles, the effects of securitisation on the policies and activities of national governments have been limited to date. In other words, by focusing on the realm of

the representational, the securitisation field has made little connection with what governments and organisations are doing 'on the ground'.

With these limitations in mind, I then go on to suggest a third approach, one that engages with the idea of human agency, or "capacity to make a difference" [22, p.14], in climate change and security debates. This approach emphasises that the conditions of security and insecurity are not static but rather relational, negotiated and historically structured. It also draws attention to people's day-to-day capabilities in managing their own climate securities while recognising the challenges of negotiating intersectionality in the context of a continually evolving threat like climate change. In advancing these ideas, I hope to develop a more dynamic approach to climate security debates than has been the case to date. The next section considers scientific efforts to establish an empirical link between climate and human conflict followed by consideration of the Copenhagen School's approach to climate security in section 3. Section 4 introduces key ideas concerning climate security and human agency, and section 5 provides the conclusion.

2. Connecting climate change and conflict

Researchers have proposed several theoretical causal mechanisms between climate change, security and conflict in recent years. Barnett [2], for example, suggested that political scale, the nature of governance within countries, and scarcity or abundance of natural resources are three key influencers on the likelihood of conflict emerging as a result of climate change. Similarly, Seter [23] identified three factors–economic hardship, resource levels and migration driven by economic change–connecting climate change and conflict, and Bretthauer [24] suggested that agricultural dependence and low levels of education increase the likelihood of armed conflict resulting from global heating. Other researchers have emphasised that, while direct links between climate change and conflict exist, there are multiple pathways between these "ranging from agriculture and economic productivity or demographic pressure to psychological mechanisms" [25, p. 241]. This means that, rather than a 'one scenario fits all' approach, people's particular experiences of environmental change in the context of wider social structures and processes are likely to create individual paths to insecurity [16]. Researchers have also argued that climate change acts as a 'threat multiplier' rather than a direct cause of human insecurity and violence [10]. In other words, regions already vulnerable to violent conflict due to low levels of human development are similarly vulnerable to the effects of climate change [26,27]. This latter argument raises the prospect of 'double exposure' to climate change and conflict occurring among populations [28].

Together, these studies suggest that numerous connections exist between climate change, environmental degradation and conflict. However, finding empirical evidence of these connections has been challenging. While long-term historical studies have established a measurable relationship between climatic change and large-scale human crises [29,30], most work looking at change over shorter timeframes has been inconclusive, with "not yet much evidence for climate change as an important driver of conflict" [31, p.7]. There are some examples where such an effect has been determined, although these have tended to be extreme or isolated examples. For example, in their study of the causation of conflict and displacement in East Africa over the last 50 years, Owain and Maslin [32, p.1] found that climate variations played little role, although they did conclude that "severe droughts were a contributing driver of refugees crossing international borders". Fjeld and von Uexkull [33, p.444] were similarly tentative, concluding that, in certain conditions, there is "some evidence that the effect of rainfall shortages on the risk of communal conflict is amplified in regions inhabited by politically excluded ethno-political groups". And Abel et al. [25, p.246], utilising data on refugee flows

between 2006 and 2015 across 157 countries, found little evidence for a "robust link between climatic shocks, conflict and asylum seeking for the full period". The only exception, the authors noted, is evidence of a causal link between 2010 and 2012 when "global refugee flow dynamics were dominated by asylum seekers originating from Syria and countries affected by the Arab spring, as well as flows related to war episodes in Sub-Saharan Africa". In these studies, the main barrier to establishing a clear climate-security connection has been the very wide range of research designs, scales of analysis and case studies undertaken [25] as well as the "numerous intervening economic and political factors that determine adaptation capacity" [34, p.1]. Taken together, these factors complicate scientific efforts.

Given these challenges, there have been calls in the literature for more research to uncover direct pathways and intermediate factors connecting climate change and conflict. As pointed out by von Uexkull and Buhaug [35], techniques of analysis and disaggregation in the climate security field are becoming more sophisticated all the time, meaning that such connections might become more demonstrable in the future. Nonetheless, other researchers have expressed discomfort with the general direction of this work, suggesting that "some studies in environmental security are in danger of promulgating a modern form of environmental determinism by suggesting that climate conditions directly and dominantly influence the propensity for violence among individuals, communities and states" [36, p.76]. Similarly, some researchers have questioned the frequent portrayal of people exposed to climate change and conflict as 'threats' to Western countries [37,38]. Inevitably, any discussion of state and human security, whether linked to environmental change or not, will implicitly or explicitly involve the identification of 'suspect communities' that are more likely to become insecure and therefore subject to security measures to contain or manage them [39]. These concerns move the focus of debate away from seeing climate security and insecurity as empirically verifiable conditions towards consideration of how in/security is represented via discourse. This is the focus of the next section.

3. Securitisation of climate change

Researchers working on the securitisation of climate change seek to understand how the idea of climate security is constructed as a 'matter of concern', in whose interests this process operates, and the social, economic and political consequences for individuals and groups identified as security threats or problems. As outlined above, this body of work mainly draws upon the Copenhagen School of security studies, which highlights the risk of "discursive practices invoking (current or projected) climatic events as an existential threat, thereby justifying urgent measures in response" [40, p.807]. These measures, in turn, may be exceptional or extraordinary in nature, including the build-up of military and police forces along national borders [6]. In this way, an essentially political problem concerning the distribution of costs and benefits of measures to tackle climate change becomes overwhelmed by "perverse responses that do not address the [root] causes of climate change and even position those affected most by it as threatening" [41, p.46]. The securitisation of climate change, in other words, threatens to remove global heating from political debate while imposing an antagonistic approach that poses "a threat to the kind of peaceful international cooperation and development initiatives needed to respond equitably and effectively" [42, p.234].

In this way, the Copenhagen School has presented the main challenge to those seeking to elevate climate security to the 'high politics' of the UN and other international bodies in an attempt to generate publicity and attention [43]. There is, however, debate over the degree to which the apocalyptic images frequently used in climate security debates have translated into 'real world' changes in government policy and practice [44]. This is because, as argued by Warner and Boas [45], the actors that are mobilising climate change as an existential threat

have tended to advocate relatively mundane response measures rather than more exceptional ones, thereby relying "on solutions that are anchored in the present-day distribution of power and geopolitics" [10, p.280] instead of addressing root causes [46]. According to Mason [40, p.808], this mundane approach is "designed to manage climate risks in a way that renders them less threatening to Western geopolitical and geo-economic interests" but is also grounded in "a depoliticised stance reflecting UN norms of neutrality and impartiality". For example, Burnett and Mach [47, p.2] cast doubt on whether the many climate risk reports and statements produced by the US Department of Defence in recent years "are regularly translated into institutionalized planning and decision-making", limiting response measures to "selective integration" of climate considerations into previously established security indices and country plans. Similarly, Trombetta [48, p.144] argued that the risk of climate-induced migration to the EU has "become subjected to the already existing European machinery of managing and controlling migration" that is consistent with the logic of governing human movement 'from a distance' [49].

An additional challenge for the securitisation of climate change argument is that, while climate security rhetoric has garnered considerable attention in recent decades, its prevalence and impact has been geographically uneven, often because the catastrophic scenarios presented by such rhetoric have been met with scepticism by some audiences [45]. In the main, it is the large multinational organisations located in the Global North that have adopted the language of climate security [4], especially the European Union [50,51]. In contrast, there has been a decline in the amount of securitising climate change language in some countries located in the Global South [12]. Boas [52], for example, documented how the Indian government rejected 'alarmist' ideas of climate security, dismissing them as a Western negotiating tactic designed to encourage more binding carbon mitigation targets. Similarly, von Lucke [53] argued that the securitisation of climate change in Mexico produced a limited effect on government policy due, in part, to the dominance of 'hard' security issues in the country, such as conflicts with drug cartels. In these cases, there is little consensus over what role, if any, intergovernmental organisations like the UN Security Council should adopt in encouraging the governments of developing countries to move climate security concerns higher up their political agendas [54]. Taken together, these studies cast doubt on the argument advanced by scholars that the securitisation of climate change is leading to extreme and exceptional measures.

4. Climate change, human security and agency

Both the positivist and constructivist approaches to understanding the climate change-security relationship outlined above underplay human agency, or the ways in which "individuals with different resources at their disposal (economic, cultural, political or environmental) are able to negotiate the more-or-less favourable circumstances into which they are born and raised" [5]. For example, Raleigh [36, p.77] suggested that, "In arguing that communities directly or indirectly respond to increased temperatures by attacking their neighbours, competitors or the state, deterministic studies neglect the complex political calculus of governance, the agency of communities, and the multiple ways that people actually cope with challenging environmental conditions". Most actors, therefore, are capable of exercising some kind of power [22]–of processing social experience and devising ways of coping with climate insecurity–in ways that do not resort to violence, even under the most difficult of circumstances [55]. Moreover, McDonald [41, p.47] argued that, while being "explicit about the pathologies associated with 'securitization'", the Copenhagen School has fallen short in providing clear ideas about human agency. This ambiguity, in turn, "serves to reinforce international power inequalities and renders criteria for intervention by powerful states and international institutions less transparent and less

accountable" [56, p.113]. With these limitations in mind, the aim of this section is to outline an agency-oriented perspective on climate security. As set out in section 1, this perspective emphasises the relationality of security and insecurity over time and between different places as well as the centrality of people's own everyday security practices. These dimensions are explained in greater depth below.

Writing about human security in the Caribbean, Noxolo [57] makes the important point that security and insecurity are deeply located, historically grounded and constantly produced and reproduced in relation to one another. Security and insecurity, therefore, are not new, future-oriented concepts that have arisen solely in the context of climate change but, instead, are conditions that have been experienced by marginalised individuals and groups over time. This is evident, for example, when considering the effects of climate change on tribal communities in the United States [58] or on groups that have been repeatedly subject to population relocation [59]. Moreover, the distribution and effects of security and insecurity are geographically unequal. Indeed, Philo [60, p.1] described the highly uneven geographies of security and insecurity as "entangled" across networks existing at a range of spatial scales, from the local to the global. In other words, the processes through which security and insecurity come about in different places are closely linked, and the measures undertaken by some groups to ensure their own securities potentially undermine or trade off the securities of others. For example, with regard to the risk of theft and burglary, Valverde [61, p.13] pointed out that "the private security guard who is concerned to protect only one building will be likely to displace disorderly people to the next block". Similarly, an intervention carried out by one group to secure their livelihoods in a situation of prolonged drought–such as farmers extracting water from a river to irrigate their crops–might diminish the availability of this resource for others downstream, thus risking the latter group's security.

More broadly, trade-offs can emerge at the level of the nation state between, for example, imperatives to ensure national energy security [62] and people's human securities in accessing agricultural land and water [63]. Hydroelectric dams, for example, are frequently promoted as sources of 'green energy' that contribute to climate change mitigation efforts and that help rapidly developing countries secure a much-needed supply of electricity [64]. However, as has been widely documented by researchers and activists, such dams are also often a source of insecurity for local populations, many of whom are displaced by construction activities, infrastructure and reservoirs, losing access to valuable natural resources in the process [65]. Security trade-offs in climate change responses can also occur in relation to planned adaptation or resilience-building initiatives undertaken by governments or development agencies. For example, the resettlement of vulnerable populations out of areas deemed to be no longer safe due to weather-related extremes can lower direct exposure to environmental shocks and stresses but can also lead to communities being subjected to new forms of danger that risk further diminishing their climate securities. To illustrate, Arnall [66], working in Mozambique, showed how the government-led relocation of small scale farmers out of river valleys to nearby areas of higher elevation land helped to protect farmers against large-scale floods. However, relocation also increased farmer exposure to drought, with the outcome that many vulnerable groups in resettled communities were compelled to return to live in floodplains in order to continue their farming activities. Returning in this manner increased their food and income securities but also increased the risks of physical harms from floods.

The existence of these inequalities can complicate efforts by governments and development agencies seeking to enhance people's securities in the face of climate change [67]. However, it does not mean that people themselves are necessarily helpless. Individuals and groups, including women [68,69] and young people [70], are constrained by the structural inequalities in which they exist but at the same time often live with and manage a wide range of insecurities

on an ongoing, everyday basis. As argued by Crawford and Hutchinson [71, p.1185], this form of 'lived security' encompasses people's "actual experiences of security processes and the related practices that people engage in to govern their own safety" rather than objectified, expert-led risk assessments [72]. A lived security approach, therefore, moves away from a focus on the spectacular and exceptional towards consideration of "what it means to be safe, secure and content" on a daily basis [73, p.70]. Everyday security is important because if climate change research focuses purely on 'official' or 'high' security then much of what makes people's lives liveable and meaningful 'on the ground' may be lost. For example, Arnall [74, p.1], exploring farmer mobilities in and out of floodplains in rural Mozambique, drew on the notion of 'everyday agency' to show "people's day-to-day capacities to respond to environmental variability and change while also drawing attention to the challenges associated with the gradual accumulation of risk in mobile, rural livelihoods". In the light of increasing frequency, severity and duration of weather-related extremes around the world, understanding how people seek comfort and safety on a day-to-day basis will become increasingly important [75–77].

In living with and managing in/security, people's everyday experiences are likely to be shaped by a wide range of enabling and constraining intersectional factors, including gender, class, ethnicity and age. These factors, in turn, can intersect with risks and impacts caused by environmental shocks and stresses to heighten conditions of vulnerability and marginalisation. As pointed out by Crawford and Hutchinson [71, p.1189], the traditional field of security studies, which deals with politics and international relations, has been "rightly criticised for paying insufficient attention to the views and experiences of both minority groups and women". Nonetheless, some feminist scholars have found the human security concept to be a useful one not only in articulating the structural disadvantages often experienced by women but also the crucial role played by women's agency in the often overlooked domestic sphere [78]. For example, drawing on the case of two communities in central Mexico, Bee [79] highlighted the role of women's knowledges in obtaining essential resources, including water and food, in the context of drought, thereby helping to achieve security at the household level. This example illustrates, in turn, the importance of disadvantaged groups being able to exercise agency to secure different forms of capital, including social, physical, financial, human and natural capitals, during weather-related crises and the harms that potentially arise when they are unable to do so [80]. In this way, an agency-oriented in/security lens has the potential, like vulnerability, to diagnose "inherent social and economic processes of marginalization and inequalities" in the context of environmental shocks and stresses and to seek to identify ways of addressing these [81, p.5].

Understanding how intersectional processes of security and insecurity operate and are negotiated will become more and more important as the effects of climate change are increasingly felt over the next few decades. As I have argued above, people are often more capable of devising ways of coping with insecurity than is commonly appreciated in climate security debates. However, these capabilities cannot be taken for granted or afford to 'stand still' in the face of global heating. Indeed, as pointed out by Valverde [61, p.5], "As Hobbes, the original philosopher of security, noted long ago. . .simply erecting a moat or taking other one-time measures to defend an existing space will not create security. . . The project of achieving security takes the form of an ever-rising spiral". In other words, the task of addressing security needs can characterise an 'arms-race' between threats perceived and measures implemented, thus resembling an ongoing process of escalation rather than a final, achieved condition. Similarly, climate change is constantly presenting actual or anticipated threats to people's securities that demand a continually evolving response. This creates new fields of governance that did not previously exist and that sometimes contradict or elude traditional management approaches to achieving climate security that rely on conventional notions of human progress

and control [82]. For example, the emergence of heatwave risks in European cities in recent years contradicts "the common assumption that high levels of economic and technological development automatically lead to lower vulnerability to weather extremes" [83, p.1]. And 'extreme wildfires', which have increased in magnitude, severity and prevalence in the past ten years, are presenting new and growing dangers to people in developed and developing countries alike despite the increasing abilities of scientists to map and predict wildfire occurrence [84]. In these cases, individuals and groups are not only required to negotiate their conditions of security with each other 'on the ground' but also with governments, agencies and scientists seeking to respond to global environmental change, often in trade-offs with other securities.

5. Conclusion

For advocates of a climate change-security link, 2007 was a high point, a moment when dominant, narrow accounts of security were challenged and climate change was elevated "to the 'high politics' realm. . .where it would attract the priority and funding it deserved" [41, p.43]. There is little doubt that the positioning of climate security in this manner has helped to highlight the dangerous nature of global heating [2], providing the issue with a "major boost in attention" [6, p.137]. However, as demonstrated in this paper, despite ongoing concerns about the securitisation of climate change, it has had little effect on the policies and activities of national governments, which have tended to take 'business as usual' approaches to managing and containing international migration. Similarly, notwithstanding the mainstream nature of climate change and conflict issues among international and national policymaking circles, the scientific community is generally ambiguous on the subject, frequently concluding that a direct link does not exist [21]. This is reflected by how human security featured prominently in the IPCC's 5th Assessment Report in 2014 but was little mentioned in its follow-up 6th Assessment Report in 2021. Indeed, as well as spurring conflict, worsening climatic conditions also have the potential to set the stage for enhanced cooperation between actors in seeking to reach common solutions, especially at regional [85] and international levels [86].

These challenges have led some researchers to suggest that we 'desecuritise' climate change altogether, thus returning the global heating problem to the realm of normal politics where it can be openly debated and discussed [41]. And yet, despite the challenges that this field of research has encountered to date, I have argued that the climate security concept can be revitalised in a progressive manner if a more dynamic understanding of security is taken, one that recognises the relational, historically-grounded nature of security and insecurity and that appreciates the role of people's everyday practices in managing their own safety. It is also necessary to consider where the social and ecological limits to such practices might lie, especially in relation to intersectionality and the security challenges involved in responding to a continually evolving threat such as climate change. These understandings are important considering the unequal spatial and temporal effects of global heating on societies that are being witnessing around the world. Crucially, such an approach also considers the highly uneven nature of governmental responses to climate change as individuals and groups seek to enhance their own securities within and across social structures.

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