Knowledge production at the environment-security nexus: Between orthodoxy and transformation

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ABSTRACT

The question of how changes of the natural environment interact with security receives increasing attention within the context of 21st century global challenges. While abundant knowledge exists, there is no consensus on the nature of the environment-security nexus, and instead, we observe a knowledge battle over predicting the “real” security implications of environmental change. What has received limited attention, however, is the question of how knowledge production on this issue is itself producing “global realities” by strengthening certain practices while foreclosing others. This special issue addresses this gap. It examines how knowledge production influences efforts of governing global environmental change-related (in)securities and how these developments (re)shape the contexts within which they unfold. Providing the analytical framework for this endeavor, this article engages with the role of knowledge production in environmental politics. We extend these debates to security governance, moving beyond discursive (de)constructions, to highlight the importance of tracing the impacts and policies produced by different environment-security knowledge frames. Using Cox’s critical vs. problem-solving knowledge distinction, we provide examples of how knowledge production on the environment-security nexus both reinforces and challenges prevailing ways of knowing, ordering, and securing. Orthodox knowledge production, aligning with state-centric reasoning, remains dominant. Yet, we highlight how shifts in the orthodox/transformative knowledge production spectrum are on the rise, offering potentials for rethinking security in the context of environmental crisis. We conclude by calling for more open knowledge systems and for broadening knowledge-practice interfaces, as pathways for re-focusing environment-security framings towards more just and sustainable visions, practices and policies.

1. Introduction

This special issue addresses how knowledge production on the interrelation between environmental change and (in)security – what we refer to as the environment-security nexus – influences contemporary policy and governing practices. In so doing, we advance the understanding of the environment-security nexus by examining how different epistemological underpinnings, temporal imaginaries, and resulting practical as well as normative effects, shape the unfolding and manifestations of this nexus in different world regions.

To underscore the practical significance of assessing these issues, we begin by providing a few illustrative snapshots. First, let us look at the remarks of the US Representative to the United Nations (UN), Ambassador Linda Thomas-Greenfield, at a recent UN Security Council (UNSC) Open Debate on Security in the Context of Terrorism and Climate Change. Thomas-Greenfield’s statement strongly drew on the epistemic authority of the first-ever (US) National Intelligence Estimate (NIE) Climate Change and International Responses Increasing Challenges to US National Security Through 2040 (NIC, 2021). “The report,” she told her audience, “made its points very clearly: Climate change will increase instability and internal conflict.” The NIE, according to Thomas-Greenfield, also highlighted that “the climate crisis is set to drive millions from their homes, propelling mass migration.” Far from just being “a human catastrophe,” these processes primarily affect “the exact kinds of vulnerable populations terrorist organizations prey upon.” And as “extremist groups exploit weak governance, systemic corruption, and societal fractures to embed themselves in communities and develop sources of income,” the climate crisis “could exacerbate these challenges and provide openings for these terrorist organizations.” Against this backdrop, she commented the UNSC, which recognizes climate change as a “threat multiplier,” for taking seriously the link between climate change and conflict. Her speech ended with an urge for action and adaptation.

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measures “to save lives and reduce instability across the world” (United States Mission to the United Nations, 2021).

The practical implications of narratives braiding climate change and political “extremism” can be observed in different settings around the globe. The Sahel – which is among the world’s most climate-affected regions – paradigmatically illustrate how the coupling of climate change to extremism, armed conflict, migration and state fragility, has contributed to legitimizing and expanding the scope of military and defence-based policy solutions (Charbonneau, this issue; Esteve, 2021). Here the “climatization” of security, and security-driven policy framings of climate change (Esteve, 2021) are mutually constitutive knowledge-practice constructs, as the past two decades’ steep rise in military interventions defines the context wherein the climate crisis unfolds and is framed (Daoust and Selby, 2022; Yeltekin, 2022).

Other socio-political contexts exhibit different mobilizations and implications of the “extremist” narrative, for example casting protestors advocating for climate action as threats to domestic order and stability (Dunlap, this issue; Brock and Dunlap, 2018). In 2023, statements of German politicians depicting protestors as “climate extremists” in the tradition of the Red Army Faction were followed by police raids of the homes of activists of the group Letzte Generation on charges of forming a criminal organization (Berliner Zeitung, 2023; Münchener Merkur, 2023).

In the US, “eco-terrorism,” has been depicted by the Federal Bureau of Investigation’s Deputy Assistant Director as “(t)he No.1 domestic terrorism threat” (quoted in Potter, 2018: 883) and the, “terrorism enhancement,” a legal designation that adds 15 years to the sentence of those convicted of a crime in the U.S., has been applied to environmental activists over and above white supremacists and the anti-abortion movement” (Chalecki, 2022).

The upsurge of criminalization of environmental activism has had dire consequences for advocates of environmental protection in countries such as Brazil, Colombia, Guatemala, Honduras, India, or the Philippines, where environmental defenders have been portrayed as “anti-development extremists” (Wachenje, 2020). As a recent large-n analysis of 2743 cases showed, environmental defenders are globally confronted with “high rates of criminalization (20% of cases), physical violence (18%), and assassinations (13%), which significantly increase when Indigenous people are involved” (Scheidel et al., 2020: 1; on the gendered dimension of this, see Tran and Hanacek, 2023).

While the situation is particularly bleak in Latin America, which has been reported as the most dangerous world region for environmental activism, again with indigenous populations facing the greatest disproportionate risks (Birss, 2017), the region is also a site of transformative change toward new frameworks for environmental decision-making and protection. Regional civil society groups, along with human rights activists and environmental experts, recently spearheaded a process whereby the world’s first legal instrument to include provisions for protecting the security of environmental human right defenders, as well as the public right “to access environmental information and participate in environmental decision-making” (Ali, 2021) was produced: the Escalzi Agreement, which entered into force in April 2021. Making reference to indigenous conceptions of safety and well-being as states of human-nature unity, the Secretary General of the UN’s Economic Commission for Latin America (CEPAL) stressed that “The Escalzi Agreement is a tool that needs to be used to construct a different future that changes our approach to development and that it narrows the gap of good living, beyond an anthropocentric approach to adopt an ecocentric approach in which humanity is part of nature and not as its dominator” (quoted in Davila, 2022: 69).

This whirlwind overview of different entanglements of environmental change and security policies showcases how diverging knowledge frames of the environment-security nexus construct different interpretations of the nature of (in)security, including understandings of whose security is at stake, in the context of environmental crisis. Consequently, different meanings and interpretations of the nexus privilege different responses – from policies centred on countering instability and extremism (in various forms), to efforts of creating new frameworks and futures centred on eco-centric human safety.

At the centre of these diverging interpretations sits a tension between order and transformation, with knowledge production being a decisive factor within this dynamic. Knowledge production, as we will elaborate in greater detail below, has the potential to both uphold established orders and drive transformative change. Knowledge production can contribute to maintaining status quo by providing a foundation for decision-making, policy development, and governance aiming at the preservation of the given order. Simultaneously, knowledge production can also fuel transformation by challenging existing norms, fostering policy innovation, and encouraging new perspectives.

Accordingly, knowledge production plays a significant role in shaping security-driven responses to environmental change, and raises the question of what types of responses are required. Does environmental crisis require policies that step-up security measures serving to protect states and international stability against the multiplying threats brought about by environmental change? Or, on the flipside, is environmental change integral to a deeper crisis underpinning the global order, and prevailing human-nature relationships, and should thereby serve as a catalyst for practices seeking to transform this order?

The first vision exerts a hegemony grounded in existing state-centric reasoning, tied with a concept of security designating the capability of nation states (and the international system), to defend themselves against external and internal threats. The second vision, refocusing security to connote eco- and human-centred aspirations (planetary rather than state-centric in nature) remains more marginal, exactly as it calls into question currently dominant ways of knowing, ordering, and securing.

With Robert Cox (1981; 2012), these differences can be understood in terms of “orthodox,” or “problem-solving” knowledge on the one hand, and “critical” knowledge, on the other. Recognizing that knowledge is far from impartial and objective but “always for someone and for some purpose” (Cox, 1981: 128, original emphasis), Cox depicts orthodox knowledge as a form of knowledge that is grounded in hegemonic theories, concepts, and practices, which reflect (and reinforce) existing norms and power structures. Such orthodoxy leads to a particular problem-solving outlook that aims to address specific issues by finding practical solutions to current problems rather than questioning underlying power structures and epistemological assumptions that contribute to those problems. In a nutshell, this knowledge seeks to make improvements within the established order, championing a vision of incremental change. In contrast to this, critical knowledge seeks to uncover and challenge the current state of affairs and its underlying power structures by questioning dominant paradigms to create new understandings and practical alternatives that can lead to transformative change.

Applied to the domain of security (see also Peoples and Vaughan-Williams, 2014; Williams and Krause, 1997), and the security-environment nexus more broadly, this perspective is useful for de-naturalizing dominant understandings of security that are grounded in “an association with defence, the military and the state” (McDonald, 2018a: 3), and which, recall, inform the hegemonic framing of the environment-security nexus while marginalising other interpretations.

To be sure, orthodox knowledge production underlying dominant framings of the environment-security nexus, and its ability to shape the policy arena, has far from escaped contestation. Indeed, the linking of environmental change to security threats has triggered a burgeoning
academic debate, especially “for and against” understandings and predictions of environmental change as a global “threat multiplier” (e.g. Barnett, 2019; Hurriens and Nachbar, 2015; Hayes and Knox-Hayes, 2014; Ide et al., 2020; Klare, 2019; Salehyan, 2014). Citing reductionism, flawed methodological approaches and normative drawbacks of security-driven predictions and frames pertaining to environmental and climate change (e.g. Barnett, 2019; Buhaug, 2010, 2015; Hulme, 2011), some scholars and analysts argue for abandoning security frameworks in assessments of environmental change (Buxton, 2021; Cudworth and Hoibden, 2013; for a discussion of this issue, see McDonald, 2018).

The possibility of instead using environmental change as prism for rethinking the concept of security itself, while simultaneously utilizing the security framing of environmental change to add urgency in the call for action, has gained some traction (Harrington and Shearing, 2017; McDonald, 2018, 2021). Such perspectives, however, remain comparatively underexplored, as does the related question of how knowledge claims on environmental change’s “factual” implications for security itself, are part of producing truth claim-based global realities in the first place, by informing and strengthening certain practices and policies, while foreclosing others. This special issue addresses this gap, and in doing so, it delves into a range of closely related matters.

First, widening the space for analyzing a greater range of environment-security relationships and their policy manifestations, requires attention to underexplored questions of how these processes of knowledge production unfold at various scales and in different—often interconnected—sites around the globe as well as what effects they have, practically and normatively.

This moreover pertains to global knowledge/power asymmetries and the Western-centrism underpinning these processes. Compared to other domains of environmental governance where non-Western, and in particular Indigenous, epistemologies have been (partly) recognized (e. g. Roué et al., 2022), in the domain of security governance Wester-centrism prevails, informing problem- and policy-framings. Such bias is exacerbated by the underlying temporalities (on the importance of temporarities in and for environmental policies, see Baker et al., 2018). In seeking to govern present security risks based on predictions regarding future environmental developments, previous forms of human-environmental interactions and their impact upon contemporary (in)security issues fall out of the picture. This includes colonial encounters and their post-colonial afterlife. It also covers previous forms of governance failure (in their practical, institutional and international manifestations) and broader questions of the failings of carbon-driven capitalism and long-standing globally dominant ways of organizing the world, with all the inequalities and knowledge asymmetries these “conjoined histories” have come with (Chakrabaty, 2014, 2021).

In addressing these lacunae, the special issue offers an interdisciplinary Social Sciences perspective, which seeks to assess how ideational and practical configurations of the environment-security nexus are produced by social, political, historical, institutional, and economic factors that shape underlying instances of knowledge production (Fassin and Steinmetz, 2023). Bringing together scholars with backgrounds in Anthropology, Cultural Geography, Development Studies, International Relations, Political Science, and Sociology, the special issue engages with debates on the role of knowledge in global environmental politics (Turnhout et al., 2019; Vanhala et al., 2021; Vink et al., 2013; Yusoff, 2009), and related global geographies of governance and policy (Peck, 2000). It empowers associations and the domain of security governance, while moving beyond the prevailing analytical privileging of discursive (de)constructions within the latter debate (e.g. Estève, 2021; Beas and Rothe, 2016; Diez et al., 2016). Uncovering different scales and sites of practice and policy implementation – from Bolivia over the Sahel, to Oceania, and Vietnam – the special issue, taken as a collection, offers a grounded critique of orthodox framings of the climate-security nexus, and considers how the concept of security itself may be diversified in the face of the current global environmental crisis.

The remainder of this introduction will unpack these dimensions in greater detail. We begin by discussing the question of knowledge production in security-driven environmental policy. Moving on from this, we highlight the connections between knowledge production, temporalities and policies, and the resulting influence on the ideational, practical, and normative outlook of the environment-security nexus. Illustrating these connections with concrete examples of orthodox and transformative configurations of the environment-security nexus, we then point out the contested nature of underlying knowledge production and the related possibilities and challenges for rethinking our understanding of security against the backdrop of contemporary environmental challenges. Next, we present an outline of the contributions to this special issue. The articles display a continuum of the epistemological underpinnings, and resulting practical consequences, of different manifestations of the environment-security nexus, ranging from orthodox knowledge frames informed by state-centric ideas of political order-maintenance, over more transformative framings, to critical knowledge production inspiring alternative visions and practices concerning the connections between environmental change and security. Against this backdrop, we conclude by calling for more open knowledge systems and for broadening knowledge-practice interfaces, as pathways for re-focusing environment-security framings towards more just and sustainable visions, practices and policies.

2. Knowledge, power and the production of environmental and security policy frames

2.1. Knowledge production and environmental policy

Governance, understood as “institutionalized modes of social coordination to produce and implement collectively binding rules, or to provide collective goods and services” (Börzel and Risse, 2021: 5), is inseparable from knowledge. Being “a matter of authoritative knowing,” governance ultimately depends upon “knowledge work and expertise” (Vol and Freeman, 2016: 1). Governance’s dependency upon knowledge also applies to the domain of environmental governance, defined as “forms of collective decision-making and action that are aimed at protecting the environment and resolving conflicts over natural resources” (van der Molen, 2018: 18). This is the case, as decision-makers rely upon knowledge and expertise to design policies, conceived of as purposively devised actions seeking to attain particular governance outcomes (Hill and Hupe, 2009: 2). These knowledge workers, usually people recognized as experts, and regularly scientists, tend to be fashioned, and portray themselves, as “objective arbiters of the facts and a source of trusted wisdom, offering the promise, if not reality, of impartial knowledge” (Reppy, 2015: 127).

The alleged impartiality of the knowledge produced by these actors endows them, as well as policy-makers relying upon their expertise, with enhanced symbolic power and legitimacy. Specifically, when such knowledge resonates with a wider political culture and it’s in-built “tacit knowledge-ways through which [citizens as well as policy-makers] assess the rationality and robustness of claims that seek to order their lives and public debate” (Jasanoff, 2005: 255).

Stemming from the combined adscriptions of objectivity and disinterestedness, expert knowledge not only appears as impartial. It also comes with an appearance of standing above power. This is best exemplified in what has been called the “linear model of expertise.” The model, in a nutshell, envisions policy-making as a process in which scientists/experts, those who have gotten the facts “right,” act as neutral policy prescribers for end-users enabling them to design better policy (Durrant, 2015: 17; see also Beck, 2011).

Such reasoning, derived assumptions about the sequence and “organization of knowledge and decision making” whereby “scientists provide the facts, and then citizens, politicians, and all interested others express their values and decide what to do” (Halfmann, 2019: 40), have been increasingly contested by environmental scholars for their
“simplistic representation of both scientific practices and policy-making” (Karhumaa, 2020: 588). Related studies have questioned the validity of the linear-model of expertise and its underlying assumption of treating scientific knowledge production and politics as separate domains (Beck, 2011; Floor et al., 2019; Pielke, 2004). Contrasting such understandings, scholars have shown how knowledge production for environmental governance is a relational, negotiated as well as contested affair, leading to the production of selective (re)presentations of environmental problems and solutions (Allan, 2017; Buchanan, 2013; De Dona, 2023; Lund, 2015; Peterson, 2019; Ross, 2022; Stewardson et al., 2021; Turnhout, 2019; 2018; Wesselinik et al., 2013).

In more abstract terms, we can say that the knowledge that ultimately informs environmental policy is the outcome of struggles between competing knowledge producers over epistemological dominance through which political reality and ways of ordering it are constructed. “Hegemonic knowledge regimes,” in a society or policy domain, are the outcome of such struggles (Machen and Nost, 2021).

Looking at “epistemic communities,” which are key protagonists in the struggles over epistemological dominance in environmental governance (Haas, 2019, 2015; Hrabanski and Le Coq, 2022; Mabon et al., 2019; Ojha et al., 2022), is instructive for uncovering how hegemonic knowledge regimes emerge and are sustained.

Haas (1992) coined the term epistemic communities to define networks of knowledge-producing actors (such as experts, scholars, practitioners, and policymakers), who share a common worldview, including underlying normative ideals. Regular interactions and cross-referential engagements convert epistemic communities into global transmission-belts for knowledge-based policy visions, more often than not of the orthodox kind, however.

Contributing to this outcome is the fact that epistemic communities regularly have established communication and collaboration channels with policy-makers, domestic as well as international. Such privileged access, in turn, allows epistemic communities to participate, often in informal ways, in policy formulation. Particularly, as decision-makers exhibit a strategic preference for problem-solving knowledge, in its Coxian sense, by engaging with epistemic communities that share their way of seeing the world. Through such strategic outreach, “closed knowledge systems” (Cornell et al., 2013), grounded in “consensual knowledge,” are being constructed that allow specific voices to be heard while silencing others (De Francesco and Guaschino, 2020: 115). This, in turn, enhances the “epistemic authority” of the pre-selected epistemic community, as it allows its members to be “recognized and maintain recognition as authoritative voices” including within intergovernmental fora governing environmental issues (Espuerra and van der Hel, 2021: 13).

Incarnating the “world-making powers of accredited scientific knowledges,” the influence of orthodox epistemic communities on environmental governance, at the local, national, as well as global level, contributes to the (re)production of “uneven geographies of scientific authority, the spatialities of the boundaries drawn between the scientific and the political, and the situated co-production of epistemic and normative commitments” (Mahoney and Hulme, 2018: 395). In this process, dissent and contestation – for example in recent debates on mainstream “green initiatives,” or on the accumulation of CO2 in the atmosphere and the impact on climate change – are often reduced to relatively uncontroversial discussions around institutional governing modalities or technological solutions (Swyngedouw, 2011: 266–267). The resulting “dominant technical framings of environmental problems,” Turnhout points out, “often exclude other political and social considerations, values, and interests. And this means that when arbiters accept or endorse such technical framing in order to do their work, they are implicitly – and perhaps often also unwittingly – endorsing the political and social considerations, values, and interests that underwrite this technical framing” (Turnhout, 2019: 222-223, original emphasis).

The previous references to “technical framing” points towards the centrality of framing discourses in shaping knowledge production for environmental governance more broadly (Bertolotti and Catellan, 2021; Diaz-Pont, 2021; Erick-Barr and Smith, 2022; Halfmann, 2019; Hilson, 2015). By presenting and interpreting data in particular ways, framing discourses enable the cultivation of specific narratives about governance challenges in ways that render one set of policy responses palatable as matching solutions while simultaneously marginalizing alternatives (and the actors promoting them) (Fukuda-Parr and McNeill, 2019; see also Boas and McNeill, 2001). Framing discourses also have a temporal dimension. They are grounded in the mobilization of particular imaginations of the past, present and future, with those frames being most appealing to public and policy audiences that offer a positive chronological narrative linking a dominant interpretation of the past to a forecast of the times to come, while simultaneously “providing a clear roadmap, a temporal span, between these constructed dimensions” (Nyberg et al., 2020: 196; see also Hulme, 2011; Ribot, 2014). Accordingly, hegemonic framing discourses successfully propose a particular way of ordering and controlling “the unfolding of the future” that is grounded in orthodox “epistemic foundations and practical operations of transcendentary rationalities and mechanisms of societal governance” (Stockdale, 2015: 2; see also Valverde, 2015).

The underlying, as well resulting, selectivity is regularly both purposeful and intentional. Environmental knowledge producers seek to enhance the practical relevance of their frames by “using categories that they hope will be policy relevant” (Turnhout, 2018: 363). In turn, political decision-makers, dependent upon electoral and economic performance outcomes, exhibit a tendency to strategically select epistemological framings of environmental problems that propose orthodox governance approaches privileging the maintenance of the socio-political status quo by promoting incremental over transformative change (Swyngedouw, 2011: 270; see also Ferns and Amaeshi, 2021; Hess, 2016). Epistemological “conceptual bubbles” and bandwagoning effects (Wacquant, 2022), which are nurtured by political pressures, funding streams, institutional incentive structures and related career opportunities, exacerbate these outcomes and the political features of knowledge production in and for environmental governance (e.g. David et al., 2021; Goldman, 2005; Hulme, 2019; Salih, 2013).

The above, should not be read as if there is a built-in automatism in the reproduction of orthodox knowledge production for environmental governance, however. If knowledge production is political, it is also contested. And environmental knowledge producers have contested prevailing environmental knowledge, with important practical and policy-implications.

One of the most noteworthy manifestations of such contestation, as it challenges state- anthropo-, and Western-centric understandings of environmental governance, the key tenets of orthodox knowledge production, is the growing interest in co-produced knowledge arrangements through which “Indigenous peoples and scientists are joining forces in decolonized partnerships to grapple with the complex challenges posed by global [environmental] change” (Roue and Nakashima, 2022: 8; see also Hill et al., 2020; Maclean et al., 2022; Zurbà et al., 2022).

Underlying calls for decolonization (Rodríguez et al., this issue; see also Wilkins and Datchoua-Tirvaudey, 2022) not only recognize the importance of “Indigenous knowledge sovereignty” as an “entitlement rooted in Indigenous sovereignty, title, and rights” (Latulippe and Klenk, 2020: 10). They also question the “legitimacy and applicability of global and nationstate political and legal mechanisms” by highlighting their inability to address environmental problems in a holistic way; a way that from the perspectives of many Indigenous peoples around the globe underscores that contemporary environmental problems are “inevitably tied to, and symptomatic of, ongoing processes of colonialism, dispossession, capitalism, imperialism/globalization and patriarchy” (McGregor et al., 2020: 37). Accordingly, Indigenous environmental studies examine environmental and climate crisis “less as a future trend, and more as the experience of going back to the future” (Whyte, 2017: 156).

Stated differently, much of the environmental problems Indigenous peoples are confronted with, are inherently connected with the ways in

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which political power and (resource extractive) capitalism operate at the national, international, and global level, and how their past and present workings contribute to the political marginalization of Indigenous communities and an endangerment of their lands and livelihoods. From the vantage point of this special issue, this is important, as it means that “environmental degradation and the meaning of security are, for Indigenous peoples, inextricably linked” (Greaves, 2018: 108). Consequently, such Indigenous understandings of the environment-security nexus directly challenge orthodox state- and anthro-centric security framings, including their previously mentioned association with defense issues and the military, as well their underlying presentist outlook.

In fact, Indigenous conceptions of environmental (in)security point towards the ongoing legacies of historical encounters in which “(c)o lonial-nationally-induced environmental changes altered the ecological conditions that supported Indigenous peoples’ cultures, health, economies, and political self-determination” (Whyte, 2017: 154).

Laying the foundation for the global expansion of capitalism, colonialism has presented centuries-long sustained environmental security threats to Indigenous peoples, including through dispossession of land, resource extraction, deforestation, ecosystem imbalances as well the systematic disruption of customary ecological knowledge systems and resource management stewardship. Exactly due to an intricate connection of livelihood and cultural identity with nature, ecosystems and the environment, the environmental hazards produced by colonialism as the catalyst for the spread of capitalism, have throughout history posed existential security threats to Indigenous peoples. And Indigenous peoples share this experience with other populations, particular in the Global South. Here, encounters with empire, colonialism, and capitalism, were often important “milestones” of environmental change and degradation (Beinhart and Hughes, 2007 Ross, 2017), whose afterlife shapes contemporary manifestations of environmental problems in what Chatterjee termed “most of the world” (Chatterjee, 2006).

Before further delving into these discussions and their implications for a transformative rethinking of the environment-security nexus, it is important to unpack the notion of security itself.

2.2. Knowledge, environmental and security policy

Despite the attention paid to the crucial role of knowledge production in shaping the contours of environmental governance in general, the domain of security has remained of comparatively marginal interest to environmental scholars (but see Passgaard, 2017; Svensson and Pasgaard, 2019), as have the wider the entanglements between security governance and environmental politics, the previously discussed growing policy as well as academic attention paid to the environmental-security nexus in policy circles, notwithstanding. Political science has probably been the discipline that paid most attention to these processes (for recent discussions, see Aykut and Maertens, 2023; Dalby, 2023; Daoudy, 2021; Ide, 2023; 2020; Riofrancos, 2023; Selby et al., 2022), without disecting the role of knowledge production in the making of the nexus, however.

For assessing how knowledge production is informing, as well as contesting, security-related framings of environmental issues, it is important to highlight that security stands out in important ways from the realm of ordinary politicized questions, becoming an issue that threatens the very survival of states and their citizens, defined not as individuals but as the collective object ‘society’” (Gledhill, 2015: 19).

As modern politics, national as well as international, are based on “the idea that the state is expected to provide security and order within a polity and protection for that entity from outside threats” (Biersteker, 2020: 1; for a classic formulation, see Tilly, 1985), securitization (and security governance more generally) tends to privilege the voices of state actors. This, in turn, clarifies the previously mentioned hegemonic and practical association of security with the state, defense issues and the military. Consequently, security governance is firmly located within hierarchical decision-making structures, concentrated in international organizations, national governments, military organizations, police and intelligence agencies. This also explains much of the above-mentioned “orthodox” braiding of security and environmental issues, in which environmental challenges, such as climate change, are depicted by state actors as aggravating factors for already recognized threats to state survival, meaning to national (and by extension, international) security. Not at least “to secure resources and underscore their legitimacy” (McDonald, 2018a: 3). The proliferation of the “threat multiplier” narrative in the securitization of climate change is a case in point, illustrating the order-maintaining consequences of orthodox framings of the environment-security nexus.

Yet, as securitization theory acknowledges, securitization processes are a political issue. Therefore, it is important to keep in mind a potential plurality of actors with divergent interests who partake in the political struggles through which environmental change and security become interrelated via securitization.

To assess what is at stake in these struggles it is necessary to move beyond the dominant focus in much of the related literature on political speech acts and language (for critical discussion of the centrality of speech acts in securitization theory, see Antoninou, 2019; Salter, 2008). Instead, the epistemological work underpinning these utterances, such as the NIE Thomas-Greenfeld referred to in her UNSC speech (see above), needs to be brought to the fore. This goes beyond an analysis of “the mobilization of scientific facts” (Berling, 2011) by securitizing actors to instead unpack “how scientific ideas are informed by political discourses and rooted in power relations and practices and how scientific knowledge in turn relates to dominant ideologies and security frames” (Rychnovska et al., 2017: 330).

The next section will address these issues by unpacking examples of epistemological struggles over security-driven framings of environmental change, leading to different figurations of the environment-security nexus. We purposefully move beyond discursive de- and reconstruction, by delving into selected empirical examples, brief, by necessity, to highlight connections between past and present knowledge-practice trajectories, as well as to convey different normative and practical outlooks of the underlying figurations of the environment-security nexus.

We first zoom into the current policy traction of orthodox securitization approaches to environmental change, while thereafter highlighting alternative epistemological entanglements between security and environmental issues that turn security into a “site of progressive practice” in the domain of environmental governance (McDonald, 2018a: 3) – all of which is unpacked in more detail in the contributions to the special issue.
3. Perpetuating orthodoxy

The contemporary dominance of orthodox framings of the environment-security nexus, gravitating around the “threat multiplier” narrative, claiming that environmental change, by aggravating “already-known” threats, such as illegal migration or terrorism, exacerbates unrest, instability and conflict (see Telford, this issue), with correlating present and future challenges to state sovereignty and (inter) national security, has a long historical pedigree. While it is beyond the scope of this section to unpack this history in detail (for a concise overview, see Trombetta, 2008; 2012), a brief assessment is nonetheless in order to understand the related legacy effects.

Take the case of the NIE mentioned at the beginning of this article. The document is a direct outgrowth of decades-long CIA engagements with the national security implications of climate change, dating, at least, back to 1974. That year, a report was published that warned of a worst case scenario in which “climate change caused grave shortages of food despite US exports, the potential risks to the US would also rise.” This was the case, as such shortage would tend to “increasingly desperate attempts on the part of powerful but hungry nations to get grain any way they could. Massive migrations, sometimes backed by force, would become a live issue and political and economic instability would be widespread” (CIA, 1974: 2).

The knowledge that fed into this report’s orthodox framing of climate change was produced by an environmental community within the US-intelligence field that expanded after the end of the Cold War, not at least to secure funding and institutional legitimacy in the post-Cold War era (see also Barnett, 2001), to draw other institutions and public scientists into its orbit. In an effort of upcycling Cold War intelligence leftovers, prominently including the results of satellite reconnaissance, the Environmental Task Force (ETF) was established in 1992, grounded in a close collaboration between leading US environmental scientists and the CIA. Two years later, this process fed into the creation of the MEDEA program, which worked as an advisory body for the US intelligence community, as well as other government agencies, to offer scientific advice on the national security implications of environmental change. In 2019, MEDEA was de facto replaced by the establishment of the MEDEA program, which worked as an advisory body for the US intelligence community, as well as other government agencies, to offer scientific advice on the national security implications of environmental change. In 2019, MEDEA was de facto replaced by the establishment of the Climate Security Advisory Council (CSAC), accompanied by the creation of the National Academies Climate Security Roundtable, which brought together stakeholders in climate research, including scientists and experts within and outside the intelligence community, to discuss intelligence-related aspects of climate change. It was the epistemic community gathered in the CASC, which received the task of reviewing the NIE’s scientific content (Barnard et al., 2021).

This case, which has been paralleled by similar epistemological work inside the US Department of Defense (Klare, 2019; Stricof, 2021), paradigmatically illustrates a trend that gained momentum from the early 2000s onwards. In fact, since the new millennium, an increasing number of scholars and analysts, including current and former security practitioners, military scientists, and Pentagon-funded consultants (e.g. Manwaring, 2002; Schwartz and Randall, 2003), drew ever more attention to the national and international impact of environmental degradation on violent conflict.

much of the related research offers quantitative meta-analysis on how environmental change purportedly over time would constitute a core driver of conflict-peace dynamics (Zhang et al., 2007; Burke et al., 2009; Hsiang et al., 2013). Specifically, quantitative analysis has centered on correlations between climate and conflict data, and claim causal links between high temperatures and rainfall frequencies, on the one hand, and patterns of armed conflicts in the “tropics,” on the other. Such findings have been elaborated into “climate predictions,” with, for example, Burke et al. forecasting a 54% increase in armed conflict (with additional 393,000 deaths) caused by raising temperatures by 2030 (Burke et al., 2009: 20672).

Such framings emerge from a particular variant of “climate reductionism” (Hulme, 2011). Grounded in the “epistemological authority” that is generally attributed to quantitative science (ibid., 249), these perspectives have exerted significant “hegemonizing knowledge effects” (Machen and Nost, 2021: 556). One of the resulting consequences has been the exclusion of socio-political factors that shape societal responses to environmental change, or the recasting of such factors as “constant variables,” thereby making environmental variability the one determinant and “known” variable in an otherwise unknowable future” (Hulme, 2011: 249).

While there is substantial variation in contemporary climate-security wording and strategies depending on countries and institutions, such reductionism appears as a shared premise and sub-text for a large portion of policy analysis and frameworks, offering an orthodox interpretation of the environment-security nexus as a future threat to “the state” and international security. Countering this threat necessitates, so the reasoning goes, conventional security responses and enhanced climate preparedness in the present to “remain ahead of adversaries seeking strategic positional advantages in a climate-altered world” (US Army, 2022: 5; see also Buxton, 2021).

From the 2000s onwards, and building upon already extended security framings and funding for orthodox security knowledge production within the context of the Global War on Terror (GWOT), an environment-focused subfield of what has been termed the “counter-terrorism/counterinsurgency [knowledge] industry” (Scabill, 2013: 468, for elaboration of the term see also Dreznner, 2015; Müller, 2020; Shepherd, 2007: Stampnizky, 2013: chapter 8) emerged. This subfield drew together a variety of knowledge producers collaborating as well as competing over the formulation of convincing environment-security policy framings with purchase for security policy communities, seeking to prepare for prospects of an ever more climate turbulent and threat-based world.

Within this context, think tanks have played a particularly influential role as science-policy connectors benefitting from increased security-earmarked funding, access to, and networks across private interest groups, political actors as well as university research environments (see also Bliesemann de Guevara, 2014; Bliesemann de Guevara and Kostić, 2017). Take the case of the report The Age of Consequences: The Foreign Policy and National Security Implications of Global Climate Change, published in 2007 by two leading bipartisan Washington-based national security think tanks: the Center for Strategic & International Studies and the Center for New American Security. The report presents ten implications of climate change, including increasing “North-South tensions,” a “profound increase in the movement of people,” which “will cause greater tensions and perhaps violent conflicts between and within countries over uncontrolled immigration issues,” and a tendency to “push already failed states deeper into the abyss of ungovernability, while driving other states toward the brink” (Campbell et al., 2007: 106–107). In 2008, the report was turned into a widely read book titled Climate Cataclysm: The Foreign Policy and National Security Implications of Climate Change, published by the Brookings Institution (Campbell, 2008). These publications by leading Washington-based security-focused think tanks, outlined orthodox framings of the environment-security nexus, grounded in future climate impact scenarios, to develop warnings that the world is now facing the “age of consequences” marked by “the intersection of climate change and the security of nations” (Campbell et al., 2007: 5).

The studies, moreover, paradigmatically illustrate the socio-institutional networks, spanning think tank experts, academic researchers and political actors, of the epistemic communities that prominently partake in the production and dissemination of such orthodox knowledge. The list of contributing authors includes several security think tank directors, a former CIA director, an ex-chief of staff for President Bill Clinton, a former deputy assistant secretary of defense for Asia and the Pacific, a senior scientist, as well as two university professors (one historian, the other a professor of international affairs, formerly serving as a national security advisor). Such socio-institutional infrastructures, intentionally brought together to facilitate knowledge
exchanges amongst “different policy circles, scientists and national security practitioners” (Campbell and Parthemore, 2008: 20), display a profound blurring of the boundaries between research and policy. In turn, this invites us to (re)consider how prevailing orthodox framings of the environment-security nexus are intentionally produced through the interactions between the domains of policy and science, with the latter lending credibility and legitimacy to the former, including the resulting bandwagoning effects and funding opportunities that embed these processes. Not at least, because the dynamics of the environment-security knowledge industry expose an organization of bandwagoning effects and funding opportunities that embed these lending credibility and legitimacy to the former, including the resulting the environment-security nexus are intentionally produced through the 

Critical knowledge production on the environment-security nexus, and related transformative reconsiderations of whose security is as stake and what is seen as causing insecurity in the first place (Dalby, 2014: 3), is inscribed into a longer history of knowledge-based contestations over policy, which highlights the wider temporal horizons of the politics, economic relations, and modes of ordering that form the backdrop of contemporary environmental insecurity.

Let us start with the example of Rachel Carson’s book Silent Spring (Carson, 1962), which effectively educated ecology to a “subversive subject” going “against the grain of materialism, scientism, and the technologically engineered control of nature” (Kroll, 2010). Silent Spring was the first systematic science-based documentation of the environmental destruction caused by the use of pesticides – many of which had been developed in the context of post-World War II military funding for science. It illustrates the role of science in the rise of the wider environmentalist movement, contesting unsustainable industrial and agricultural practices, and, in the concrete case of Carson’s work, contributing centrally to the implementation of new political and legal regulations of pesticides. Moreover, the book’s publication, and reception, coincided with the escalating military use of herbicides (a category of pesticides) as a central component of the US counterinsurgency efforts during the Vietnam War. In this context, Silent Spring fuelled the emergence of a critical environmentalist movement that developed in tandem with Washington’s war effort, as “environmental ideas fuelled war criticism, just as the war provided a unique context for dramatizing environmental issues” (McCord, 2003: 1). Eventually, scientific knowledge production, amplified by alternative media outlets, public

2 The adoption of the roadmap, whereby climate-security now is part of defense planning, takes place within a context where the EU’s multi-annual financial framework (MFF) 2021–2027 has earmarked an unmatched funding amount for security and defense purposes, including border control.


4. Contesting orthodoxy

Despite the prevalent dominance of orthodox framings of the environment-security nexus, it is crucial to underscore the significant advance of alternative knowledge formations, taking environmental change – and in particular the climate crisis – as the starting point for rethinking order and security. In so doing, they expose the flipside of the “threat multiplier” frame by highlighting, in the words of Dalby, that climate security “in the long run is not a matter of environmental change causing political difficulties, but rather a matter of contemporary political difficulties causing accelerating climate change” (Dalby, 2014: 1; 2023 for elaboration). Such a critical perspective, in the Coxian understanding of the term, leads to a framing of the security-environment nexus that conceives of environmental (in)security as inherently related to the prevailing political and economic order, including its determination of human-nature relationships. Turning to these issues, this section will demonstrate the resulting potentials of reconceptualizing and reimagining security by de-linking it from the orthodox state-and human-centric framing underpinning the previously discussed version of the environment-security nexus.

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intellectual debates, and popular mobilization, would become the main catalysts for challenging a weaponized orthodox framing of the environment-security nexus as a countersurgency tool.

From 1961–1971, US forces destroyed the rural landscape, forest cover, mangrove swamps and food crops in South Vietnam as part of a strategy for “pacifying” the South Vietnamese countryside by starving out insurgents and denying them cover. In response to this military destruction of the environment in Southeast Asia, a veritable epistemic community formed around molecular biologist Matthew Stanley Meselson (Harvard) and plant biologist and bioethicist Arthur W. Galston (Yale) to end the “ecocide,” a term coined by Galston, in Vietnam. Bringing together scientists associated with the American Association for the Advancement of Science, and its journal, Science, and by reaching out, mostly through publications, to a wider non-academic national and international public, these knowledge producers played a critical role in ending the use of herbicides as a weapon of war in Vietnam (Zierler, 2011; see also Frey, 2013). They “offered critiques that formed the nucleus of protests within global scientific and pacifist communities,” (Ilay, 2022: 53) observed. These communities included the philosophers Jean-Paul Sartre and Bertrand Russell, who “led one of the first international tribunals to decide whether the United States was guilty of war crimes, with American defoliation missions offered as evidence of a wartime atrocity. At the same time, scientists from North Vietnam and East Germany challenged US claims about the safety of the phenoxy herbicides to human health” (ibid.).

In so doing, these knowledge producers contested a geopolitically motivated framing of the environment-security nexus that weaponized the environment in order to stabilize a world region that from Washington’s perspective was vital for containing the global spread of communism.

While efforts of institutionalizing ecocide as a violation of international law, prominently involving international law professor Richard Falk (Princeton) (Falk, 1973), were unsuccessful—after nearly four decades of conventions and discussion on this issue, the 1998 Rome Statute, and the International Criminal Court, excluded ecocide from the final document (Gauger et al., 2013)—the concept remained an important epistemological reference point for critical knowledge production and transformative action (e.g. Dunlap and Brock, 2022; Halder, 2003; Short and Crook, 2022; Whyte, 2020).

Legal scholars, for example, have argued for the relevance of making ecocide a crime under international law and an important means for recognizing the right (and security) of nature and non-human beings (Higgins et al., 2013; Lay et al., 2015; Oldring and Mackintosh, 2022). Such calls resonate with, and have been taken on board by, global grassroots movements against environmental destruction (Greene, 2019: 5), like Extinction Rebellion, but also by more formalized non-profit international campaign networks like Stop Ecocide, which call for “making ecocide [...] an arrestable offence.” Recent years have also witnessed notable signs of transformation in the climate litigation landscape in the U.S., where the first-of-its-kind constitutional climate change trial, resulting in a Montana judge ruling in favor of a group of young environmental activists asserting that the state’s fossil fuels policy violates Montana’s constitutional guarantee for a clean and healthy environment, may well pave the way for more climate law suits contesting government decisions and policies (BBC News, 2023).

Critical scholarship on the topic, however, highlights that criminalization so far mainly has operated in a different direction. Rather than punishing those actors who intentionally inflict environmental harm, criminalization tends to target groups resisting ecocide, with indigenous communities, recall, being “disproportionate targets of this repression” (Dunlap and Brock, 2022a: 5).

A recent important example of how, notwithstanding wider geopolitical pressures, environmental destruction is actively being contested by Indigenous peoples, while alternative conceptions of the environment-security nexus are mobilized to challenge orthodox frames, can be found in the Arctic; a region that is both critical for maintaining a stable and safe global climate and under severe stress due to climate change-induced temperature increase (Serrezee, 2018).

With rising temperatures, the thawing of permafrost and the melting of sea ice, access to natural resources in the region, such as natural gas, crude oil, copper or iron ore, has been eased significantly. As many of these resources are located on the territories of Arctic Indigenous peoples, the region witnessed a simultaneous expansion of resource extractivism and socio-environmental conflicts. Particularly, as Indigenous communities seek to “confront coloniality, weak governments, and repression, because of the harm that extractive tendencies perpetrate on the environment and on socio-cultural well-being” (Hanacek et al., 2022: 11; see also Banerjee, 2012).

Exacerbating this conflict scenario is a mounting militarization of the Arctic. Fueled by enhanced geopolitical competition over new strategic opportunities, shipping routes, as well as access to strategic resources, countries such as Canada and Norway re-defined their Arctic security agenda in orthodox ways by linking the protection of national sovereignty to the extraction of non-renewable resources (on Arctic security and climate change, see Heininen and Exner-Pirot, 2020; Hoogensen Gjerv et al., 2020; Kraska, 2011).

The underlying orthodox framing of the environment-security nexus, underpinned by Western-centric epistemologies of state power and politics has been challenged by Indigenous peoples and their framing of the connection between security and the environment. In fact, through successful transnational forms of political mobilizations and activism, Indigenous communities managed to become included as permanent participants in regional fora, such as the Arctic Council, the Northern Forum and the Barents Euro Council, which opened-up a space for the articulation of Indigenous concerns and perspectives in Arctic governance, including within the domain of security (Greaves, 2016a; 2016b). As Greaves contends, underscoring the wider significance of the case: “While there is no unitary Indigenous conception of what security means, there are clear similarities across different Indigenous peoples with respect to what is considered threatened. Common concerns include the ecological vitality and survival of Indigenous peoples’ traditional territories, and the Indigenous cultural and subsistence practices developed over many centuries that rely upon them” (Greaves, 2020: 371; see also; 2016b; Nickels et al., 2013; for similar observations regarding Oceania, see Farboko and Campbell, this issue).

Another pertinent example illustrating these shared concerns, is the struggle of Small Island Developing States facing climate change related sea-level rise. Representatives of these states invoked the “climate-securitization” framing to add urgency to their demands for climate action and climate justice. In doing so, some of these states have advocated for placing climate change at the center of the UNSC agenda, to elevate its importance in international politics, while explicitly linking climate-security to their right to territorial integrity, livelihood, wellbeing, cultural protection, and human security (Andersson, 2022; Yeltekin, 2022).

Thus, environment-centered re-framings of security have allowed for articulating un-orthodox security interests in ways that expose long-standing challenges and threats to Indigenous peoples and Global South populations as important security issues. Yet, despite significant transformations at the practical level, such as the Loss and Damage Fund adopted at COP27, or the international endorsement of principles such as

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5 Kuokkanen and Sweet (2020) have highlighted the importance of adding a gendered perspective to these concerns, as Indigenous women in the Arctic (and elsewhere) have different (in)security experiences and priorities compared to Indigenous men.
as “common but differentiated responsibility,” the structural and specific security challenges Indigenous peoples and Global South populations are facing remain largely unaltered. This exposes their non-dominant social position in post-colonial and settler-colonial settings (and in the international system more widely), combined with the vulnerability associated with livelihoods and cultures that are embedded with particular eco-systems that continue to be endangered by climate change and extractive endeavours associated with wider economic growth priorities (Greaves, 2020).

Wider contestations against such priorities are on the rise, however. Notably, the recognition of the limits of planetary resources and the related threat to human life associated with an overshoot of the globe’s carrying capacity, is progressively spreading across knowledge fields and disciplinary boundaries, from Indigenous studies (see above), climate and environmental science, Earth science and the social sciences (where in particular research on the Anthropocene highlights the interconnection of human and ecological security). Related practical and policy manifestations, can be observed, for example, in the expansion of the degrowth agenda. To be sure, the pursuit of such transformational agendas continues to face formidable opposition from entrenched political interests centred on electoral and economic performance, tied with dependency on the growth paradigm (and counter to degrowth, ecomodernist perspectives hold that growth can be decarbonized and dematerialized or “greened”; (see Dunlap, this issue; Benjaminsen, 2022) – all of which ties in with orthodox framings of state- and geopolitical security. Nonetheless, while the degrowth agenda initially was broadly perceived as a left fringe critique it has rapidly gained traction across a broader political, and policy, spectrum (as illustrated for example by the recent Beyond Growth-conference in Brussels) (Roj, 2023).

These observations, as well as the other illustrations of un-orthodox framings, and resulting practices, of the environment-security nexus presented in this section, invite us to more widely rethink, and decenter, dominant figurations of the nexus. Because of the narrow state- and human-centric outlook, these orthodox perspectives are profoundly ill-fitted for addressing the challenges of contemporary environmental insecurities that are planetary in scale, and ultimately do not know state borders.

In light of this, and with security remaining central to political action and legitimacy, appropriating and re-narrating the meaning of “security,” may open important sites of contestation over related environmental knowledge production, policy, and practice. As McDonald summed it up “(t)he scale of the climate threat necessitates a change in the way we view security: away from self-contained groups of particular species at particular times and towards a holistic approach that enframes, and resulting practices, of the environment-security nexus are not the exclusive – and in many ways decolonial, understanding of the links between environmental change and security. They invite for “more open knowledge systems’ (Cornell et al., 2013: 60) and for thinking of how to produce knowledge which de-centers state- and human-centric underpinnings of “hegemonic (security) discourses that are infused with anthropocentrism and linear forms of causality” (Harrington and Shearing, 2017: 34).

One important step in this direction, at least from the vantage point of this special issue, would be to consider possibilities for productively combining problem-solving and critical knowledge (as Cox in fact himself has argued, with reference to climate change; quoted in Schouten, 2009), whereby critical knowledge can be linked with problem-solving action toward “effective societal responses to persistent problems of unsustainability” (Cornell et al., 2013), involving a fundamental rethinking of currently still dominant social, political, economic and institutional structures, and related ways of knowing, ordering and securing.

4.1. Organization of the special issue

Against the backdrop of the previous sections, the contributions to this special issue further unpack the practical consequences of these competing knowledge-based figurations of the environment-security nexus. The articles build analytically in a sense that, when read together, they lay out the contours of a continuum of the epistemological underpinnings, and resulting practical consequences, of different manifestations of the environment-security nexus. This continuum ranges from orthodox knowledge frames inspired by state-centric ideas of political order-maintenance, over more transformative framings, to critical knowledge production informing alternative visions and practices concerning the braiding of environmental change and security.

Beginning at the orthodoxy end of the spectrum, the contribution by (Telford, 2023) discusses the epistemological politics underpinning causal claims that connect climate change to conflict, migration and terrorism. Drawing upon analytical insights from linguistic pragmatics, and offering a critical discourse analysis of a 2021 United Nations Security Council debate on climate and security, the article highlights a “climatic determinism” that prevailed in these discussions. This determinism is most visible in “discourses of present and future scenarios of climate insecurity,” which “instead of adopting a range of adaptive strategies to respond to these circumstances (for example cooperative resource allocation, conflict resolution, improved education or livelihood diversification),” instead propose securitizing responses through which “climate-insecure populations will or are likely to be compelled towards and vulnerable to acts of (political) violence,” as they are made palatable as “breeding grounds” for terrorism (ibid., 141).

The contribution by (Charbonneau, 2022) engages with the consequences of such orthodox reductionism and takes up the “(normative) questions of whose security is threatened by global warming, and whose or what knowledge should inform judgments about climate security” (ibid., 98). Focusing on the Sahel, a context that has witnessed the combined unfolding of escalating violent conflicts, resulting international interventions, and climate change, Charbonneau assesses the contested nature of knowledge production on climate security. Calling for the need to provide “positive security outcomes” for the people in the region, the article underscores the urgency for closer collaboration between social and climate scientists “to avoid the excesses of ‘forensic analysis’ and to examine the political (mis)use of such modeling and scenarios as they inform policy,” as well as more funding for security and climate science research in the region. Not at least “to avoid the traps of erasure and exploitative knowledge extraction” (ibid., 103).

Underscoring that orthodox framings of the environment-security nexus are not the exclusive “privilege” of democratic countries in the Global North, the contribution by (Gverdsitseli, 2023), by engaging with the debates on authoritarian environmentalism, shifts the geographic focus of these discussions to Vietnam and analyses the framing of climate change as a security threat under authoritarian political structures. Her contribution highlights how “authoritarian knowledge production” on the environment-security nexus “links climate change to natural resource security, water resource security, food security, energy supply security, and assumes that climate change policies shall yield economic benefits, which in turn is the basis for the public security agenda and ultimately regime security,” meaning the legitimacy of the Communist Party of Vietnam. The article highlights, how this translates into the production of particular environmental security policy frames that are “invented to construct a political narrative of effective authoritarian governance, whose main purpose is function as “a tool of co-opilation that ultimately aims to ensure regime security by building performance-based legitimacy” (ibid., 169).

The contribution by (Dunlap, 2023) critically engages with the epistemological foundations of the green economy. Questioning the transformative potentials regularly ascribed to the green economy, Dunlap argues that key epistemic devices of the green economy (energy, biodiversity and carbon), are central to crafting a psychosocial
apparatus organized to garner legitimacy for green capitalist solutions. Highlighting how related constructions of legitimacy inform beliefs of status-quo oriented ecological modernization, and bolster the credibility of governments that support green economic transitions, while suppressing epistemological as well as practical alternatives, Dunlap calls the green economy a counter-insurrecional device: “(A) governmental technique of internal social peace, political order and capital accumulation that redirects ecological and climatic anxieties into economic, consumer and governmental mechanisms, intending to manufacture a docile political body acclimated to capitalist infrastructures, production and consumption habits” (ibid., 40).

Moving on to the more transformative end of the continuum, the article by Rodríguez et al. (Rodríguez et al., 2023) assesses how Indigenous knowledge production successfully challenged orthodox framings of wildfire management as a security problem, warranting criminalization. Drawing upon the findings of a longstanding collaborative, and participative, research endeavor, as well as decolonial thought, the article demonstrates how the Monkox Indigenous people, living in the Indigenous Territory of Lomerío, Bolivia, established local control of wildfire risk management in the territory by actively challenging the epistemological power of the Bolivian Forest Management Agency. In so doing, they demonstrated the “capacity and agency to respond not only to the increasing pressure of climate and socio-cultural changes, as well as to the threat of criminalizing fire use policies in their territory.” Moreover, the Monkox also created the conditions for a more symmetrical engagement with the Bolivian Forestry Agency about the use of fire in Lomerío and challenged the dominant anti-fire discourse of the Bolivian authorities.

The final contribution by Farbotko and Campbell (2022) looks into diverging forms of knowledge production and security frames that inform discussions and policies regarding the (un)habitability of the atolls of Oceania within the context of sea level rise. In criticizing Western-centric security logics and underpinning “existential threat” framings, the authors propose a new concept of security, “relational security,” which acknowledges that “relationality is a critically important part of Pacific life.” Accordingly, the authors suggest that this term can move security discourses in and on the Pacific beyond Western-centric ideas, and incorporating individualistic logics to instead recognize atoll peoples’ understandings of “security of being,” including its inherent cultural and cosmological aspects. Recognizing this security of being, can inform new understandings of (un)habitability that “can ensure that science, law, policy and planning are engaged in advancing relational security, rather than potentially placing it at even greater risk, through naïve reproduction of the existential threat discourse and neglect of cultural and cosmological aspects of habitability” (ibid., 188).

4.2. Conclusion and avenues for future research

Taken as a collection, the contributions to this special issue help us to understand the social, political, historical, institutional, and economic conditions, and conditioning, of knowledge production underlying different manifestations of the environment-security nexus and their practical implications. In sum, the contributions both expose how the exclusions associated with orthodox framings of security reverberate in contemporary practices as well as policy processes shaping the domain of environmental change (and climate change, in particular), and, on the flipside, how re-interpreting the meaning of security, through the prism of environmental change, can be key in opening up more inclusive processes of knowledge-production along with related contextual sites of planning, policy and practice.

Current debates on Ecological Security (see above) are already indicating how potential shifts in the orthodox/transformational knowledge production spectrum are on the rise and deserve more exploration. The approach, recall, expands referent objects of security beyond humans and states to include wider ecosystems. It thereby offers a discursive normative deconstruction of security as the basis for urging climate action that challenges “the tyranny of status quo” (McDonald, 2021: 192; also quoted in Benjaminsen, 2022: 28).

Arguably, however, the Ecological Security approach is also illustrative of a wider analytical bias toward privileging discursive deconstructions of security, while remaining vague on possible practical and contextual implications. Without further, and substantive, engagement with the latter, transformative potentials may be lost (see also Benjaminsen, 2022). Indeed, the Ecological Security approach’s call for climate action, if devoid of details on the scope of action, or contextual as well as social considerations, runs the risk of reinforcing exclusionary outcomes of such action, already widely documented; for instance, afforestation blocking pastoral mobility, or large scale investment in windmill parks and conservatories (often linked with securitization) triggering conflict and displacement, as well as numerous other known examples across the globe of injustice and insecurity tradeoffs of particular forms of climate action (see for example Benjaminsen, 2022; Drew, 2020; Schetter et al., 2022; Dunlap and Fairhead, 2014).

This illustrates how, without a grounded orientation toward societal and contextual implications, knowledge, agency as well as power dynamics of in- an exclusion, the discursive attempts of broadening the scope of security in the face of environmental crisis, may inadvertently feed into orthodox responses. A key implication for research – also flowing from the findings of this special issue – is the need to connect future attempts of reframing security in response to environmental crisis, to efforts and knowledge centered on climate- and environmental justice, including the tradeoffs and “justice implications of ongoing climate change as well as of planned and current mitigation and adaptation, initiatives” (Benjaminsen, 2022: 28).

More widely, this speaks to the need for advancing “more open knowledge system” centered on engagements and joint knowledge production, both across disciplines (paring human, political and ecological considerations and knowledge) and through the expansion of “interface mechanisms” (Cornell et al., 2013) between science and practice, including policy, to productively combine critical and problem-solving knowledge.

In fact, processes of deepening the exchanges and collaborations both across disciplines and across science, practical and societal knowledge, may serve to reclaim the terrain of “problem solving” knowledge, toward transformations required for addressing insecurities associated with environmental crisis. This also calls for efforts of expanding knowledge-practice interfaces beyond more narrow considerations of how knowledge gains policy traction (and the specific problems of critical knowledge struggling to gain traction – important as such considerations are), to assess and utilize opportunities for knowledge networks and exchanges, across a wider range of experiences and knowledge fields (sciences, societal, indigenous, activist, policy etc.), to ignite strategic action and transformation. In so doing, we not only gain a deeper understanding of the relations between knowledge production and action, viewing them as interrelated domains and fields of responsibility that are embedded within wider power dynamics (van Kerkhoff and Lebel, 2006; Cornell et al., 2013: 62). Such opening-up of knowledge exchanges, moreover, holds potential to reshape said power dynamics by de-centering the place of orthodox epistemologies and thereby re-focus framings of the environment-security nexus towards transformative knowledge work that can inform meaningful and empowering ways of reclaiming security in the face of the current environmental crisis.

Declaration of Competing Interest

The authors have no conflict of interests, such as financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work.
Data Availability
No data was used for the research described in the article.

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