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The green economy as counterinsurgency, or the ontological power affirming permanent ecological catastrophe

Alexander Dunlap

Centre for Development and the Environment, University of Oslo, Norway

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ABSTRACT

As old as industrialism or civilization itself, socio-ecological problems are nothing new. Despite all efforts to resolve environmental dilemmas, socio-ecological catastrophe has only intensified. Governments, in response, have unveiled the green economy to confront ecological and climate catastrophe. The green economy, however, has worsened socio-ecological conditions, invigorating the present trajectory of (techno)capitalist development. This article argues that the green economy serves as a tool of global counterinsurgency, managing, preempting and redirecting the inevitable ecological anxiety that could mobilize for radical social change. While fragmenting ecological opposition, the green economy meanwhile serves as a "force multiplier" for market expansion and capitalist development, as opposed to actually working towards real socio-ecological mitigation and remediation. The article proceeds by defining counterinsurgency, and indicating its relevance to the green economy. Dissecting the technics of the green economy, the next section reviews its origins and epistemological foundations by investigating the concepts and operationalization of 'energy', 'biodiversity' and 'carbon'. Then, briefly, the article reviews the extractive reality of low-carbon infrastructures, revealing the socio-ecological harm implied and justified by the green economic and decarbonization schemes. The green economy, it concludes, is a governmental technology, preventing collective self-reflection and action to (adequately) rehabilitate ecosystems and address the structural socio-ecological problems threatening the planet, thus preforming a counter-insurrectionary function in the service of state and capital.

1. Introduction

Police vehicles burn, riot police slowly retreat as armored vehicles exhausted themselves by traversing rows of barricades. This could describe countless low-intensity conflicts going on across the world against police violence, mines or infrastructure projects (Dunlap and Brock, 2022). The Environmental Justice Atlas, while not exhaustive, documents approximately 3000 environmental conflicts, in different conflict phases across the world (see Fig. 1; Scheidel et al., 2020). These struggles coincide with 'climate youth' marches and Extinction Rebellion civil disobedience actions, flooding urban centers (Sovacool and Dunlap, 2022). Conflicts emerging from ecological and climatic factors, since the 1970s, have emerged as serious security issues (Dunlap and Fairhead, 2014; Dalby, 2020). Despite governmental efforts, the last three decades of climate change mitigation are regarded as resolute failures (Stoddard et al., 2021; see Fig. 2), intensifying the commodification and marketization of ecosystems (Sullivan, 2010; Muradian and Gómez-Baggethun, 2021) and promoting the myth of 'green growth (Parrique et al., 2019; Hickel, 2020; Vadén et al., 2020). The present socio-ecological situation is critical, 40% of the planet's soils are seriously degraded; earthworm biomass declining by 83%; global fish stocks facing 85% depletion; mammal populations have dropped by half; and 'dead zones' from chemical run off, nitrogen, and phosphorous spread along the coastlines of industrialized regions across the world (Hickel, 2020: 6–16; Gelderloos, 2022). Deforestation, furthermore, is at an all-time high, as forest fires, record heatwaves (resulting in human and nonhuman death), erratic weather and floods spread across the world with rising sea levels (Hickel, 2020). Meanwhile, business-as-usual continues and intensifies. 'US companies retain strong profit margins through the pandemic' (Valetevitch, 2021), which includes Amazon delivering record profits in 2020 with 'yearly increase of over $100 billion' (Kohan, 2021), according to news reports.

Conflict, ecological and climate catastrophe are rather obvious outcomes of industrialization, state formation and capitalist economies, whether planned, Keynesian or neoliberal. While states, and their security forces remain diverse (Hönke and Müller, 2016), mediating various actors, conflicting political and economic interests (Sklair, 2001), the developmental logic of states and 'high-modernism' (Scott,

E-mail address: alexander.dunlap@sum.uio.no.

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1998)—which fetishizes territorial control, bureaucracy,[1] markets, technological innovation and the accumulation of power—remain[2] consistent and enduring features (Bakunin, 1990/1873; Springer, 2016). Modernist development and the resulting ecological and climate catastrophe are not an accident. In fact, it remains concealed, enforced and socially engineered. Exxon mobile's suppression of climate science (Franta, 2021), along with routine police-military invasion to grab land and habitats are ever present reminders (Menton and Le Billon, 2021; Verweijen and Dunlap, 2021; Dunlap and Brock, 2022). The green economy, meanwhile, remains instrumental to continue engineering these extractive pathways towards ecological and climate catastrophe, while simultaneously affirming state control, economic growth and corporate profits. Reflecting on the intersection of 'climate conflict', environmental markets and militarization, Dunlap and Fairhead (2014) (954, 55) make two foundational points. First, the notion of climate conflict creates a 'self-fulfilling prophecy' – a positive feedback loop—'of militarisation, environmental degradation, and market production that are the principle causes for ecological crisis and climate change'. Secondly, this leads them to conclude that 'the "green" economy' supported 'by climate change mitigation practices [is] the continuation of war by ecological crisis'. Developing these two findings, this article argues that the green economy functions as a counter-insurrectionary (counterinsurgency) device, designed to stabilize environmental anxiety, unrest and to intensify techno-capitalist development. Aside from site-specific case studies, this perspective has not received sustained theoretical attention.

The green economy as counterinsurgency is the product of numerous scientific and governmental institutions, which results in acceptance, and/or acquiescence, of green capitalism as a viable socio-ecological solution. Foucault's (1995, 2003: 15) conceptualization of politics as a relationship of force, or as "a continuation of war by other means" (Dunlap, 2014), views the state as an antagonistic political economy or, thinking of Tom Nomad (2017) (17, 21), a logistical system to impose sovereignty and facilitate economic competition and growth. Counterinsurgency, because states identify entire populations as potential enemies, "has become a principle of government" (TIC, 2015: 153), which extends to manufacturing a discourse and a socio-technical apparatus of political control to reinforce and affirm state and economic imperatives, meanwhile fragmenting, mitigating and pacifying its real, imagined or potential detractors. The green economy, then, is 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. This article interrogates these governmental mechanisms, specifically the ontology and epistemology constructing green economic legitimacy, further revealing the science or, more accurately, the arithmetic employed to justify a 'war by ecological crisis'.

Rooted in political ecology, anthropology and human geography, this article is influenced by over seven years of fieldwork, investigating environmental conflicts related to wind energy development (Dunlap, 2019a; Dunlap and Correa-Arce, 2021), coal mining (Brock and Dunlap, 2018), copper mining (Dunlap, 2019b) and energy infrastructures (Dunlap, 2020b, 2021; Dunlap and Larrate, 2022). Rooted in previous studies, this article extends this work by reviewing numerous academic articles, reports and upwards of twenty renewable energy life cycle assessment (LCA) and environmental impact studies. The critical nature of this article arises from this fieldwork, seeking to encourage the rethinking of public policy and political action, which begins below by defining counterinsurgency, and indicating its relevance to the green economy. Dissecting the technics of the green economy, the second section reviews the origins and epistemological foundations through the concepts and operationalization of energy, biodiversity and carbon. Then, briefly, the article reviews the extractive reality of low-carbon infrastructures or so-called 'green mining', revealing the socio-ecological harm implied and justified by the green economy. The article concludes that the green economy is a governmental technology,

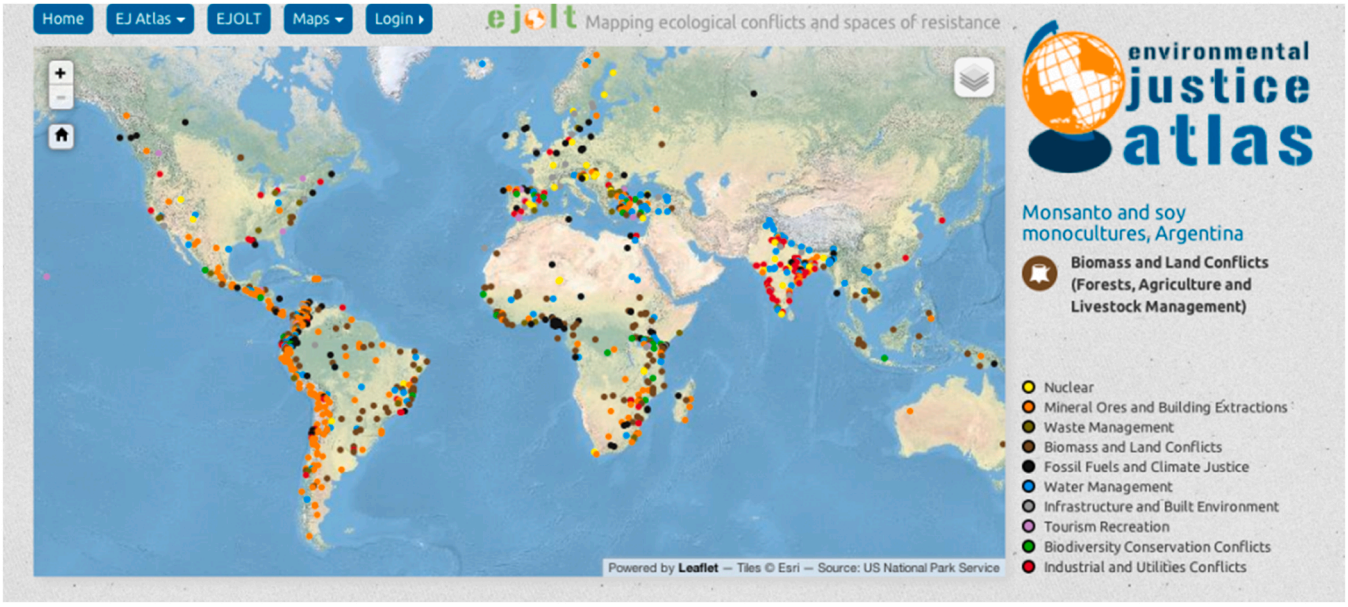

Fig. 1. The Environmental Justice Atlas (EJOLT) maps the multiplicity of environmental conflict around the world.
Source: http://www.envjustice.org/.

preventing collective self-reflection and action to (adequately) rehabilitate ecosystems, live in harmony with our environments and address the structural socio-ecological problems. Thus, the green economy, preforms a counter-insurrectionary function in the service of state and capital, and at the detriment to ecosystems and the planet.

[1] Centralized, but more so 'administrative decentralization' that operates hierarchically and autonomously (Light, 2003), central to cybernetics and planning.

[2] Political, resource, technological, military & geopolitical power.

2. EcologicaL failure and counterinsurgency

'Counterinsurgency, then, or counter-insurrection', Colonel David Kilcullen (2012) (130) reminds us, 'seems to be an enduring human social institution that has been part of the role of virtually every government in history and perhaps even partly defines what we mean by the word "state." Counterinsurgency is a type of war—'low-intensity' or 'asymmetrical'—and style of warfare that emphasizes intelligence networks, psychological operations, media manipulation, security provision and social development to maintain governmental and/or extractive legitimacy Dunlap, 2018; FM3–24. (2014). Counterinsurgency combines civil and military action, employing the brute force of 'hard' conventional warfare and 'soft' civil-development strategies that form a larger mutually reinforcing governmental-corporate strategy, disciplining, enchanting and engineering the 'hearts' and 'minds' of target populations (Dunlap, 2020). Illuminating 'bottom-up' from 'top-down' control approaches, Louise Wiuff Moe and Markus-Michael Müller (2017: 8, 20) reveal how 'complexity and resilience enables substantial expansion of counterinsurgent warfare logics into "real" politics, governance strategies and life worlds of the local. It remains well established that '"positive" social dynamics can undermine insurgencies', Moe and Müller (2017) (16) remind us, and counterinsurgency 'becomes a context independent pacification tool that allows the application of warfare driven governance rationales, beyond major battlefields of the GWOT [Global War on Terror] to confront every type of potentially "subversive" adversary'. This 'subversive adversay', for example, could extend to a population or global movement with existential ecological and climatic concerns. Counterinsurgency or counter-insurrection, as Kilcullen reminds us above, is the state and governance, openly employing a 'whole-of-government' approach that attempts to manage conflict, which includes the (wrongful) pre-emptive and systematic targeting of environmental protesters as 'extremists' or 'insurgent' (Lubbers, 2012; Del Gandio and Nocella, 2014; Dunlap, 2018, 2019b; Brock and Dunlap, 2018) to enforce the present trajectory of political economy.

The green economy, contrary to popular marketing, is not clean or untouched by this enduring governmental logic of counterinsurgency. Responding to popular environmental concerns in the 1960–1970 s, meanwhile refusing to critically reflect on statism and capitalism as sources of socio-ecological and climatic problems (Dalby, 2020), the green economy and environmental security emerge together to combat politico-economic and environmental threats. The green economy, in military terms, would rise as a statist-capitalist 'force multiplier' by solidifying political control, advancing markets (or accumulation by dispossession) and responding to environmental critics and movements. In a conversation related to land defense struggles in France, Jean-Baptiste Vidalou (JBV) recognizes '[t]he economy wants to keep moving, it does not want disorder and *the green economy is just there to put some oil into the global capitalist machine*—to put more oil into the machines so it could be more fluid.'.

AD: And the people are the gears in the economy, it is about oiling their minds and putting them at ease so they will keep going [in the face of ecological and climate catastrophe] and keep operating the gears of capitalism….

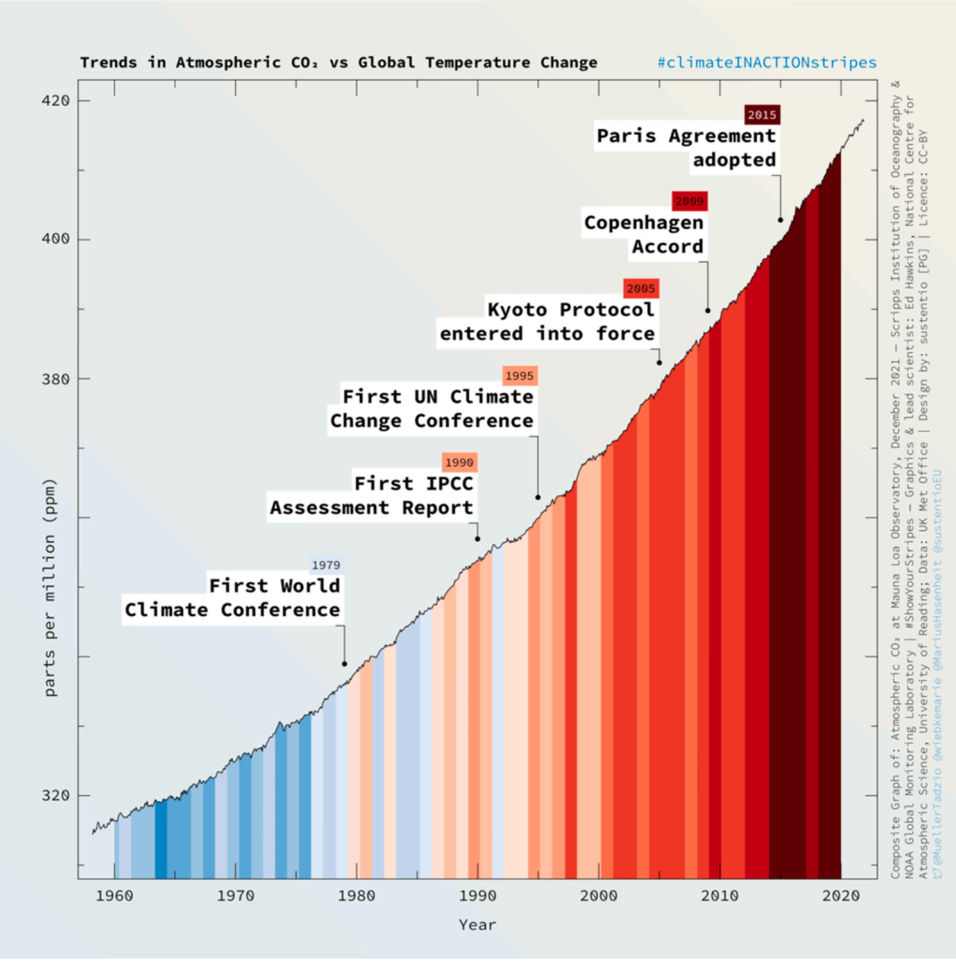

Fig. 2. Trends in atmospheric CO_2 vs. global temperature change, 1958–2020, with climate conference dates indicated.
Source: @MuellerTadzio / @wiebkemarie / @MariusHasenheit / @sustentioEU.

JBV: Yes. There is … a mystification, and the ideology behind it, like: "We will put trees around the area and people will think we are doing stuff for the climate," when in fact they [governments and companies] are not doing anything. So this imaginary is being projected into the minds of people and it needs to be attacked.[3]

The green economy seeks to convince people that capitalism can resolve socio-ecological crisis, despite all evidence to the contrary (Parrique et al., 2019; Hickel, 2020; Vadén et al., 2020), and that governments, corporations and NGOs are the only way to stop climate catastrophe. Indirectly referencing environmental 'offsetting' (see Sullivan, 2010, 2017), Vidalou recognizes the green economy as a pacification device employed to economize—or make more efficient—(techno)capitalist development. Green capitalism, in the face of ecological and climate catastrophe, emerges as an apparatus of psychological warfare, projecting misleading images, ideas and ecological modernist ideologies into the minds of people in order to continue the global project of capitalist political economy and statist governance. The green economy, as it relates to climate change mitigation schemes, are designed to pacify resistance and—real or imagined—insurgency against extractive industries (Menton and Le Billion, 2021; Verwejien and Dunlap, 2021), while simultaneously expanding capitalist consumerism and governance systems that facilitate a structure of ecological conquest. 'Green' or 'sustainable' discourse serves as another layer to legitimize the deployment of repressive forces to disrupt political organizing, break barricades and enforce extractivism. The green economy, moreover, is a refusal of the demands of people, ecosystems and the planet, instead doubling-down and intensifying the current capitalist trajectory of colonial control and extractivism.

Popular ecological resistance and insurgency to the failures of capitalism, consumerism and governance remain an ever looming and existent threat (Lubbers, 2012; Del Gandio and Nocella, 2014; Brock and Dunlap, 2018; Weis, 2021), making a political response necessary. The green economy reaffirms economic growth, while promoting digital efficacy and monitoring through 'smart censors', redesigning 'environmentally friendly' buildings, conservation, bioenergy, electric vehicles and low-carbon infrastructures (EC. 2020), such as wind, solar, hydrological, tidal wave and other processes of green extractivism (Dunlap and Marin, 2022). These low-carbon infrastructures and electric vehicles demand increasing conventional and critical raw materials (Dunlap and Larrate, 2022). An activist in northcentral Portugal fighting lithium mining, a crucial mineral for electric vehicles, explains:

…lithium is just being used as a Trojan Horse, carrying within it capitalist projects. Energy transition, decarbonization and digitalization is an excuse to go digging mines and exploiting everything that interest them, based on European subsides and continuing to extract more valuable ores.[4]

Affirming these concerns, another activist from the same region explains: the European Commission wants to "solve this climate change problem with lithium, but this would destroy nature and biodiversity, which makes no sense at all." The green economy advances territorial control and the plundering of those territories. Meanwhile, the lifestyles of urban populations and the public remain unchanged, even intensifying with digitalization schemes, believing this economic trajectory to be green and environmentally friendly. The green economy is a global discourse of land control and political pacification, which builds on and extends existing Western ontological foundations of detachment and separation from ecosystems, meanwhile advancing existing trajectories of political pacification and profiteering.[5]

This socio-ecological separation is normalized by urbanization, industrial lifestyles and, the corresponding, dependency on work (see Brock et al., 2021). Psycho-social separation (see Dunlap and Sullivan, 2020), moreover, is reinforced culturally and by the dominant institutions and science, instrumental for organizing and legitimizing the power of the green economy (Brock, 2020a). While counterinsurgency is a governmental logic, which manifest differently across countries, neighborhoods and extractive site interventions (as mentioned above), understanding a global discourse and program, such as the green economy, as counterinsurgency remains unconventional. Is the green economy *intentionally* organized as a warfare and political control strategy rolled out by security or governmental forces? While it would be easy to say "no," it would ignore the entire assemblage of state institutions, policy documents—or a 'whole-of-government' approach—designed to advance state and economic interests. Public policy, of course, relies on the popular self-identification with governments and belief in its political and economic operations. People or, more accurratley, populations are organized and conditioned to view the world from the perspective of governments, companies and elite factions. The state apparatus—the judiciary, media, policy, and universities—work to construct an entire psychosocial apparatus to implicate people into its agenda, epistemology and ontology or worldview and objectives. Green capitalism, as promoted by the public and private sectors, seeks to capture the 'hearts' and 'minds' of the population. Counterinsurgency, then, is 'hidden in plain sight' to accomplished governance and economic imperatives. The counter-insurrectionary reality of the green economy is normalized, celebrated and retains an entire scientific and institutional apparatus to confront the challenge of environmental collapse and climate change, but also the socio-political instability the state and technocapitalism has and will continue to generate. Ecological issues are socio-political issues and vice versa. Energy, biodiversity and carbon, discussed below, remain important (ideologically driven) mechanisms that lay the foundations for the green economy. The next section discusses the onto-epistemological mechanics socio-ecological pacification by exploring energy, biodiversity and carbon. Before exploring the epistemic workings of the green economy—constructing hopes, confusing political subjectivities and isolating militants—it's worth reviewing, if briefly, the failure of climate change mitigation schemes and the intensity of ecological resistance stoking governmental concerns for permanent repression.

2.1. The green economy, resistance & governmental fears

Climate change mitigation practices have been increasingly identified as triggers of conflict, exaggerating inequality and ecological degradation (Dalby, 2013, 2020; Dunlap and Fairhead, 2014; Sovacool et al., 2015; Hunsberger et al., 2017; Work et al., 2019). Climate change 'mitigation and adaptation efforts can produce and perpetuate spaces of danger', explains Naho Mirumachi and colleagues (2020: 1) pointing out five aspects to assess low-carbon development. This includes 'spatially uneven effects of low carbon development; violent imageries of the global south and the production of "ungoverned spaces," demarcating spaces of insecurity; non-violent yet harmful instances of conflict, mediated through political control; marginalization and dispossession of groups within society; and depoliticized, techno-managerial effects of resilience that evade addressing sources of contention' (Mirumachi et al., 2020: 2). Predictably structurally racist (see Patel, 2020), sustainable development and climate change mitigation projects are recognized as significant threats to environments and the *peoples* that inhabit them. '[C]limate change *politics*', Franco and Borras (2019) (193) confirm, 'may or can displace or dispossess more people form their land than actual climate change'. There is a growing literature recognizing the increasingly harmful effects of sustainable development (Menton et al., 2021; Temper et al., 2020; Sovacool, 2021). Habitats and ecosystems, despite the last thirty years of critical reflection, are still treated as 'resources' to be extracted and integrated into the global economy (Springer et al., 2021). Conservation, bioenergy and low-carbon infrastructures are increasingly triggering environmental

[3] Interview, April 24, 2019. See Vidalou (2017) to read their work (in French).
[4] Interview 20, 24–01–2022.
[5] Interview 12, 21–01–2022

distribution conflicts (Marijnen et al., 2021; Temper et al., 2020), environmental injustice (Menton et al., 2020; Sovacool, 2021) and resistance (Verweijen and Dunlap, 2021; Sovacool and Dunlap, 2022), reinforcing the trajectory of socio-ecological catastrophe.

This resistance, or anti-colonial/statist insurgency in many instances, in defense of territory and habitats is centuries old. This begins with anti-colonial resistance (Rodney, 2009/1972; Galeano, 1997/1973), which continues into the present North and South of the Globe in struggles against mines, dams, energy infrastructures and industrial waste production (Churchill, 2002/1988; Gedicks, 1993; Stephen, 2002; Martínez-Alier, 2002; Nixon, 2011; Menton and Le Billon, 2021; Verweijen and Dunlap, 2021; Dunlap and Brock, 2022). Arguably, every resource extraction project in Indigenous territory is confronting some form of contestation: from vocal opposition and protests to militant confrontation and sabotage (Temper et al., 2020; Scheidel et al., 2020; Sovacool, 2021). Environmental militancy resurged across the world since the 1970 s. The 1980 s anti-nuclear movement in Germany alone, in addition to massive protests that occupied and damaged nuclear construction sites and offices, knocked down over 150 high-tension power lines connecting to nuclear power plants (Geronimo, 2012/1990). At the same time in Italy, equally high numbers of sabotage and power line attacks took place against nuclear power, and techno-capitalist domination generally (Anonymous, 1988). Ecological struggles would also intersect with national liberation movements. The Basque separatists, Euskadi Ta Askatasuna (ETA), joined the struggle against the Lemóniz nuclear power plant in the Basque province of Vizcaya. ETA attacked and bomb the construction of the nuclear power plant multiple times, resulting in multiple deaths and, later, executed two lead nuclear engineers in 1981 and 1982 (López Romo, 2008). Leading to considerable division and debate within the Iberian environmental movement (López Romo, 2008), militant environmental actions also had 'lone wolf' articulations. Ted Kaczynski's (2010) bombing campaign, between 1978 and 1995, against "Industrial Society and Its Future" remains another iconic example of targeting timber giants and specialized engineers associated with earth destroying and technological industries, which has gained some revival with the eco-extremist tendency (Anonymous, 2018), which is sending postal bombs to nano and biotechnology professors, engaging in assassination and other violent actions.

Earth First! emerged in the 1980 s, promoting a decentralized open network fighting in defense of the earth, which included a diversity of actions (Tsolkas, 2015). This involved popular actions of civil disobedience, such as blockades and 'lock-ons', as well as encouraging ecotage or 'monkey wrenching', which entails spiking trees, downing power lines and sabotaging machinery (Sovacool and Dunlap, 2022). Earth First! organizational chapters would spread across the world. Night ecotage, would give way to action groups, such as the Earth Liberation Front (ELF) and Informational Anarchist Federation (FAI). Eco-action groups popped up across the world to attack ecologically destructive industries (see Loadenthal, 2017a; Sovacool and Dunlap, 2022). Micheal Loadenthal 2017b: (4–5) documented 27,100 acts of ecotage, over a 38-year period, whereby '98% of attacks target property (i.e., not human beings), and 99.7% cause no injury'. Eco-anarchist and autonomist actions remain common, ever present and, often, suppressed and/or mischaracterized by the media, as with the wave of anarchists actions in southwest England between 2011 and 2014 (Anon, 2014). France alone, between 2020 and 2021, witnessed over 200 acts of sabotage, arson and vandalism most of which were attacking extractive and energy industries (Anon, 2021). This brief outline suggests that ecological concern and militancy is present and, currently, gaining momentum with rising climate concerns, which the green economic projects are responding in an attempt to mitigate or preempt with new climate youth manifestations, such as Fridays for Future or Extinction Rebellion (see Sovacool and Dunlap, 2022). By mitigating popular anxiety, the green economy stultifies effective action, and rehashes the tired violence vs nonviolence debates (Gelderloos, 2013, 2022), which seek to moralize tactical questions and isolate militant actions as 'extremist' or unjustified. The green economy as a device, or weapon, implies coercion and manipulation, which the next section unpacks by delving into the key mechanisms supporting the function and legitimacy of the green economy.

3. The green economy: 'energy', 'biodiversity' & 'carbon'

The entire green economy relies on the production, measurement and verification of abstractions. The commodification, exploitation and transformation of the natural world could not be possible without a particular materialist ontology and epistemology. This (ontological) outlook is explicit about its desire to subdue, dissect and control ecosystems/habitats (Merchant, 1983; Shiva, 2002/1989), modern science seeks to create universal truths and dominate the epistemological and, consequently, ontological realm (Foucault, 1977/1966; Sullivan, 2006). Counterinsurgency, a doctrine of scientific violence, reflects this materialist ontology of control, enacting and operationalizing this control of ecosystems and humans on different scales, intensities, numerous and multiple purposes. ***Ontology*** is the study of being, a branch of metaphysics concerned with the nature and relations of being (Blaser, 2013; Sullivan, 2017). Ontology, then, is the study of the 'real' and what can be said to exist.

Arising from ontology is ***epistemology***, which is the study or theory of knowledge creation that explores the origin, methods and limits of human knowledge. Foucault's (1977) *Order of Things* challenged modern epistemology and coined the term *episteme*. Materialist ontology and corresponding epistemologies remain foundational to the global environmental-security nexus, which celebrates the green economy as a solution to ecological and climate catastrophe. This perspective, and practice, naturalizes the nonhuman as 'enemy' to colonize and dominate, which extends to people through colonial and racialized discourses (Rodney, 2009; Patel, 2020). Counterinsurgency is the praxis of colonial conquest and population control (Dunlap and Brock, 2022), which, according to Mark Neocleous 5) (2014), makes dubbing 'colonial warfare as "unconventional" or a "small wars" affair' completely inappropriate due to its historical frequency and duration. The green economy extends the process of colonial invasion and counterinsurgency ontologically and ideologically. 'Ontological assumptions and praxis', Sullivan (2017) (223) summarizes, 'denote what entities can exist, into what categories they can be sorted, and by what practices and methods they can be known (i.e. epistemology), for participants in a social grouping sharing and negotiating these assumptions'. While space does not permit greater exploration, ontology crafts the foundations for thinking, understanding and relating, which is crucial for crafting three mechanisms instrumental to the green economy: 'energy', 'biodiversity' and 'carbon'.

What is energy, biodiversity and carbon? These terms are facts, and have become normative scientific truths within techno-industrial society. Because of epistemological methods of dissection, categorization, validation and function according to specific standards and logics, these readings of natural phenomenon become instrumental to the function and belief in the green economy. The logic, mechanics and function of the green economy remain dependent on the particular abstraction and commodification of the natural world, thus crafting a larger psycho-scientific apparatus that can claim ecological remediation, while advancing extractive capitalism. These onto-epistemological foundations and institutional practices provide the mechanisms by which to construct counter-insurrectionary tools to enliven the state and capital.

3.1. Energy

Where did 'energy' come from? Energy emerged as a concept in the 1840 s as coal-fed steam engines were multiplying across Europe (Daggett, 2019). The social construction of "energy" emerges as a technology of the industrial revolution, which sought to make legible, categorize and measure vital resources—nonhumans and humans—to

economize and harness their fuel and power. Energy as a signifier and its science, thermodynamics, as Cara Daggett (2019) shows, like the theory of evolution, had to negotiate with the church. This includes how the fabricators of 'energy' were believers in protestant work ethic, utilitarianism, government and, consequently, reinforced patriarchal notions and racist stereotypes (Clarke, 2001). Energy and physics emerge to reinforce exploitative labor regimes. This project predates the category of energy, but in the 19th century, 'you see a move in the language from something that is of a more religious discourse, about "civilizing" and "Christianizing" people, toward a scientific discourse about a way of working on bodies and disciplining energy flows', explains Daggett. People 'could be categorized according to their energy, their productively, their efficacy and assumptions can be made about people who needed governance, so they would not be[6] "wasteful", "idle" or "lazy"'. While thermodynamics is functional, it transfers and embeds a particular value system into a science, which, Daggett (2019) (111) contends, 'does not simply describe a preexisting thing called energy, but rather invents energy as a unit of accounting (and work and waste), thereby offering new governance strategies that were particularly useful to Victorian industry' (see also Lohmann, 2021). Energy, in many ways, became a moral construct and justification for global divisions of labor that 'naturalized the imperial circulation of power, which sacrificed people and things to the project of work, just as coal was sacrificed to the engine' (Daggett, 2019: 160). Thermodynamics, and the energy as a unit of measurement, economized patriarchy, advanced utilitarianism and the creed of economic growth. This epistemological logic proved instrumental to colonizing human and nonhuman resource at 'home' and 'abroad'.

Energy became the backbone of techno-capitalist development. "Energy is a thoroughly modern thing," Daggett (2019) (3) reminds us. While the distinction between fossil fuels and renewable energy stretches back to the industrial revolution (Malm, 2016), the entry of energy into politics did not formalize until the 1973 oil crisis (Daggett, 2019). Energy as a political field corresponds with the oil crisis, but also environmental crisis that gained traction in the 1970 s. The US Department of Energy formed in 1977, which Daggett (2019) (4) explains mainstreamed concepts such as 'energy transitions', 'energy alternatives', and 'energy forecasting', paving the way for 'energy companies' and corresponding 'energy outlooks'. More critically, however, historians of science, Christophe Bonneuil and Jean-Baptiste Fressoz (2016: 101), explain, 'if history can teach us one thing, it is that there never has been an energy transition', in fact it is 'successive additions of new sources of primary energy' (see also Dunlap, 2021). Bonneuil and Fressoz (2016) (101, 2) remind us, the term 'energy transition' was 'invented by think-tanks and popularized by power institutions: the US Department of Energy, the Swedish Secretariat for Futures Studies, the Trilateral Commission, the European Community and various industrial lobbies'. Central to understanding the green economy as counterinsurgency, '"transition" rather than "crisis" made the future less generative of anxiety, by attaching it to a planning and managerial rationality," explain Bonneuil and Fressoz (2016) (102). 'Transition' ignores the continuation and addition of generalized energy extraction (Bell et al., 2020; Dunlap, 2021), meanwhile opening the doorway to environmental-technological optimism and, consequently, market development in line with the rise of sustainable development. Energy, as a concept, remains essential to enabling green extractivism through low-carbon infrastructures (Dunlap and Marin, 2022), while the green economy spreads low-carbon infrastructures and wins acceptance for them as 'renewable', 'sustainable' and 'ecologically friendly', irrespective of the environmental costs of additional energy systems. Energy and energy transition, again, emerge to pacify legitimate socio-ecological desires, preforming a counterinsurgent role for the present trajectory of capitalist political economy. The ontology and discourse, leads to pacification, which is multiplied by police, military and extra-legal forces imposing mining and infrastructure projects.

3.1.1. Biodiversity

Biodiversity is a catchall phrase that refers to the lives of various species. Replacing the terms 'species diversity' and 'species richness' (Walker, 1992), biodiversity rose to prominence after the UN WCED1992 "Earth Summit" and is frequently specified by terrestrial, marine or aquatic biodiversity. The discourse of biodiversity, Escobar (2012)/(1995): 203) contends, means 'nature becomes a source of value in itself'. The term biodiversity transforms species of flora and fauna into 'reservoirs of value that research and knowledge, along with biotechnology, can release for capital and communities' (Escobar, 2012: 203). In line with the creed of sustainable development, biodiversity is a categorical priming for the objectification of nature. The 'programmes, or international meetings of donors and policymakers to discuss the fate of 'the global environment,'" Sullivan (2006) (109) explains:

thus requires and reproduces acceptable conceptualisations of, and relationships with, the presentable, packageable, consumable and manageable objects of 'nature', 'biodiversity' or 'the environment'. A 'nature' with which human relationships are reduced to sustainable consumption and custodial practices, whether direct or indirect, for livelihoods or for profit.

The United Nations have been instrumental in this commodification process. The 2005 United Nations Millennium Ecosystem Assessment report, is one of many examples, which conceptualizes nonhuman natures as 'ecosystem services' and offers twenty-four 'service categories', such as provisioning services (food, water, timber, fiber, etc.), regulating services (floods, droughts, land degradation and disease) and so on (Sullivan, 2010). This conceptualization of nature as a service provider, in the words of Sullivan (2010) (116), 'begins the discursive and conceptual transformation of earth into a corporation, providing goods and services that can be quantified, priced and traded as commodities'. This discursive and conceptual transformation, however, is not innocent.

War is literally carried out by militarizing and employing counterinsurgency to enforce conservation sites (Verweijen and Marijnen, 2018: Marijnen et al., 2021), and discursively by capturing, enclosing, marketizing and financializing nature in the name of biodiversity, ecosystems and climate change mitigation (Dunlap and Fairhead, 2014; Mirumachi et al., 2020). '"[B]iodiversity conservation" and other "natural climate solutions"', Philippe Le Billon (2021) (186), demonstrates, 'represent dangerous tools of land reallocation, creating spaces of exception and annihilating "traditional" socio-environmental forms of life'. Le Billion (2021) reviews how conservation and extractive industries are advancing multiple forms of extraction (see Fig. 3), demonstrating how 'biodiversity offsets can pave the way to opening up new spaces of coal extraction' as well as 'offer the agro-industrial group opportunities to further coerce local communities into limiting their traditional livelihood actives and possibly evict them from their ancestral territories' (see also Brock, 2020a; Huff and Orengo, 2021; Kröger, 2022). The green economy, through the framing of biodiversity (and carbon), is advancing ecological extraction and political control.

The trend of 'selling nature to save it' (McAfee, 1999), resonates with the rise of 'neoliberal multiculturalism', that Hale (2002) (498) describes as redirecting 'the abundant political energy of cultural rights activism, rather than directly oppose it' (see also Ulloa, 2013/2005). This is the objective of ('soft') counterinsurgency strategies. Escobar, following Martin O'Conner, foreshadows neoliberal multiculturalism and nature with the concept of Biodiversity. "[T]he tropical rain forest areas of the world," Escobar (2012) (123) explains, 'are finally being recognized as owners of their territories (or what is left of them), but only to the extent that they accept to treat it-and themselves-as reservoirs of capital'. Forests and habitat are ontologically flattened and reduced to investment 'resources' (Sullivan, 2010, 2017), ushering in new waves of socio-ecological colonization. The green economy extends

[6] November 17, 2021, Q&A keynote at the book launch for Batel and Rudolph (2021).

Category	Extractive companies	Conservation organizations
Operational goal	Extraction	Protection
Economic perception	Promised development	Wasted potentials
Environmental image	Destructive	Protective
Financial motivations	Profits	Charitable funding
Material interest	Subsoil resources and agro-productive soil and water	Surface biodiversity and ecotourism
Areas of interest	Resource frontiers and commercial deposits	High biodiversity and critical ecosystems
Spatial logics and forms of control	Erasure of previous land use and exclusion or integration of local residents; Concession and surface/sub-surface terra-transformation	Re-naturalization of land ('without use') and exclusion or co-management with local residents; Protected areas and Other Effective Area-based Conservation Measures (OECMs)
Security	Militarization and community pacification through Impact Benefit Agreements, Corporate Social Responsibility projects, and repression	Militarization and community enrollment through eco-tourism, 'sustainable' livelihoods, REDD+, and repression

Fig. 3. Comparing extractive and conservation industry objectives.
Source: Le Billon (2021).

the trajectory of techno-capitalist progress, even though it provides numerous benefits, which makes this a subject of intense debate (Dunlap and Sullivan, 2020; Büscher and Fletcher, 2020; Kashwan et al., 2021; Huff, 2021). The green economy thereby serves as a method of pacification and ecological conquest, advancing spatial control, creating markets, affirming statist governance and expanding digitalization (dependent on extractivism), via financial apps, security equipment (for park guards) or surveillance and animal monitoring technologies, and all in the name of environmental policy.

The biodiversity turn is predicated on 'natural resource', but also cognitive resources. Speaking to Escobar (2012), Hale (2002) and Ulloa (2013), Leanne Betasamosake Simpson commiserates:

When there was a push to bring traditional knowledge into environmental thinking after *Our Common Future* in the late 1980 s, it was a very extractivist approach: "Let's take whatever teachings you might have that would help us right out of your context, right away from your knowledge holders, right out of your language, and integrate them into this assimilatory mindset." It's the idea that traditional knowledge and indigenous peoples have some sort of secret of how to live on the land in a non-exploitive way that broader society needs to appropriate. But the extractivist mindset isn't about having a conversation and having a dialogue and bringing in indigenous knowledge on the terms of indigenous peoples. It is very much about extracting whatever ideas scientists or environmentalists thought were good and assimilating it…. put it onto toilet paper and sell it to people. There's an intellectual extraction, a cognitive extraction, as well as a physical one. (Klein & L. Simpson, 2012).

Land, biodiversity and knowledge are the primary frontiers of extractivism under the green economy. Sustainable development, or "greening," assimilates traditional ecological knowledge (TEK) into statist circuits and in the service of techno-capitalist progress, preforming a 'cognitive extractivism' (see also Grosfoguel, 2016; Kröger, 2022). The green economy is a statist instrument that advances the conquest and reconfiguration of human and nonhuman nature, protecting and advancing techno-capitalist trajectories, while promoting the belief of ecological and climate catastrophe mitigation. The green economy serves a counter-insurrectionary function to preserve the state and global capitalist system.

3.1.2. Carbon

Carbon dioxide remains the principle unit of measurement for evaluating global warming and justifying the green economy. Carbon dioxide, or carbon, calculations are essential to renewable energy/fossil fuel+ development, but also conservation, specifically with carbon sequestrations schemes like REDD+ (Reduced Emissions for Deforestation and Forest Degradation). Carbon measurements represent seven different greenhouse gases (GHG): water vapor, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. In 2001, the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard," was design by the World Resource Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), which currently serves as the main framework for emissions accounting worldwide (Boukherroub et al., 2017). The WRI and WBCSD update how they calculate commensurability between carbon and the six other GHGs, for example, methane rates change by 29% over 20 years (Boukherroub et al., 2017: 46). Carbon accounting and modeling are subject to uncertainty and inaccuracies, yet this approach remains the principle framework for charting the ecological footprints of companies and climate change.

Carbon, like energy and biodiversity, have the same ontological and epistemological underpinnings. Carbon is a colorless gas and element that naturally exists within the atmosphere. There are, according to Tasseda Boukherroub *and colleagues* (2017: 51–2), four methodologies for measuring the carbon footprint. First, 'direct measurement' that directly measures pollutants from sites, yet typically is only done if regulated by authorities. Second, 'energy-based calculations' are 'based on mass balance or theoretical combustion specific to a facility or a process'. This measurement is applied to fuel consumption. Third, 'activity-based calculations' applies an activity-based cost formula that calculates a total cost pool and divides in by the cost driver, which yields the cost driver rate. The cost driver rate is an activity-based counting that calculates the amount of overhead and indirect costs related to a particular activity. Information is frequently withheld, sometimes due to competition between companies or the potential damaging effect in can have on a product (Bouchery et al., 2017). Fourth, economic input-output life-cycle assessments' (EIO-LCA) models converts company expenditures into average amount of carbon emissions. 'Carbon data' is often provided by companies themselves, or part of online data platforms that are updated and people can subscribe to plug this data into (the various) life-cycle assessment models (see Bouchery et al., 2017). *This raises serious concern with data collection and what actually constitutes data.* The responsibility of companies is difficult to identify, because projects are jointly owned and, according to Yann Bouchery *and colleages* (2017:6), 'companies' direct emissions average only 14% of their supply chain emissions prior to use and disposal'. Companies have intricate webs of subcontracting to other businesses, which creates

significant challenges and potential zones of plausible deniability for the socio-ecological impacts of companies. Underreporting combines with abstract indicators and inaccurate measurement devices.

Carbon remains a categorical scientific abstraction. This raises issues with how carbon can represent the qualitative dimensions of ecological destruction. Take a mine, for example. Carbon accounting fails to account for toxic dusts entering the air, tailing dams (containing arsenic, thorium or other heavy metals) overflowing or breaking,[7] downstream water contamination, ecosystem die-off and human rights abuses enacted to enforce the construction of a mine (Dunlap and Marin, 2022). Carbon accounting conceals ecological catastrophe. Emphasizing climate and decarbonization remains a slight of hand, which separates climate from ecological issues. Gelderloos (2022) (38) calls this 'climate reductionism.' This discursive shift, purposely or implicitly, deflects from the reality that climate change is produced by local ecological degradation and discord around every city, factory and extraction site. Meanwhile, sending the paralyzing message that the problem of climate change is enormous, locating action primarily with governments, international committees and companies, which in essence disempowers people from taking immediate ecological action in their localities (Dunlap and Jakobsen, 2020). This, likewise, creates new industries related to geoengineering (Dalby, 2020). The Carbon accounting, furthermore, confronts supply chain monitoring problems, which creates a large range of governance issues, techniques to avoid accountability and ideological systems celebrating capitalism and an intensification of business as usual—accelerating socio-ecological and climate catastrophe.

While carbon, through another mathematical calculation, represents six elements (nitrous oxide, hydrofluorocarbons, etc.), it does not account for the myriad of industrial wastes, ecological disruptions and degradations related to techno-industrial development and urbanization. Quality remains a lacking and detrimental factor. Moreover, this does not include the reliability of data, measurement procedures and models, as with the four collection methods above, there are serious data collection limitations. The Domestic Material Consumption of $C0^2$ emissions, Marina Requena-i-Mora and Dan Brockington (2021: 20) show, is 'limited to the amount of material directly used by any national economy', therefore '[i]t does not include the upstream raw materials related to imports and exports originating from outside the national economy'. This creates accounting bias that make high-income countries appear less environmentally destructive. Material Intensity and Environmental Performance Index that monitor material or energy use per unit of GDP, Requena-i-Mora and Brockington (2021: 21) also show, 'does not consider change in absolute or per capita terms'. This 'gives the illusion that rich countries can grow indefinitely because natural resources are unlimited and/or substitutable with manufactured capital' and (Requena-i-Mora and Brockington, 2021: 21), thus, preserving the myths of the green economy. Any attempts to measure this with any real accuracy—outside (and along with) the narrow ontology and epistemology of modern science—would require time consuming and costly multi-scientific impact assessments.

Carbon acts as the primary indicator of climate catastrophe, which includes its algebraic and econometric accounting procedures. The reductive approach of carbon, then preforms three functions. First, it allows the minimization of ecological and climate catastrophe, providing conservative assessments regarding the impact of techno-capitalist development. Second, it enables half-hearted mitigation schemes, such as conservation 'offsets', eco-tourism and low-carbon infrastructures, which collaborates with mining companies and further integrates ecosystems into economic and financial circuits. Thirdly, it enables the gymnastics of statistics and modeling, which offers reassurances, but also distracts from questioning and intensifies the existing trajectory of production, consumption and profiteering. Carbon accounting, then, emerges as an essential technology in legitimizing the socio-political pacification efforts of the green economy. The reassurances are manipulative, justify the continued coercion of extractive capitalism and aids-and-abets planetary degradation and destruction. The green economy and its scientific mechanisms perform a governance counterinsurgency function with planetary consequences.

4. Green mining? Rebranding ecological catastrophe

The first pages of a supply chain textbook are quick to declare: 'there can be no such thing as a "sustainable supply chain"' (Bouchery et al., 2017: 2). Critiques of sustainability are well versed in this point, which includes acknowledgement that "sustainability" often refers to financial or social sustainability (Scoones et al., 2015). The green economy has rebranded capitalism, sustains the illusion of ecological and climate change mitigation, meanwhile diluting environmentalism. Building on the dominate ontology and epistemologies discussed above, the green economy emerges as a war by other means to prolong capitalism, underestimate the extent of socio-ecological issues and disable resistance. Positioning low-carbon infrastructures and electric vehicles as environmentally friendly, by surreptitiously juxtaposing them from conventional hydrocarbon extraction, has come to justify mining as a pathway towards sustainability and decarbonization.

While still celebrating 'energy transition', the World Bank (Hund et al., 2020: 37) claims that: 'The clean energy transition is expected to be much more mineral intensive than fossil-fuel based electricity generation'. The rapid deployment of wind and solar projects will require enormous amounts of non-metallic minerals. Based on the 'ambitious scenario' of limiting global temperatures 'well below 2 °C′, the World Bank (Hund et al., 2020: 21, 72) provides alarming estimates. '[D]emand for aluminum, indium, and silver are expected to ***increase by more than 300% by 2050*** from the [2018] base scenario, while the demand for copper, iron, lead, neodymium, and zinc is expected to increase ***by more than 200%***' (emphasis added). The situation, however, is radically underestimated. In the EU alone, unlike projections by the World Bank, solar and wind technologies will (under a 'high demand' scenario) increase the EU's demand for lithium, dysprosium, cobalt, neodymium and nickel by up to 600% in 2030 and up to 1500% in 2050 (Bolger et al., 2021). Batteries for electric vehicles, wind and solar technologies will drive the EU's demand for lithium up by 1800% and cobalt by 500% by 2030, and in 2050 demand will increase by almost 6000% for lithium and 1500% for cobalt (Bolger et al., 2021). These approximations, however, still do not take into account many infrastructures and digitalization devices, not to mention the increasing demand of electric vehicles in non-EU countries like Norway (Klesty, 2021), which surpassed earlier calculations.

While data is reductive and limited—ignoring toxification and human rights abuses—there are just flat-out omissions. The socio-ecological costs are unknown, and even lack relative approximations. Smartphones contain around 62 different types of metals, including rare earth elements, copper, lithium and cobalt, and conflict minerals such as tin, tantalum, tungsten and gold (Bolger et al., 2021). '25% of all the silver mined around the world goes into electronic products', explains the European Environmental Bureau (EEB) report, continuing that 'collectively, smartphones have consumed 107,000 tons of copper, 38,000 tons of cobalt and 157,000 tonnes of aluminium and thousands of tons of other materials, and use around 10% of global primary palladium and cobalt production' (Bolger et al., 2021; 3, 15). Digital infrastructure requires enormous amounts of extraction. This extractive trajectory is expanding with 'smart city' digitalization. Sensors require tin, tungsten, tantalum and platinum; Radio Frequency Identification (RFID) tags use silver, copper and aluminum. In 2014, 6.3 billion tags were sold (Pilgrim, 2017). In 2016, Hannah Pilgrim (2017: 9) contends, 'the needed raw materials and energy for the 'future technologies' (e.g. RFID-Tags, chips, displays, etc.) have not yet been taken into account'. Even if

[7] See 'Chronology of Major Tailing Dam Failures', 1960–2022, https://www.wise-uranium.org/mdaf.html

life-cycle assessments exhibit severe modeling limitations (e.g. socio-ecological reduction & model assumptions), they—according to David and Koch (2019)—have not been accounted for in the development of smart city infrastructures. Still more, efforts to clean up mineral supply-chains with conflict mineral certification schemes (CMCS), the Extractive Industries transparency Initiative (EITI) and Minamata Convention on Mercury (MCM), Le Billon and Spiegel (2021) (3) show, actually legitimize and exacerbate various forms of violence, inequalities, racialized hierarchies and ecological degradation, if not destruction.

Electric vehicles as an ecological solution is another socio-ecological absurdity enabled by the green economy. 'There are today about 8 billion electric motors in use in the EU', according to the 2020, 'consuming nearly 50% of the electricity EU produces'. Decarbonizing the economy, according to the Work Bank (Hund et al., 2020: 30), includes attempting to provide electricity to 840 million people without access, meanwhile building 'the motors and chassis to electrify 135 million electric vehicles' anticipated over the next 10 years. The situation, however, is much worse. Summarizing available numbers, Sovacool and colleagues (2020: 3) document:

[T]he number of electric vehicles (EVs) needs to jump from almost one million in 2015 to one billion cars in 2050 (more precisely from 1.24 million passenger cars to 965 million passenger cars); from 200,000 electric buses and trucks/lorries to 57 million; and from 200 million electric scooters and bikes to 2.16 billion. The amount of battery storage similarly needs to climb from 0.5 gigawatt hours (GWh) to 12,380 GWh.

Cobalt demands alone in EVs have increased by '200% between 2018 and 2020, and again by 500% by 2025′, while lithium ion's demand will quadruple between 2018 and 2028 (Sovacool et al., 2020: 3). EVs, it is estimated, use 'four times as much copper as fossil fuel cars' (Bolger et al., 2021: 14). This raises the issue of battery capacity, recyclability (see Fig. 1) and decommissioning waste. '[G]lobal solar panel waste amounted to 250,000 tons in 2016′, reminds Sovacool and colleagues (2020: 4), which can reach up to '60 million tons of solar waste in 2050′. This combines with '11 million tons of spent lithium ion batteries' and 3.1 MW wind turbine, which creates between '772–1807 tons of landfill waste, 40–85 tons of waste sent for incineration and about 7.3 tons of e-waste per unit' (Sovacool et al., 2020: 4). As Fig. 4 below indicates, current rates of recycling will not make a dent in this level of extraction and waste production. These numbers again do not account for the various forms of toxification, horrendous living conditions and systematic human rights abuses implied (see Dunlap, 2019b, 2020; Brock, 2020; Menton & Le Billion, 2021; Verweijen, 2017; Verweijen and Dunlap, 2021; Dunlap and Brock, 2022). The green economy remains instrumental in concealing this violence in the service of intensifying the operations of capitalist political economy.

The streets of every city continue to be filled with e-bikes and scooters under the name of 'environmentalism' and 'going green'. While this also entails the enclosure of public space by business, this proliferation of extracted materials are 'not considered' for e-bikes, scooters and other devices in the accounting above (EC, 2020: 35). This means more energy use, less walking and more (critical) raw materials for riding e-bicycles. More copper, neodymium and other rare earth metal mining and processing. The EC, 2020 and World Bank (Hund et al., 2020: 11): '[D]o not include the associated infrastructure needed to support the deployment of these technologies (for example, transmission lines)'. This statistics above do not include the land contracting, operational impacts of low-carbon infrastructures (Dunlap, 2019a, 2021), energy use or decommissioning issues related to low-carbon infrastructures (Sovacool et al., 2020), which are rather extensive.

Mineral	End-of-life recycling rates	Recycled content rates
Aluminum	42%–70%	34%–36%
Cobalt	68%	32%
Copper	43%–53%	20%–37%
Lithium	<1%	<1%
Nickel	57%–63%	29%–41%

Fig. 4. Recycling Rates via UNEP.
Source: Hund et al. (2020), p. 8.

The project of state formation and political economy, while being exemplars of technological progress, have failed to account for the socio-ecological repercussions this pathway of development would entail. Environmental policy must critically reflect on the ontology and epistemology reinforcing the science supporting the green economy, which remains self-serving to the current trajectory of governance and economic development. People, likewise, need to reconsider their role, acquiescence and submission to these structures, together examining how the green economy functions to continue a war by ecological crisis in the name of governance, climate change mitigation and 'green' growth. The present socio-ecological situation has been intentionally engineered, organizing ecological catastrophe by fragmenting, confusing and repressing dissenting voice within and outside governmental institutions.

5. Conclusion

The counterinsurgency logics and (protective) mechanisms of governance extend to ecological and climate issues. The green economy, which is a politico-economic apparatus designed to advance political control, is a response to generalized socio-ecological and climate issues. This article has reviewed the key epistemic devices behind the green economy: energy, biodiversity and carbon. These epistemological, and seemingly neutral, instruments are central to crafting a psychosocial apparatus organized to garner legitimacy for green capitalist solutions. The effectiveness of the green economy as counterinsurgency relies on legitimacy construction. This translates into the belief, celebration or tacit acquiescence of people into this material ontology, reductive epistemology, corresponding myths of ecological modernization and the credibility of governmental institutions to sanction these activities. This legitimacy, however, is a result of long-term conditioning or domestication, which derives from peoples' willingness to believe and desire that their best interests are served by the green economy (as promoted by governments and companies) and being convinced that (wasteful) modernist lifestyles can exist while mitigating socio-ecological and climatic crises. The green economy, in essence, is a global pacification device, attempting to mitigate environmental anxieties, fragmenting dissent and opening new 'green' conservation, bioenergy and energy infrastructure markets.

Ecological abstractions, quantifications, measurement and modeling devices, while presented as neutral and technical, are acting as weapons to acquire land, wind, solar and hydrological resources, meanwhile minimizing, if not concealing, the ecological catastrophe in order to promote an intensification of conventional and green extractivism in the name of 'sustainability', 'renewability' and 'energy transition' (Dunlap, 2021; Le Billion, 2021). Colonialism, indusial development, capitalism and technological progress, thereby have sacrificed numerous ecosystems, people and the qualities of socio-ecological and more-than-human relationships (Kröger, 2022). The green economy operates in this tradition of subversion, coercion and extractivism. Counterinsurgency is instrumental to engineering and managing political control, from which the green economy emerges as a large-scale discourse and growing psychosocial apparatus, designed to advance capital accumulation, affirm the state system and fragment opposition. This political framing, the green economy as counterinsurgency, is intended to highlight not

only the severity of the issue, but its intentional and engineered reality of socio-ecological and climate catastrophe. The ontological and epistemological instruments employed are inadequate, constructing a picture suitable to the forces most responsible for ecological and climate catastrophe, namely governments and large-industry. Ignoring and concealing this reality is an act of exterminating negligence. Changing production practices (Hickel, 2020), school curriculums (Gills and Morgan, 2020), even if it is too late (see Fig. 2), are necessary and immediate to change, individually, communally or at the level of public policy. Encouraging large-scale participation in creating degrowth and real circular economies (see Spash, 2020), circumventing and restricting ecologically destructive industries, planned obsolescence, advertising industries and profiteering (Hickel, 2020: 205–50). Decriminalizing land defense so people can protect their habitats (Menton & Le Billion, 2021), also remains a necessary an immediate policy change. This also necessarily entails placing human and nonhuman interests alongside humans (Springer et al., 2021), eliminating ethnic and epistemic discrimination and recognizing, for example, the importance "Indigenous Science" to remediate socio-ecological catastrophe (Whyte et al., 2016). The green economy emerges as a counter insurrectionary strategy designed to support global governance and destructive industries, meanwhile suppressing Indigenous people, non-human natures, concerned citizens and land defenders. It remains painfully clear: For the planet to ecologically thrive, capitalism must cease to exist as we know it.

Author statement

The author, who is responsible for data curation, formal analysis, the research, the methodology employed and the administration of related projects, conceptualized this paper. This paper is not the result of funding acquisition or computational software. This article was written and conceptualized by the author, which received critical feedback and translation help from friends, colleagues and the manuscript reviewers.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Availability

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Alexander Dunlap is a postdoctoral research fellow at the Centre for Development and the Environment, University of Oslo. His work has critically examined police-military transformations, market-based conservation, wind energy development and extractive projects more generally in Latin America and Europe. He has published two books: Renewing Destruction: Wind Energy Development, Conflict and Resistance in an American Context (Rowman & Littlefield, 2019) and, the co-authored, The Violent Technologies of Extraction (Palgrave, 2020). This includes a forthcoming edited volume: Enforcing Ecocide: Power, Policing & Planetary Militarization (Palgrave, 2022).