

# Carbon Leviathan: A Planetary Sovereign Governing the Anthropocene

Florian Skelton, Goethe-University Frankfurt am Main

[florian.skelton@stud.uni-frankfurt.de](mailto:florian.skelton@stud.uni-frankfurt.de)

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## Abstract

*As evidenced by the recent boom of commitments to reach 'net zero CO<sub>2</sub>e emissions', there is a fast-growing consensus that 'something' must be done against climate change. Calls for swifter action and the measuring of targets all revolve around CO<sub>2</sub>e as their paramount indicator, making it the category of the Anthropocene par excellence. Dominantly, CO<sub>2</sub>e is grasped in the marked-compatible form of traceable and tradeable units. This paper proposes to read contemporary ecological politics as a quest for planetary sovereignty, that is, a struggle to decide which sovereign can or should legitimately impose what type of climate action. It does so by grasping targets for 'net zero CO<sub>2</sub>e emissions' as invoking a new regime governing both human and climatic processes at the planetary scale. Specifically, it is argued that the position of a planetary sovereign is being taken up by carbon in a market-compatible form. This understanding of sovereignty is in line with the Anthropocene, which contends that human and non-human realms have been fused due to climate change. As such, sovereignty is no longer understood in the modern sense of an actor or government, but rather to diffuse among the amalgam of human and more-than-human domains to govern spheres such as production systems, politics and atmospheric processes alike. Carbon is not only politicized as making up the detrimental CO<sub>2</sub>e emissions, but also as the emanation of an all-encompassing cycle between humans, more-than-humans and climatic processes. Thus, sovereignty in the Anthropocene is identical with what it governs, leading to what I delineate as Carbon Leviathan.*

## Introduction

In 1917, Sigmund Freud (1963, 284–85) argued that humanity's narcissism has been insulted three times: Copernicus dislocated the Earth from the center of the universe, Darwin unveiled humans as animals created by evolution and he himself demonstrated that human consciousness "is not even master in its own house". This list has since been extended—however, it is a conspicuous thought that climate change and collapsing ecosystems constitute the most existential insult to humanity yet. Unlike previous insults, climate change forces us to accept that humankind cannot transcend its material constraints, but that the authority to direct climatic processes lies in an amalgam of humans *and* more-than-humans.

A veritable quest for such an authority of planetary magnitude has taken hold of contemporary ecological politics. As climate change is becoming impossible to ignore, a struggle unfolds to decide who can or should legitimately impose what type of response. It is depressing to notice the mismatch between the imperative to keep global warming well below 2 degrees (UNFCCC 2015b) and the absence of appropriate political action. In the face of this dejection, the Anthropocene—a buzzword denoting the present geological epoch since the late eighteenth century when global concentrations of carbon dioxide and methane started to increase abruptly (Crutzen 2002)—is instructive in thinking about the messy status of political sovereignty amid planetary crises.

By ascribing the increase of greenhouse gases to human activity, the Anthropocene elevates our species, *anthropos*, to the rank of a planetary force capable of and responsible for climate change (Malm and Hornborg 2014, 65–67). At the same time, though, the Anthropocene decenters humanity from its position external to nature (N. Clark 2014, 25) to the extent that the Anthropocene might end up outliving humanity (Kunkel 2017). These contentions have sparked a plethora of publications, challenging many core scientific assumptions and theorems. Regarding sovereignty, the Anthropocene does away with the human–nature–divide and does not assume ‘nature’ as a means at the ready for human manipulation, hence dropping modern notions of progress (Chandler 2018, chap. 8; Lövbrand et al. 2015).

No actor, nation or institution explicitly arrogates authority over the planet’s future to itself (yet). But nevertheless, possible planetary sovereigns are hinted at in philosophical debates (Luisetti 2019). Most prominently, Bruno Latour’s (2017) ‘Gaia’ and Donna Haraway’s (2016) ‘Chthulu’—but also Joel Wainwright and Geoff Mann’s (2018) ‘Climate Leviathan’—are figures which are portrayed to ‘rule’ our disintegrating world. They are “figures of chaos and sovereignty” (Luisetti 2019, 342) which paint the Earth as a near animist agent powerful enough to govern the Anthropocene. The present paper investigates how specifically greenhouse gas emissions are invoked as a locus of planetary sovereignty. These

emissions of carbon dioxide equivalents—I will henceforth refer to them as CO<sub>2e</sub>—are singled out as the root cause of global warming. Carbon is the element that makes up carbon dioxide and methane, two of the most famous greenhouse gases, as well as fossil fuels, the combustion of which is targeted as humankind’s central transgression.

Crucially, carbon is articulated as a pseudo-subjectivity every time targets for lowering emissions are proclaimed. Calls such as ‘net zero CO<sub>2e</sub> emissions’ resound all around the world now. Not only the EU and China have committed to carbon neutrality by 2050 and 2060, respectively, also some of fossil capitalism’s central corporations have proclaimed equal or even more ambitious plans. Hence, my analysis of planetary sovereignty focuses less on awe-inspiring personages such as Gaia and Chtulu, but on carbon, a seemingly innocuous parameter central to the science and politics of climate change.

## **Indeed, We Are at a Crossroads**

To begin, three theses set the ground from which my argument for a Carbon Leviathan as a planetary sovereign will take off. They point towards the recent boom of ‘net zero CO<sub>2e</sub> emissions’ commitments and reveal a significant shift in recent politics.

First, I not only follow the Intergovernmental Panel on Climate Change’s (IPCC) assessments that global warming is real and human-induced, but also contend that climate change is already upon us and that it is too late for it to be averted altogether. This means that, to an extent dependent on future politics, climate change will inevitably worsen the conditions sustaining human activity on earth (Thompson 2010, 167–68).

Second, I claim that party politics have shifted significantly to adjust to the thesis above. After decades of ignorance and denial, mainstream political parties are now prompted to lay out a more detailed program on climate change. This is not to say that a majority of them is suddenly willing to take the drastic steps necessary to honor the Paris Agreement. Rather,

political parties are increasingly pressed to clarify their position to voters, explaining which policies can or should (not) be pursued and how they would affect productivity, jobs, etc.

Third, fast growing parts of the financial industry—along with fossil capitalism’s central corporations—have moved away from denial and are pushing their own proposals, too. This might not be that visible in the public realm, but many companies’ net zero targets are actually more ambitious than those of countries and political parties: reinsurance company Swiss Re and investment bank Goldman Sachs by 2030, car manufacturer Daimler by 2039, energy company RWE by 2040, asset manager BlackRock and oil company Shell both by 2050—to name only a few of the world’s largest corporations (Rechsteiner 2020).

Taking these three premises together, the imperative to bring CO<sub>2</sub>e emissions down to net zero has become a political consensus. A historic threshold has thus been crossed and now many actors are reckoning with ecological breakdown, one way or another. Regardless of whether ecological politics will steer towards Green Keynesianism, ecomodernism, laissez-faire market or central planning—as much of contemporary debate goes—CO<sub>2</sub>e emissions will ground any of these variations. It is no understatement: ‘net zero CO<sub>2</sub>e emissions’ is heralded as the magic formula capable to bring climate change under control. Also, it serves as an apposite principle to sum up our current conjuncture in the Anthropocene. The ‘net’ refers to trade and compensation (economy); ‘zero’ sketches a future in which climate change has supposedly been mitigated (politics); ‘emissions’, finally, indicate the geophysics of the problem itself (nature).

## **Carbon as Sovereign**

Among the proposed policies aimed at reducing emissions of CO<sub>2</sub>e, market-based mechanisms dominate. Carbon offsets, carbon taxes and the scheme of ‘cap-and-trade’ are highly popular policies with the expressed goal of mitigating climate change (Wainwright and Mann

2018, 31). They are founded upon CO<sub>2</sub>e emissions as the paramount indicator to measure the state of climatic destruction as well as to inform targets. Specifically, then, I discuss traceable and tradeable units of CO<sub>2</sub>e as the category of the Anthropocene *par excellence*.

Anthropogenic emissions of CO<sub>2</sub>e—which are themselves partly made up of carbon—fundamentally disrupt the “carbon cycle” (Prentice et al. 2001) which is indispensable for a stable human metabolism with non-human nature. This leads to what could be called a “metabolic rift” (Foster 1999) in the Earth system’s carbon metabolism (B. Clark and York 2005). Since atmospheric processes are inert, this disturbance of the carbon cycle is becoming independent of human activity. More-over, once certain “tipping elements” (Lenton et al. 2008) have been surpassed, self-reinforcing processes such as the melting of permafrost begin, releasing methane on its own accord (Kunkel 2017). This is why, even if humanity should go extinct, the Anthropocene would continue to prevail (Kunkel 2017).

Accordingly, emissions of CO<sub>2</sub>e are not solely identified as the problem to be reduced in scope, but also as the emanation of an all-encompassing cycle between humans, more-than-humans and climatic processes stretching over millions of years. These multi-complex and multi-layered processes of the carbon cycle have been grasped in a specific form during the last decades: localisable, priceable and tradeable quanta of CO<sub>2</sub>e emissions destined for market exchange. Early conventions and influential reports on climate change attest to this.

The Kyoto Protocol of 1997 consolidated the first attempts to devise a global political regime for mitigating anthropogenic global warming (Bolin 2007, 153), deciding on market-based instruments as the means to achieve targets. For example, a framework was established for signatory parties to certify emissions reductions and removals to then trade as ‘reduction units’ and ‘removal units’ (UNFCCC 1997, Art. 6 and 12; Bolin 2007, 152). The EU was the first to go ahead and devise a scheme to trade emission permits in 2005 (Bolin 2007, 235).

The *Stern Review on the Economics of Climate Change*, published in 2006 and widely seen as the state of the art at the time (Bolin 2007, 242), deepened this vision. Its author, econ-

onomist Nicholas Stern (2007, xviii), understands climate change as “the greatest market failure the world has ever seen”. His main proposal to overcome climate change is to tax ‘negative externalities’, i.e. the pricing of carbon emissions, and to draw up a global system of emissions trading (Stern 2007, xviii, 442, chap. 15). Even though not all ‘market imperfections’ will be overcome with such a strategy, as Stern (2007, 427) admits, both carbon taxes and emissions trading should be “used to create an explicit price for carbon” (Stern 2007, 368).

The Paris Agreement of 2015, another milestone in global efforts to curb climate change, codifies the most ambitious targets to date and likewise pushes for carbon tax and compensation schemes with units of CO<sub>2</sub>e as their parameter (UNFCCC 2015b, especially Art. 6). Prior to the negotiations, the six largest oil companies (BG, BP, Eni, Shell, Statoil and Total) sent an open letter to the UN, urging them to implement more costly carbon price systems and eventually merge national systems into a global framework which regulates the costs of CO<sub>2</sub>e emissions (UNFCCC 2015a).

Summing up, the rationale grounding the now hegemonic ‘net zero CO<sub>2</sub>e emissions’ is to offer climate change as an investment opportunity to capital: Market schemes such as the trade in emissions permits (‘cap-and-trade’), high consumer disposition for ‘sustainable’ finances and ‘green’ business as well as government subsidies for carbon removal technology (Wainwright and Mann 2018, 31; Malm and Carton 2021, 7). Declaring market-compatible CO<sub>2</sub>e emissions as the most fundamental parameter in climate policy, a system of carbon tax, compensation payments and emissions permits has since developed. In order to reach ‘net zero’ at a global scale, an estimated 210 to 360 gigatonnes of CO<sub>2</sub>e would be traded until 2100, entailing a financial flow amounting to 250 trillion US-dollars (Lee, Fyson, and Schleussner 2021, 5–6). If ever flaws in trading schemes for CO<sub>2</sub>e emissions are admitted, they are attributed not to the market dynamics going too far, but actually not far enough (Bolin 2007, 235–36; Stern 2007, 427; Dasgupta 2021, 310, 498).

## Carbon Leviathan

Contending that CO<sub>2</sub>e emissions in a market-compatible form are elevated to the rank of a planetary sovereign requires an engagement with the most prominent image of sovereignty in intellectual history—Thomas Hobbes' *Leviathan*.

For Hobbes (1996, chap. 13), the state of nature is a state of war with a total absence of sovereignty (*bellum omnium contra omnes*). In it, man (sic) is conceived of as rational and diffident, endowed with a natural right to seize, fight and kill as he sees fit (*homo homini lupus est*) (Hobbes 1996, chap. 13). In order to escape this dangerous state of nature, Hobbes (1996, chaps 14–19) formulates a social contract whereby which every man transfers his powers to the Leviathan. Henceforth, Leviathan assumes absolute sovereignty, permitted to command every one of his subordinates at will with the only restraint of having to ensure their bare life.

It is the structure of Hobbes' thought experiment which is adopted by Wainwright and Mann (2018, 30) to investigate “a dream of a planetary sovereign” which they name “Climate Leviathan”. Hobbes portrays a calamitous state of nature which supposedly necessitates the voluntary and collective submission to an absolute sovereign to avert war, chaos and death. Paralleling these thoughts, Wainwright and Mann (2018, 28–30) describe the politics of climate change as a quest for planetary sovereignty in order to prevent climatic collapse. If Hobbes' Leviathan gained its legitimacy by forestalling the state of nature, Wainwright and Mann's Climate Leviathan presents itself as a sovereign which inhibits climate change. More precisely, Climate Leviathan is assumed to be brought about by “a collection of powers coordinated to ‘save the planet’” (Wainwright and Mann 2018, 15). The invocation of a ‘planetary interest’ is the source of legitimacy whereby which Climate Leviathan arrogates to itself a *Weltrecht*, i.e. the power to “invoke the exception, declare an emergency, and decide who may emit carbon and who cannot” at the planetary scale—a task, as the authors grant, of sheer biblical proportions (Wainwright and Mann 2018, 29).

Wainwright and Mann do not affirm a sovereign like a Climate Leviathan. To the contrary, they wish to criticize what they observe as a prominent wish for an unconstrained planetary sovereign capable of swiftly enforcing all the necessary measures (Wainwright and Mann 2018, 30–32). With their actualization of Hobbes’ Leviathan, they hope to capture much of contemporary calls in environmental politics which are geared towards invocations of a powerful sovereign at the planetary level (Wainwright and Mann 2018, 39).

Furthermore, it is pivotal to understand Climate Leviathan as a sovereign which has not yet fully consolidated, but is rather in the process of emergence. It derives power not from its actual existence, but from it being expected and glimpsed at the horizon of the future. This way, Climate Leviathan exists *in potentia*; its sovereignty unfolds in it being awaited, influencing present expectations and actions (Wainwright and Mann 2018, 18). As such, Wainwright and Mann deal with prospection and not prediction, the difference being that the latter aims for an impartial estimation of the future while the former is a committed hope (or fear) about our shared destiny (Moellendorf 2020, 149–50).

Following the recent boom of ‘net zero’ commitments and the ongoing financialization of CO<sub>2</sub>e emissions, I wish to narrow Wainwright and Mann’s ‘Climate Leviathan’ down by chipping away some of its near-biblical pretensions and specifying it as a sovereign which primarily regulates ‘net zero CO<sub>2</sub>e emissions’. Consequently, I delineate the emerging climatic regime sketched above as ‘Carbon Leviathan’: a sovereign which is identical with what it governs, a locus of sovereignty which sets constraints and imperatives by simply existing. Contrary to Hobbes (1996), but in line with Wainwright and Mann (2018, 31), this Carbon Leviathan transcends national boundaries to span around the globe and across the atmosphere.

Wainwright and Mann (2018, 31) conceive of their Climate Leviathan as beyond nation states, but not beyond the human-nature-divide. The two authors speculate that a globalized Climate Leviathan will be embodied by either the United States alone or in agreement with China (Wainwright and Mann 2018, 152–53). Either way, they still succumb to a view in



which human systems such as nation-states are distinct from natural or atmospheric systems. My proposition of a Carbon Leviathan, on the other hand, is a sovereign which fuses what has formerly been understood as ‘nature’ (carbon cycle) with what has previously been grasped as ‘humanity’ (the activity of combusting carbon). Carbon Leviathan is thus situated within the amalgam of intermingling human and more-than-human processes, enfolding the atmospheric cycles of ‘nature’ along with the political, social and economic systems of ‘humankind’.

This understanding can be discussed vis-à-vis Hobbes’ depiction of Leviathan’s body. Famously, the cover page of *Leviathan* (Hobbes 1996, xciii) shows the sum of individuals whose concerted endeavor make up the Leviathan. Carbon Leviathan’s ‘body’ is even more diffuse, comprising CO<sub>2</sub>e emissions in the atmosphere all around the world—diffuse to the extent that the concept of ‘body’ becomes nonsensical. Seen in this light, Carbon Leviathan is a sovereign in consonance with the Anthropocene: Simultaneously, it indicates an elevation of humanity’s CO<sub>2</sub>e emissions to the rank of a planetary force as well as a dethroning of humankind’s superior position as an observing manipulator external to nature (cf. N. Clark 2014, 25). Taken together, this is why I consider Carbon Leviathan to capture sovereignty in the Anthropocene more accurately than Wainwright and Mann’s (2018) plethoric Climate Leviathan.

Admittedly, political constraints and imperatives also flow from natural laws such as gravity. But the processes of carbon combustion and CO<sub>2</sub>e emissions are unique in the sense that their excess is *politically* portrayed as the root cause of climate change. Furthermore, in its form of traceable and tradeable units of CO<sub>2</sub>e emissions, carbon is invoked as a sovereign whose properties and mechanisms decide on humanity’s and the planet’s future. These invocations, most visible in the proclamations of reaching ‘net zero by 20xy’, propel carbon to the rank of a planetary sovereign.

It is important to note that Carbon Leviathan’s triumph would not be brought about because its own propositions are particularly convincing or adequate. It is difficult to imagine

a social base explicitly and effectively pushing for it. Neither business circles hostile to environmental regulation, nor ecomodernists apotheosizing a “good Anthropocene” (Asafu-Adjaye et al. 2015), nor activists concerned with climate justice, nor conservatives fearing excessive bureaucracy are aspiring to what I have here presented as Carbon Leviathan. Hence, Carbon Leviathan is not fought for—rather, it is reckoned with.

## **Governing the Anthropocene**

Carbon Leviathan transcends human and non-human realms, diffusing to govern spheres such as production systems, politics and atmospheric processes alike. It is a manifestation of the Anthropocene which triggered a shift from the subject of knowledge and power to the object of governance itself (Chandler 2018, 21). Accordingly, in the Anthropocene, a sovereign neither sets goals nor acts as an external manipulator, but emanates from the being it seeks to govern.

Thus, the human subject and its well-being are lost as determinative categories in the Anthropocene; instead, the entanglements of being become relevant (Chandler 2018, 20). This lack of normativity is constitutive of Carbon Leviathan’s governance and a major challenge to modern notions of sovereignty. It forbids to presume goal-oriented governance implemented by a knowing subject since that would erroneously presuppose human-centered notions of purpose, power and agency (Chandler 2018, 21). Put crudely, Carbon Leviathan’s governance is not a critique of modernity being dehumanizing, condemning it for separating humans from nature—it is a criticism of modernity being not dehumanizing enough, denouncing its suppositions of a subject external to being (Chandler 2018, 189). The Anthropocene, as Clark (2014, 28) puts it, has “the capacity to undo the political [...] to the extent of annihilating political beings themselves.”

Regarding this lack of a human-centered telos, Carbon Leviathan is a sovereign in accordance with the Anthropocene. But at the same time, Carbon Leviathan heavily relies upon the commodity character of CO<sub>2</sub>e emissions—a remnant of capitalist modernity. The equivalence between ‘carbon commodities’ such as removal units presumes comparability in form and causation across a variety of processes and entanglements. The Anthropocene, however, dissipates such “ratios of equivalences” (Chandler 2018, 204); abstracting across differing contexts and modes of being goes amiss. Having dissolved the subject into the world, the need for abstraction and equivalence dies with the subject (Chandler 2018, 204). So, should Carbon Leviathan be granted the status as a sovereign in the Anthropocene even though it relies upon the commodity form? By reflecting the temporal logics at work, this conundrum of differing but co-existing modes can be addressed.

Carbon Leviathan steers between the still living regime of capitalism and the already living Anthropocene. The strategy of reaching ‘net zero CO<sub>2</sub>e emissions’ with market-mechanisms is the consequence of two conflicting developments: one stretching back to early stages of capitalism in the past, the other folding back from the future Anthropocene. On the one hand, capitalist categories, namely the commodity character, have pervaded modes of governance for decades up until today. On the other hand, recent developments reveal a shift in governance in the face of an emerging Carbon Leviathan. ‘Net zero CO<sub>2</sub>e emissions’ is a compromise between these two competing temporal modes of governance. Carbon Leviathan reflects the wish to adjust to both experienced modes of capitalist governance and to the expected Anthropocene drawing nearer.

Consequently, just like Climate Leviathan, Carbon Leviathan is glimpsed at the horizon of the future, which in turn causes political shifts in the present. More accurately, the expectancy of net zero targets provokes desires for or fears of an upcoming carbon regime. As such, Carbon Leviathan is the emerging sovereign which legitimizes its grip in the present by

promising to keep climate change at bay in the future. Wainwright and Mann (2015, 319) aptly describe this temporal mode as “the furtive way the future bends back into the now”.

## **Conclusion**

The aim of this paper has been to read contemporary ecological politics as a struggle over planetary sovereignty in the Anthropocene. Having sketched current developments, I proceeded to identify an emerging planetary sovereign and delineated it ‘Carbon Leviathan’. Calls for swifter action and the measuring of targets revolve around CO<sub>2</sub>e as their paramount indicator, which is in turn grasped in the marked-compatible form of traceable, tradeable and equivalential units. Thereby, carbon—as expressed in CO<sub>2</sub>e as well as targets—is invoked as a planetary sovereign. I ended by discussing the temporal logics enabling Carbon Leviathan: an enduring capitalist past meeting the Anthropocene of the future which folds back into the present.

Singling out tradeable CO<sub>2</sub>e emissions and elevating them to the rank of a planetary sovereign might be considered a polemic and reductionist reading. But such objections have to reckon with the recent boom of ‘net zero CO<sub>2</sub>e emissions’ targets as well as shifting modes of governance in the Anthropocene. The persuasiveness of Carbon Leviathan does not stem from its ability to effectively curb CO<sub>2</sub>e emissions to the extent necessary, but from its mode of governance which matches the tension between capitalism and Anthropocene. The number, scope and gravity of ecological crises—mass extinction of species, ocean acidification, pandemics stemming from zoonosis, etc.—go well beyond an excess of CO<sub>2</sub>e emissions. In the face of these crises, Carbon Leviathan stands little chance in delivering on its promise to ‘save the planet’.

But dismally, Carbon Leviathan is likely to be the common political denominator for the upcoming decades. Carbon Leviathan simultaneously appears as a significant acknowledg-

ment of the Anthropocene and constitutes only an acceptable deviation from capitalism. It offers a viable compromise to progressives calling to ‘finally do something’, economic actors urging for financially profitable policies and the wide-spread uneasiness with state-led intervention. This way, curiously, Carbon Leviathan is paralleled by climate change relativists who believe that ecological politics cause a lot of commotion and apocalyptic hysteria, but will turn out to be neither spectacular nor dramatic, but unsurprising and quite boring.

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