War On Climate:

What Is Left Unsaid In Climate Governance Spaces

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Abstract

Not only has the United States waged a War on Terror, but it is participating in a "War on Climate" with impunity. The United States military alone is the 47th largest GHG emitter. Military emissions are omitted from climate action talks. This paper specifically looks at the US military and its environmentally destructive practices, from the infrastructure it utilizes to the environmental pollution it creates abroad. This paper argues that the inclusion of military emissions in climate governance spaces is long overdue and is necessary for an equitable future for all. That is because accountability will be assigned fairly, as 'carbon bootprints' are too large not to be scrutinized. However, this paper also analyzes why military emissions are seldom mentioned in climate action spaces. Political and economic opposition can be found in the strong mechanisms of the Military-Industrial complex. Moreover, this paper examines the 'greening' of the military and how climate insecurity is framed as a national security problem.

Keywords: US military, military emissions, Military-Industrial Complex

Earlier this month at COP 26, journalist Abby Martin posed a show-stopping question to Nancy Pelosi, the US House Of Representatives speaker. This question, which abruptly ended the news conference, was: "given that the Pentagon is a larger polluter than 140 countries combined, how can we seriously talk about net-zero if there is this bipartisan consensus to constantly expand this large contributor to climate change?"[1] Martin is no pioneer, the discussion around the effects of militarism on the climate has been fronted by many activists and organizations. For example, Brown University's "Costs of War" project[2] has been documenting the effects of the US military on the environment from the onset of the post-9/11 wars in Iraq and Afghanistan. Moreover, this month, with COP 26, a project named 'The Military Emissions Gap' was launched, which points attention to the worrying exemption of military emissions from governance spaces[3]. This conversation is an important conversation to have, and it is slowly surfacing onto mainstream environmental discourse spaces. It is crucial as one should question why these exemptions are in place to begin with, and this paper will examine the power structures that foster them. Moreover, this makes one question notions of accountability: why has responsibility been so individualized if state actors' emissions overwhelmingly trump those of individuals? To ground this analysis, this paper will focus on the activities of the United States' military. The United States is specifically chosen due to the spread of its military activities, with its devastating encroachment onto environments abroad. Through highlighting the effects of the United States' military alone on the environment, this paper argues that it is imperative to

[1] "Transcript of Speaker Pelosi's Remarks at Press Conference with U.S. Congressional Delegation to COP26 Glasgow," Speaker Nancy Pelosi, November 9, 2021, https://www.speaker.gov/newsroom/11921-2.
[2] "Costs of War Project," The Costs of War, 2010, https://watson.brown.edu/costsofwar/about.
[3]"View Your Government's Military Emissions Data," The Military Emissions Gap, 2021, https://militaryemissions.org/.

include military emissions in climate governance spaces. This is important because, as this paper will show, military emissions are too massive not to be confronted on a global scale.

How does the military affect the environment? Why should this be an important topic in global environmental politics? This should be an important topic in global environmental politics as it is necessary to confront the policies and structures that allow huge polluters to operate freely, facing no repercussions. When only accounting for fuel consumption, the US military is the "47th largest emitter of GHG in the world"[4]. Weapons systems, such as "fighter jets, battleships, fighting vehicles, destroyers and tanks are extremely energy inefficient", and in fact are overwhelmingly huge oil consumers[5]. More specifically, the most common type of fuel that is supplied to the American military is jet fuel. The amount in which jet fuel is consumed by military infrastructure, both in the Air Force and Navy, is extremely detrimental to the environment. More specifically, when utilized by the Air Force, the burning of jet fuel at higher altitudes produces more pollutants than it would for ground operations[6]. It is reported that these pollutants, released at greater altitudes, cause up to four times the warming they would on the ground[7]. Fighter planes like the F-15 and F-16 use about 1500 to 1700 gallons of fuel per hour, and if the afterburners are utilized, up to 14,400 gallons of fuel are exhausted per hour[8]. Moreover, a standard aircraft carrier consumes more than 5621 gallons of fuel per hour while for

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[4] Oliver Belcher et al., "Hidden Carbon Costs of the 'Everywhere War': Logistics, Geopolitical Ecology, and the Carbon Boot‐Print of the US Military," *Transactions of the Institute of British Geographers* 45, no. 1 (2019): pp. 72, https://doi.org/10.1111/tran.12319.

[5] Calvo Jordi Rufanges, Pere Brunet, and Chloé Meulewaeter, "Military Spending and Climate Change ," in *Military Spending and Global Security: Humanitarian and Environmental Perspectives* (Abingdon, Oxon: Routledge, Taylor & Francis Group, 2021): 11.

[6] Oliver Belcher et al., "Hidden Carbon Costs of the 'Everywhere War': Logistics, Geopolitical Ecology, and the Carbon Boot‐Print of the US Military," *Transactions of the Institute of British Geographers* 45, no. 1 (2019): 73, https://doi.org/10.1111/tran.12319.

[7] Oliver Belcher et al., "Hidden Carbon Costs of the 'Everywhere War': Logistics, Geopolitical Ecology, and the Carbon Boot‐Print of the US Military," *Transactions of the Institute of British Geographers* 45, no. 1 (2019): 73, https://doi.org/10.1111/tran.12319.

[8] Brett Clark, Andrew K. Jorgenson, and Jeffrey Kentor, "Militarization and Energy Consumption," *International Journal of Sociology* 40, no. 2 (2010) 27- 28, https://doi.org/10.2753/ijs0020-7659400202.

every mile travelled, high-tech helicopters burn 5 gallons of fuel[9]. This is all to showcase that what allows the American military to operate, its infrastructure, deems it as one of the largest institutions in the world involved in mass consumption of fossil fuels[10].

The "Costs of War" project at Brown University, has done research that has shown that in only 2017, the Pentagon's total GHG emissions were greater than those of "industrialized countries, such as Sweden, Denmark , and Portugal"[11]. In addition, the Pentagon's emissions dwarfed the emissions from US production of steel and iron[12]. From the onset of the US invasion of Afghanistan in 2001 to 2018, it is estimated that the US military emitted 1267 million metric tonnes of greenhouse gases[13]. Yet, as this paper has highlighted the environmental effects accrued due to technology, there's also a demand for resources to support troops and personnel who must be "fed, housed, armed, trained, clothed in specialized uniforms, and transported around the world"[14].

So far, this paper has laid out the evidence on how harmful US military operations are to the environment, yet, how do these effects seep into the lives of individuals that reside in said environments? This section will discuss how environmental pollution, caused by the US military bases, fundamentally changed the lives of many Iraqi populations. Iraq is an adequate case study to consider as there has been a myriad of research on the effects of US military bases on the health of the populations residing nearby. This further strengthens the importance of discussing

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[9] Brett Clark, Andrew K. Jorgenson, and Jeffrey Kentor, "Militarization and Energy Consumption," *International Journal of Sociology* 40, no. 2 (2010) 27- 28, https://doi.org/10.2753/ijs0020-7659400202.
[10] Clark, Jorgenson, and Kentor, "Militarization and Energy Consumption," 28.
[11] Neta C. Crawford, "Pentagon Fuel Use, Climate Change and the Costs of War ," Watson Institute International & Public Affairs , 2019: 2, **https://watson.brown.edu/costsofwar/files/cow/imce/papers/Pentagon%20Fuel%20Use%2C%20Climate%20Change%20and%20the%20Costs%20of%20War%20Revised%20November%202019%20Crawford.pdf.**
[12] Crawford, "Pentagon Fuel Use, Climate Change and the Costs of War ," 2.
[13] Crawford, "Pentagon Fuel Use, Climate Change and the Costs of War ," 2.
[14] Clark, Jorgenson, and Kentor, "Militarization and Energy Consumption," 28.

military emissions and activities at climate action spaces, as from an environmental justice lens, climate equity cannot be achieved without confronting the US military's activities abroad.

The US military has severely disrupted the Iraqi environment to irreversible extents. Metal contamination through many military practices has caused congenital anomalies, another word for 'birth defects', to occur to populations residing near military bases[15]. In addition, abnormally high levels of mercury and lead were found in multiple samples of Iraqi populations[16]. The contamination of the Iraqi environment can be traced to multiple sources, all caused by the US military. It is important to acknowledge the sheer scope of military activity in Iraq, with over 500 active military bases in 2014[17]." Dispensed bombs, bullets, detonation of chemical and conventional weapons" are a source of metal contamination[18]. In addition, multitudes of uranium is released into the environment due to the weathering of trucks, tanks, and general military infrastructure.[19] It has been reported that the military frequently burns 'trash' in open-air pits. This is extremely dangerous as this is basically the burning of "rubber, explosives, batteries, electronic waste, and plastics", which go on to release lead, mercury, titanium, and other toxic materials into the environment. Moreover, and importantly, it isn't just the military bases that's

[15] M. Savabieasfahani, F. Basher Ahamadani, and A. Mahdavi Damghani, "Living near an Active U.S. Military Base in Iraq Is Associated with Significantly Higher Hair Thorium and Increased Likelihood of Congenital Anomalies in Infants and Children," *Environmental Pollution* 256 (2020): 2, https://doi.org/10.1016/j.envpol.2019.113070.
[16] Savabieasfahani, Ahamadani, and Damghani, "Living near an Active U.S. Military Base in Iraq Is Associated with Significantly Higher Hair Thorium and Increased Likelihood of Congenital Anomalies in Infants and Children," 2.
[17] M. Savabieasfahani et al., "Prenatal Metal Exposure in the Middle East: Imprint of War in Deciduous Teeth of Children," *Environmental Monitoring and Assessment* 188, no. 9 (May 2016): 2, https://doi.org/10.1007/s10661-016-5491-0.
[18] Savabieasfahani, Ahamadani, and Damghani, "Living near an Active U.S. Military Base in Iraq Is Associated with Significantly Higher Hair Thorium and Increased Likelihood of Congenital Anomalies in Infants and Children," 1.
[19] Savabieasfahani, Ahamadani, and Damghani, "Living near an Active U.S. Military Base in Iraq Is Associated with Significantly Higher Hair Thorium and Increased Likelihood of Congenital Anomalies in Infants and Children," 1.

the issue, but also the toxicity due to the active detonation of bombs and ammunition releases into the environment[20].

For climate governance spaces that parade 'accountability', environmental pollution caused by the US military is too great to be ignored. Confronting and publicizing how the US military pollutes countries abroad with no scrutiny can only occur if military activities are officially brought into climate action governance spaces. War pollution is seldom addressed, and including military emissions and activities in conferences like COP 26 is a necessary first step. Why is it a necessary first step? Firstly, it solidifies notions of accountability in the global playing field of climate action. Secondly, by beginning way overdue conversations about the effects of militaries on the environment, work can be done to address the concurrent health and environmental injustices experienced by victims of war.

Having seen that the US military is such a huge climate actor, why are military emissions and activities omitted from climate governance spaces? This analysis is rooted in the events of the Kyoto Protocol. The Kyoto Protocol defines "legally binding emission targets for the industrialized countries and countries in transition"[21]. Yet, the Kyoto Protocol is extremely lacking, if anything, completely silent, on the effects of armed conflicts and long-term political crises on emissions[22]. The United States, fronted by US officials and negotiators, lobbied fiercely to exempt military emissions from the protocol. Specifically, "the US insisted that fuel sold to ships and aircraft for international transport and for multilateral military operations, "bunker fuels," should not be counted against a country's total emissions[23]. This paper has already discussed the detrimental effects of jet fuel, and with the scope of American involvement in wars

[20] Savabieasfahani et al., "Prenatal Metal Exposure in the Middle East: Imprint of War in Deciduous Teeth of Children," 1.
[21] Axel Michaelowa and Tobias Koch, "Military Emissions, Armed Conflicts, Border Changes and the Kyoto Protocol," *Climatic Change* 50, no. 4 (2001): 383, https://doi.org/10.1023/a:1010695312025.
[22] Michaelowa and Koch, "Military Emissions, Armed Conflicts, Border Changes and the Kyoto Protocol," 383.
[23] Crawford, "Pentagon Fuel Use, Climate Change and the Costs of War ," 12.

abroad, one should realize how problematic and dangerous this is. Yet, the rationale behind American intentions was, as stated by US Undersecretary of State Stuart Eizensts, "to fully protect the unique position of the United States as the world's only superpower with global military responsibilities"[24] How would this 'protect' the United States? One reason for this is that if military emissions are known to the public, it could be a threat to national security as global adversaries can gauge the amount of progress and activities the Americans are undergoing. The stronger reasoning, which is the subject of the next section of this paper, is that it is extremely profitable for the weapons industry to operate under no scrutiny. War is profitable, and if military emissions were scrutinized and limited in the climate governance sphere, it would attack individuals and industries that hold huge economic power. Yet, after lobbying for military exemptions, which were granted, the United States under the Bush administration completely dropped out from the protocol[25]. Then, in 2015, the Paris Climate Agreement briefly covered the exclusion of military emission, and it 'attempted' to rectify it. Yet, one could argue that it wasn't seriously intended to transform the status quo, as it wasn't mandatory to disclose military emissions[26]. Given the reluctance of nations like the United States to willingly disclose their military emissions, with reasons that contend with economic and political power, this paper argues that the solution is to explicitly and intentionally call for governance spaces and climate policy makers to elevate the issue of military emissions to the mainstream discourse.

One hears the slogan 'war is profit', yet, what does that entail? If war is profitable, which is what this section will explore, it is plausible to pinpoint what actors benefit from the exclusion of military emissions from governance spaces. Firstly, who supplies the energy inefficient and polluting infrastructure, from tanks to fighter jets, to the US military? This relationship between

[24]Crawford, "Pentagon Fuel Use, Climate Change and the Costs of War ," 12.
[25] Belcher et al., "Hidden Carbon Costs of the 'Everywhere War', 72.
[26]Belcher et al., "Hidden Carbon Costs of the 'Everywhere War', 72.

the military and the defense industry is termed as the 'Military-Industrial Complex'. This complex is coined as the "coalition of vested interests within the state and industry, which could lead to decisions being made which were in the interest of the coalition members and not in the interests of national security"[27]That is, the interests of the military and defense industry continue to reinforce each other. Whether with the occurrence of a 'hot war' or at times of relative 'peace', the defense industry is incentivised to sell and produce weapons. Hence, if military emissions, caused by the products of the weapons industry, were to come under legitimate policy based scrutiny, then it is possible that actors in the defense industry would incur losses. Yet, one reason for pessimism in regards to pointing attention to military emissions is the intricacy of the military-industrial complex. For example, this complex has many vested interests: "the military, government, legislature, capital, and labor"[28]. Hence, war, which is one of the main causes of military emissions, is prompted by economic interests of capital and labor, the governmental and legislative interests of politicians, and the power projection interests of the military. This is why it is no surprise that military emissions have been left uncontested for the longest time, as the procurement of military equipment is profitable to many powerful actors. To challenge such powerful actors is no easy act.

Referring to the introduction, there is much to learn from how Abby Martin's question was answered by Nancy Pelosi and another panelist, the chair of the Energy and Commerce Committee, John Pallone. To summarize their answers[29], two concepts are important to this paper's argument: national security and the 'greening' of the military. Climate insecurity has been posed as a national security issue. That is true, as climate insecurity exacerbates threats like

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[27] Tan Andrew T H., J. Paul Dunne , and Elisabeth Sköns, "The Military Industrial Complex," in *The Global Arms Trade: A Handbook* (London: Routledge, 2010): 281.
[28] Tan Andrew T H., J. Paul Dunne , and Elisabeth Sköns, "The Military Industrial Complex," in *The Global Arms Trade: A Handbook* (London: Routledge, 2010): 290.
[29] "Transcript of Speaker Pelosi's Remarks at Press Conference with U.S. Congressional Delegation to COP26 Glasgow," Speaker Nancy Pelosi, November 9, 2021, https://www.speaker.gov/newsroom/11921-2.

"water scarcity, environmental degradation, poverty, the spread of disease, and mass migration"[30]. Yet, what is problematic is that it frames the military as part of the solution and not the problem. It is interesting to refer back to the military-industrial complex to gauge who benefits from framing climate change as an issue that the military can combat. It is important to note that this is a huge deflection tactic on the ends of Pelosi and Pallone. Rather than responding to the main premise of the question, the omission of military emissions at places like COP 26, they disseminate a narrative that calls for more military mobilization, completely disregarding the role of the US military as the largest institutional polluter in the world. Pelosi does recognize that the military is a huge user of fuel, yet she tones down the graveness of this issue by pointing to how there "have been many initiatives over time… to convert from fossil fuel to other sources of fuel to run the military"[31]. This attempt to 'green' the military in the context of global environmental politics reeks of how consumption is repackaged to consumers in a more 'eco-friendly' manner. Rather than calling for less military or less consumption, a common tactic of vested interests, whether politicians or corporations, is to reframe issues to their own benefit. The 'greening' of the military, to whatever extent that occurs, should not deflect from the actual necessity of confronting military emissions in climate governance spaces. As much as the military can be used to tackle threats exacerbated by climate change, it is important not to lose sight of the disproportionately huge role the US military plays in GHG emissions. Hence, it is necessary to publicize and confront military emissions.

An arguably important question was posed in the introduction: "why has responsibility been so individualized if state actors' emissions overwhelmingly trump those of individuals?" Why is

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[30]Gilbert, Emily. "The militarization of climate change." ACME: An International Journal for Critical Geographies 11, no. 1 (2012): 1.

[31] "Transcript of Speaker Pelosi's Remarks at Press Conference with U.S. Congressional Delegation to COP26 Glasgow," Speaker Nancy Pelosi, November 9, 2021, https://www.speaker.gov/newsroom/11921-2.

it that in the realm of climate governance, there are rare, if anything nonexistent, confrontations with militaries as humongous polluters? Well, this paper has attempted to analyse why focus has been directed everywhere but to ‘carbon bootprints’ (military emissions). In the case of the US military, it is evident that the scope at which it operates, being the 47th largest GHG emitter, would logically prompt global outcry. Yet, that isn't the case. Due to the military-industrial complex, where it is profitable to wage war and sell weapons, the disclosure of military emissions would challenge very important actors. Moreover, there are proper efforts to portray the military as a solution to climate related crises, not a contributor to the problem. However, with all of that said, this paper vehemently asserts that military emissions should be seriously discussed in climate governance spaces. This paper acknowledges the powerful interests that would make that difficult, yet action around the effects of militarism on the climate can seep into calls for environmental justice for the victims of war (the case of Iraq). That could be the first step on the path to create an equitable future for all.

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