

Paris Commitments and the Nationally Determined Contributions: The Role of the Military

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Introduction

Efforts to mitigate the climate crisis have become more widespread as many member states have faced the dire ground zero effects of climate change. While emissions associated discussions take center stage, one of the crucial aspects that is often forgotten is the role of the military in the crisis. Recently, major militaries from around the world have acknowledged that climate change induced effects act as threats multipliers to security. A prime example of this was the *Report on Effects of a Changing Climate* by the U.S. Department of Defense published in January 2019², which identified major vulnerabilities resulting from climate change and strategies to solve the issues. Although this is appreciated and is a step in the right direction for global mitigation efforts, militaries across the world have been critiqued to have contributed massive amounts to global net carbon emissions. With the status quo of emissions across the globe, climate experts are now looking to the defense community to assist them in their pursuit of global reductions. They note that world militaries can pave the way to bring the planet back from irreversible effects and be front line protectors of the environment. In this paper, we will understand a context of the role of the military in initial climate change discussions, explore their contribution to climate change through a case study of the US military and apprehend some ways the defense community can assist in. mitigating the climate crisis moving forward.

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² <https://media.defense.gov/2019/Jan/29/2002084200/-1/-1/1/CLIMATE-CHANGE-REPORT-2019.PDF>

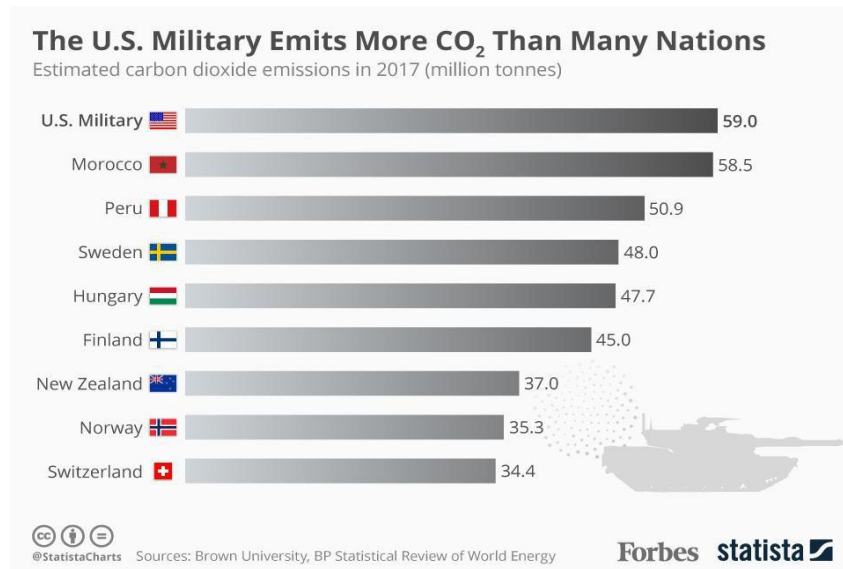
Context: Exclusion of the Military from Initial Climate Change Effort Targets

The first climate centered deliberations of the world took place in the form of the UN climate talks in 1997 hosted in Kyoto. The consequential operational framework - the Kyoto Protocol – committed industrialized nations and economies into significantly reducing their greenhouse gases by orienting them into meeting certain goals. However, one of major opportunity costs forgone to realize this treaty was the exemption of the military’s emissions in these targets. Defense sector activities contribute significantly to emissions worldwide. From available data, the European Union’s military carbon footprint in 2019 estimated to be approximately 24.8 million tCO_{2e} (tons of carbon dioxide equivalent)³. To put into perspective, the amount equals the annual CO₂ emissions of approximately 14 million cars. The United States military by itself is the world’s largest consumer of oil, meaning it has emissions greater than many countries. In this regard, it would only make sense that going forward from the Kyoto Protocol, nations would finally prompt measures to include their military’s carbon footprint into the equation. But this was not the case. When another major UN climate took place in Paris at the end of November, a 32,731 worded document was produced but it did not contain the word military.

Each nation brought a carefully thought-out plan of mitigating their carbon emissions in the form of a comprehensive document called Intended Nationally Determined Contributions (INDCs). During the deliberations in Paris, the INDCs were realized into NDCs and nations signed the Paris Climate Agreement in accordance with maintaining these targets. However, none of these included net carbon emissions from the military.

³ “The EU Military Sector's Carbon Footprint.” *CEOBS*, 23 Feb. 2021, ceobs.org/the-eu-military-sectors-carbon-footprint/.

Short Case Study: The US Military



As mentioned before, the US Department of Defense (DoD) is the world’s largest consumer oil. According to a report from Brown University⁴, since the invasion of Afghanistan in 2001, the DoD has emitted approximately 1,212 million metric tons of greenhouse gases. CO₂ emissions from 2017 alone added up to 60 million tons – more than many developed nations such as Sweden and Switzerland⁵. Nearly 70% of all energy is used to move and utilize equipment and soldiers around the globe. This requires burning significant quantities of jet fuel and diesel. Military equipment is

Vehicle	Fuel efficiency (miles per gallon)	Carbon emissions per mission (use only)
HUMVEE (armoured truck)	6 mpg	260 kgCO ₂ e
F-35 (combat plane)	0.6 mpg	27,800 kgCO ₂ e
B-2 (nuclear-armed plane)	0.3 mpg	251,400 kgCO ₂ e

Table 1: Carbon emissions from selected military vehicles, Source: Cost of War, Brown University

⁴<https://watson.brown.edu/costsofwar/files/cow/imce/papers/2019/Pentagon%20Fuel%20Use,%20Climate%20Change%20and%20the%20Costs%20of%20War%20Final.pdf>

⁵ McCarthy, Niall. “The U.S. Military Emits More CO₂ Than Many Industrialized Nations.” *Forbes*, Forbes Magazine, 13 June 2019, www.forbes.com/sites/niallmccarthy/2019/06/13/report-the-u-s-military-emits-more-co2-than-many-industrialized-nations-infographic/?sh=42a605c64372.

notorious for its fuel inefficiency and it is estimated that the country's remaining fleet of 60,000 Humvees in the region only gets four to eight miles per gallon of diesel. Table 1 demonstrates emissions from other major vehicle sources as well. A considerable footprint is also left by military real-estate and in fiscal year 2017, the DoD spent \$3.5 billion heating, cooling, and providing electricity to 560,000 buildings at 500 installations.

Conclusion

Due to the spike in conflicts in the past 2 decades, military operations have significantly contributed rise in emissions. However, with current trends of conflict attracting state and non-state actors to operate in the grey-zone, below the actual threshold of war, militaries can act diligently to make global reductions in CO₂ emissions. One key argument many climate experts are advocating for is for the military to use some of its budget for ‘climate dividend⁶’ operations. As effects of climate change are acknowledge to cause devastating security implications, one can only be optimistic about the defense community trailblazing the way for reduced carbon emissions.

⁶ Climate dividend constitutes the same concept as ‘peace dividend’ which is a sum of public money which becomes available for other purposes when spending on defense is reduced.