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The Militarization–Climate Nexus: Armed Conflict, Military Emissions, and the Governance Gap, 2020–2026

Salman Khan
Mphil Scholar and Visiting Lecturer at University of Peshawar
Shahab Khan
Mphil Scholar and Visiting Lecturer at University of Peshawar
Muhammad Umair
Graduate in Political Science University of Peshawar

Abstract
This article aims to fill a void in the existing climate–security literature, by mapping the interplay between armed conflict, military activity, and geopolitical tension in shaping the climate and global sustainability in the 2020-2026 timeframe. It tackled three research questions: first, what is the immediate environmental impact of conflict, second, how energy transitions relate to conflict-related militarisation, and third, how strong the empirical evidence is for bi-directional climate– conflict, or the "threat multiplier". The results demonstrate that the period of each of the wars in Ukraine and Gaza saw 230 million tonnes and estimated 47.7-61.4 million tonnes of CO_2-equivalent emissions respectively, largely concentrated in warfare activity and carbon-intensive reconstruction. Although there is expert-elicitation evidence on the impact of climate factors on conflict, the opposite pathway (conflict's impact on environmental governance) has been comparatively under-studied and only accounts for 3-20% of the sources of conflict risk. The discussion sets the results in the context of previous literature, sees a structural "military emissions gap" in the governance of the UNFCCC and suggests four possible reforms: compulsory reporting of military emissions, formal incorporation of the "conflict-emissions" methods into national inventories, expanded loss and damage mechanisms, and tying defence–climate finance transparency together. The study provides a policy analytical framework, which consolidates findings from various studies, often dispersed in unrelated literatures, which were necessary for the field to be analysed in a coherent manner.

Keywords: *military emissions; armed conflict; climate security; energy transition; climate finance; UNFCCC governance; Ukraine; Gaza*

1. Introduction

Within a few years, the connection between armed conflict and environmental sustainability has shifted its analytic location in climate scholarship (moving out of the margins). For most of the post-Kyoto period, the environmental costs of military activity and warfare were treated as a specialised concern,

external to the main business of decarbonisation. That separation has become unsustainable due to the conjuncture of 2020 to 2026. Two large-scale armed conflicts, the full-scale Russian invasion of Ukraine since February 2022 and the Israel-Gaza war since October 2023 have produced the first quantified estimates of conflict-related greenhouse gas (GHG) emissions, although the global military spending has reached unprecedented amounts and the multilateral climate regime has been unable to keep up. Such developments uncover a structural blind spot in global climate governance; the systematic under-measuring and under-regulating of the emissions which originate within militaries themselves, and the wars which they engage in.

The extent of the omission can now be estimated. Based on limited available data that is released by states, Parkinson and Cottrell (2022) approximate that the world military has about 5.5% of the global GHG emissions, a footprint that, had it been assigned to a single state, would have ranked 4th in the world, just behind Russia. This number does not include the contributions of active warfare, which is now being reflected in the counts of recent conflict accounting, and is intensified by an even greater militarisation process: world military spending in 2024 was US2,718 billion in real terms, the increase in military spending of 9.4% and the highest level of the single-year rise of military spending since the end of the Cold War (Stockholm International Peace Research Institute [SIPRI], 2025).

1.1 Problem Statement.

Although, despite the methodological sophistication of conflict-emissions accounting having risen, and a significant existing literature on climate and conflict. However, there has been no synthesis of interventions to-date to combine three developments, which together define the 2020 -2026 period: the development of quantified, conflict-specific emissions estimates in Ukraine and Gaza; a historic expansion of global military spending that now overshadows multilateral climate-finance commitments; and ongoing scholarly debate over the strength and direction of the climate-conflict relationship. The three developments are often researched in various literatures: conflict-emissions accounting, energy and security policy, and climate–conflict causation that often do not mention each other. Such fragmentation deprives policymakers and even the UNFCCC governance architecture itself of a coherent evidentiary foundation with regard to how the collective force of armed conflict and geopolitical tension are transforming environmental sustainability in the world. This research is aimed at filling the existing gap two-fold: an empirical gap, in the sense that the scale of the impacts of conflicts and militarisation on climate, in 2020-2026, and a governance gap, in that the international climate regime has not reconfigured its reporting and accountability structures to capture what conflict-emissions accounting has already managed to quantify.

1.2 Research Questions

The paper has around three questions;

1. What are the ecological and greenhouse-gas impacts of armed hostilities in Ukraine and Gaza during 2020–2026?
2. How have conflict, rising military expenditure, and energy insecurity affected decarbonisation and international climate finance during 2020–2026?
3. What evidence supports the two-way relationship between climate stress and armed conflict, and which causal direction is stronger?

1.3 Research Objectives

- To assess the ecological and greenhouse-gas costs of the Ukraine and Gaza conflicts during 2020–2026.
- To examine how militarisation and energy insecurity have affected decarbonisation and climate finance.
- To evaluate the evidence on the climate–conflict relationship and identify governance measures to address the military emissions gap.

2. Literature Review

2.1 From Environmental Security to the Militarization–Climate Nexus

The link between organised violence and the environment has long been a subject of academic interest, having been present for several decades. In earlier literature on environmental security, especially that of Homer-Dixon (1999) on 'environmental scarcity', the depletion of resources was acknowledged as a potential cause of internal conflict, and environmental concerns were integrated into a broader security context. It was then that the second stream of scholarship emerged, focusing on “ecological security”, in which an eye is turned to the impact of warfare and of military activities more generally on ecological systems, instead of the impact of environmental change on security (Conflict and Environment Observatory [CEOBS], 2022). This study is conducted from the latter, but both are related and therefore considered. It is important to consider the risks from climate to conflict and the impact of war on environmental and climate systems that are critical for security in the long-term, therefore, and to understand the militarisation–climate nexus.

2.2 The Climate–Conflict Debate: From Determinism to Conditional Causation

Climate change and armed conflict have been topics of much academic discussion in the past fifteen years, and the idea of “climate wars” has become more prevalent in recent years. Initial quantitative research, e.g. Burke et al. (2009), linked climatic changes to threats of civil war. But the results have been criticized by some scholars due to the design of the models, the choice of the cases and the ability to differentiate between correlation and causation (Buhaug 2010, 2015). Research since then has shifted to a more conditional view of the relationship. Using a structured expert assessment approach, Mach et al. (2019) quantified the impact of climate conditions on organised armed conflict, but concluded that this impact was relatively small at 3–20%, compared to socio-economic conditions and governance. The causes of these processes are also still unknown. In line with this conservative stance, the IPCC Sixth Assessment Report reports that there is currently no clear evidence linking armed conflict to climate change, caused by human activity (Ide et al., 2023).

2.3 Military and Conflict Emissions Accounting

One area of investigation has revolved around quantifying emissions produced by military operations and armed conflict. Historically, emissions from the military sector were subject to limited reporting, which led to a large amount of advocacy oriented research in this field. In the past, emissions from the military sector were also omitted from the national reporting under the Kyoto Protocol. The Paris Agreement did not explicitly exclude military emissions, but it allowed for voluntary and not nearly uniform reporting, as the CEOBS (2022) shows. The contribution of military activities to global emissions is estimated to be around 5.5%, which serves as an important baseline for further studies (Parkinson and

Cottrell 2022). Later studies specific to conflict have refined emissions accounting procedures. The Initiative on GHG Accounting of War has calculated emissions of the war in Ukraine, which cover military activities, reconstruction work, damaged energy infrastructure, rerouting of aviation traffic and landscape fires (Initiative on GHG Accounting of War, 2025). Likewise, Neimark et al. (2024) have used similar methods in Gaza. These studies illustrate how modern warfare can produce emissions of tens or even hundreds of megatonnes, and how significant emissions can be from the extended period of military operations and from post-war reconstruction.

2.4 Energy Security and Energy Transition as Competing Logics

A second thread of scholarship focuses on the linkages between conflict related energy insecurity and decarbonisation. A key example of this debate is the European energy crisis that followed the disruptions of Russian gas supplies in 2022. One view holds that the crisis helped to speed up the energy transition. The energy diversification and faster deployment of renewables initiatives of the European Union (EU) (REPowerEU) and the International Energy Agency (IEA, 2022) agreed that the crisis has led to a rise in fossil-fuel demand but has also created longer-term momentum for renewables. On the other side, there was a focus on the danger of fossil-fuel and coal lock-in, while some European countries either extended or re-activated coal power generation. For instance, Kim et al. (2025) state that the nuclear phase-out in Germany worsened the situation of the country to reach its net-zero targets, due to the increase in coal consumption. In Italy, the relatively heterogeneous response led to different results. Contrasting experiences indicate that energy-security shocks do not necessarily lead to greater or to poorer progress towards decarbonisation; their impact depends on the characteristics of a country's energy system and policy response.

2.5 Research Gap

From the existing literature three major gaps have emerged. First, while both conflict-related emissions and the climate–conflict relationship studies have been conducted, they have largely been developed in isolation, and they address two facets of the same potentially two-way relationship. Second, there has been an overreliance on research on the European reaction to the 2022 energy crisis, while limited comparative knowledge exists on the response to other conflict contexts, especially the Middle East region, where military spending rose by 15% in 2024 during the Gaza conflict (SIPRI, 2025). Third, the existing literature has not adequately linked such discussions with the governance issue as the problem of the emissions gap: the continued lack of mandatory and standardized reporting of military and conflict-induced emissions under the UNFCCC process. The research questions outlined in Section 1.2 are being used to fill these gaps in this study by exploring the ecological costs of warfare, militarisation and energy transitions, and the two-way relationship between climate and conflict.

3. Materials and Methods

3.1 Research Design

The proposed study uses an integrative, narrative literature synthesis, as opposed to a primary empirical research design or a formal systematic review in the PRISMA sense. This design was chosen as the research questions demand the synthesising of heterogeneous secondary evidence, namely, conflict-emissions accounting reports, institutional datasets, and peer-reviewed academic literature, in three thematic areas that have not been unified in the past, which integrative synthesising is methodologically

suitable (Snyder, 2019). In line with the typology of review methods established by Snyder (2019), the design focuses on breadth across a heterogeneous evidence base and conceptual integration over narrow inclusion criteria and effect-size aggregation of a systematic review, or meta-analysis. It is inappropriate to a field where quantitative estimates of conflict-emissions, expert-elicitation studies, and institutional financial data, cannot be put on the same scale.

3.2 Data Sources and Selection Criteria

Four types of source were used as evidence and each was chosen because it was relevant to one or more of the research questions. To begin with, specialised conflict-emission accounting projects, mainly the Initiative on GHG Accounting of War and the assessment of Gaza by the Queen Mary University of London (Neimark et al., 2024), were considered the primary sources of quantification of RQ1 since they are the most methodically developed estimates currently available regarding the two conflicts under study. Second, cross-verification of quantitative claims and RQ2 were done with institutional and intergovernmental reports, such as publications of the United Nations Environment Programme, SIPRI and the UNFCCC. Third, peer-reviewed scholarly sources in mainstream databases (e.g., Nature, Proceedings of the National Academy of Sciences, WIREs Climate Change) were consulted as the main sources of RQ3 and conceptual framework in Section 2. Fourth, time-sensitive numbers (military spending, climate-finance pledges, emissions amounts) were confirmed by targeted searches against their institutional origin and not cited in secondary sources. The criteria used to include sources as meeting the 20202026 temporal limitation are as follows: (a) the source met the temporal restriction of the research question, (b) the source was authored by an identifiable institutional or peer-reviewed source, and (c) the source offered a quantifiable claim or a theoretically load-bearing argument that answered one of the three research questions. Sources that did not have a distinct institutional attribution, or whose figures could not be cross-checked with a primary source were removed.

3.3 Analytical Procedure

Data were sorted thematically as per the three research questions instead of chronologically or by source type. In each research question, primary conflict-emissions and institutional data were mined, cross-checking where possible with at least one independent secondary report (e.g. the Ukraine emissions total was verified in both the three-year self-assessment of the Initiative on GHG Accounting of War itself and independent journalistic coverage of the underlying report), and were synthesised into the results of Section 4. Conceptual and theoretical propositions, specifically those that relate to RQ3, were tested against the structured expert-elicitation framework of Mach et al. (2019) which in turn is a compilation of judgments collected among a group of discipline-diverse experts, giving a defensible baseline against which more deterministic propositions in the broader climate wars discussion can be judged.

3.4 Methodological Limitations

This design has three limitations, which qualify the results reported below. First, conflict-emissions accounting Ukraine and Gaza have to rely on the methods of estimation used in circumstances of limited access and confidential military information; the original source studies state their uncertainty ranges, which are duplicated by this study instead of resolved. Second, integrative narrative synthesis does not use the exhaustive, replicable search protocol of a systematic review, i.e. the evidence base, and the cross-verified evidence base cannot assert itself as a complete census of all the available literature. Third,

the time frame of the study (20202026) is active and dynamic; the numbers of Ukraine and Gaza mentioned are the latest estimates at the time of writing and are likely to be updated as both conflicts and their recovery process evolve.

4. Results

The results are given below based on the respective research questions. These findings will be analyzed in the context of the existing literature only in the Discussion section (Section 5).

4.1 Results Relating to RQ1: Direct Ecological Damage from Active Hostilities

The results show that the environmental degradation caused by conflicts takes place in four large and empirically separable mechanisms. It includes direct combustion of fuel and military ammunition, destruction of infrastructure with subsequent emissions of immediate pollution and a future rebuilding, disruption of landscapes by wildfires and deforestation, and activities related to displacement such as consumption of refugee resources and aviation route change (Initiative on GHG Accounting of War, 2025).

During the initial three years of the entire war, between February 2022 and February 2025, war-related emissions produced in Ukraine amounted to an estimated 230 MtCO2e. This is equal to the annual emissions of Austria, Hungary, Czech Republic, and Slovakia (Initiative on GHG Accounting of War, 2025). The greatest percentage was warfare activities that had a figure of about 36 and reconstruction had about 27. The proportions of energy-infrastructure attacks were about 8% and aviation rerouting about 6% and displacement about 2%. In 2024, landscape fires also became a significant contributor to emissions. This was a record year of burning of about 92,100 hectares compared to the average 38,300 hectares burned in the last two years. The area that was burned in 2024 was also mentioned to be larger than all the area burnt in all 27 European Union member states in 2024.

In Gaza, the direct emissions related to military operations during the first 120 days of the conflict, between October 2023 and February 2024, were estimated to be between 420,265 and 652,552 tCO 2e. This was more than the annual emissions of 26 countries and territories. The figure is greatly increased when military construction emissions preceding the conflict and potential reconstruction are also included to reach about 47.761.4 million tCO 2 e (Neimark et al., 2024). Meanwhile, the preliminary evaluation conducted by the United Nations Environment Programme (2024) revealed widespread destruction to Gaza water, waste-management, energy, and marine systems. Part of this damage can be irreparable. Nonetheless, due to access limitations, full field-checking could not be done, implying that the reported environmental effects could be an underreport of the total ecological harm.

The results of both of these cases show that reconstruction can be the biggest or second-biggest contributor to emissions of conflicts, which illustrates the significant carbon footprint of reconstruction of the infrastructure that has been destroyed. Reconstruction is a significant source of post-conflict emissions, as the prevalence of carbon-intensive materials, especially concrete and steel, are major contributors to this process. In Ukraine alone, reconstruction costs in the next ten years are approximated at around US252 billion and environmental damages at over US127 billion, comprising of the loss of over 9,000 reported cases of environmental destruction. By applying a social cost of carbon of US185/tonne of CO2e, the climate liability of Russia at the end of three years of war is estimated to be over US42 billion. This is the amount Ukrainian officials have recommended would form the basis of

reparations but there is now no international law mechanism that could enforce such a claim (Initiative on GHG Accounting of War, 2025).

4.2 Results Relating to RQ2: Militarization and Energy Transitions

The world military spending was estimated to be about US2.718 trillion in 2024, which is a 9.4 percent growth in constant terms and the highest annual growth since at least the conclusion of the Cold War (SIPRI, 2025). Increase in the military spending by the European countries rose by 17 percent to US$693 billion whereas spending in the Middle East rose by about 15 percent. Israel registered a significantly high 65% growth in year on year basis, which is related to its military actions in Gaza.

This growth in military spending is in stark contrast to global financing of climate. It was found that during COP29 in Baku, developed countries committed to mobilize at least US 300 billion per year by 2035 to help developing countries implement climate action, with an even larger aspiration of mobilizing US 1.3 trillion per year in total (United Nations Framework Convention on Climate Change, 2024). Nevertheless, as noted by analysts of UN Trade and Development (2024), once inflation is considered and previously projected funding patterns are factored in, it might only mean approximately US$80 billion of the US$300 billion target is truly additional funding.

The results on energy transitions demonstrate that geopolitical conflict could bring both immediate slowdown and long-term expediency in the transformation to renewable energy. The REPowerEU plan of the European Union aimed at decreasing the reliance on Russian natural gas and at the same time increase the level of investment in renewable energy. The International Energy Agency noted that the 2022 energy crisis had the initial effect of spurring demand towards oil and coal, but also created longer-lasting structural impetus towards the development of renewable energy (IEA, 2022). Later trends revealed that by early 2025, renewabilities were expected to replace coal as the dominant source of electricity in the world.

The European trend, however, masks some significant national differences. Other nations such as Germany, France, Austria, Italy, and the Netherlands also had coal-fired power generation extended or re-initiated as an emergency measure in response to the energy crisis. Evidence Compared with other countries, it is argued that the concurrent nuclear phase-out and the greater use of coal put a strain on what Germany aims to accomplish by 2050: net-zero emissions. In Italy, however, the more diversified approach was followed, ensuring the presence of alternative sources of gas, also increasing the capacity of renewable energy, which leads to comparatively minor overall alterations in the emission of the electricity sector (Kim et al., 2025).

4.3 Results Relating to RQ3: Climate–Conflict Threat-Multiplier Dynamics

The results indicate that climate change and armed conflict are interrelated and not direct and deterministic. A large expert evaluation of the climateconflict nexus, through systematic consultation with experts in other fields, revealed widespread consensus that climate conditions have had effects on organized armed conflict at the state level. Nevertheless, the scholars estimated that the role of climate factors in the past historical conflict risks was only about 320 percent whereas the socioeconomic development and the capacity of nations to create such standards were deemed as significant factors. Another significant source of uncertainty was also identified as the causal factors between climate change and conflict (Mach et al., 2019).

The observation is consistent with the overall trend of quantitative studies of climate and conflict. Previous research developed more determinate explanations of the relationship (Burke et al., 2009), and later research began to focus on a conditional relationship, in which climate-related pressures mediate conflict via certain social, political and economic processes (Buhaug, 2010, 2015). In the same vein, the IPCC Sixth Assessment Report also finds that current evidence is not sufficient to form a direct causal relationship between human-induced climate change and armed conflict.

The data also indicates that there is a significant negative correlation which has been treated relatively poorly in systematic literature, which is that armed conflict can undermine environmental governance and diminish institutions in terms of monitoring, regulating, and responding to environmental harm.

In Ukraine, environmental control and monitoring have been debilitated to a point of being useless in occupied and frontline areas. It is an institutional decay that not only poses challenges to measuring the environmental harm that will arise during the conflict but also to the responsibility and accountability of post-war accountability. Destruction of water and waste-management systems in Gaza has created environmental and public-health hazards that will probably persist even after the active hostilities. Simultaneously, access limitations have curtailed humanitarian activities and field assessments of the environment, curtailing the evidence to develop successful environmental recovery and reconstruction programmes (United Nations Environment Programme, 2024).

5. Discussion

5.1 RQ1: The Scale and Structure of Conflict-Related Ecological Damage

The findings on RQ1 affirm that modern conflict-emissions accounting has reached a stage where it is now feasible to provide credible and source-supported estimates of war-related emissions, which fills a gap in measurement that was mostly not found in the literature before 2022. That reconstruction is the largest or almost largest category of emissions, has emerged consistently, in the context of two wars of very different character, conventional interstate war in Ukraine, and high-intensity urban warfare in Gaza. It has an implication that the current body of literature has not yet quite assimilated: that the climate accounting of a conflict cannot be closed at the point of the cessation of hostilities, but must persist through the period of reconstruction. The discovery also makes the accountability literature difficult. The Ukrainian example is that a plausible estimate of a monetary liability is now calculable by ordinary economic instruments like the social cost of carbon but the fact that no international legal mechanism to enforce such a claim exists. It is a recognition that measurement capability has now far outpaced institutional capability a problem in governance to which this study assigns the central role in Section 6.

5.2 RQ2: The Ambivalence of Conflict-Driven Energy Transitions

The findings to RQ2 do not substantiate one directional hypothesis regarding the impact of conflict on decarbonisation, which is consistent with the split literature in Section 2.4. Instead, the Germany Italy divide shows that the impact of the same exogenous shock is mediated by the existing energy-policy legacy: the pre-existing nuclear exit in Germany created a buffer of low-carbon geopolitical response that Italy did not need, which led to materially distinct climate responses to the same geopolitical shock. This implies that energy-security shocks must be perceived as an inoculated accelerant as opposed to a homogenous cause of decarbonisation or fossil lock-in, a better formulation than any of the acceleration-

only or lock-in-only accounts that prevail in some literature. The fact that the comparison between 2024 military spending and the COP29 finance objective now implies that the opportunity-cost aspect of this relationship - resources to defence instead of climate finance - now is large enough to be a first-order consideration in global climate-finance negotiations, not a secondary or a rhetorical consideration.

5.3 RQ3: A More Conditional Test-Multiplier Model

The outcome of RQ3 is a warning about the deterministic application of the so-called threat multiplier framing used in policy and defence rhetoric. The Mach et al. (2019) 320% attribution result, which is triangulated with the attribution of evidence that the IPCC warns about, points to climate acting as a conditioning factor in many and not a single or decisive cause of conflict, a conclusion that this research supports and does not merely reference. More important to the framing of the nexus as a unit is the asymmetry noted between the forward and reverse pathway: whereas the former pathway (climate to conflict) has been the subject of more than a decade of more rigorous quantitative challenge, the latter pathway (degradation of environmental governance by conflict) has received relatively little specific theoretical or empirical concern despite its direct evidence by the RQ1 case material in Ukraine and Gaza. This imbalance indicates that the discourse of threat-Multiplier is vulnerable to focusing analytical and policy energies on the less assured of the two causal pathways, perhaps due to the fact that the reverse course does not provide actionable security-sector implications in the same manner as the forward course.

5.4 Interrogation Across Research Question.

Cumulatively, the three sets of findings substantiate the main thesis of the study that conflict-emissions accounting (RQ1), the militarisation-energy nexus (RQ2), and climate-conflict causation (RQ3) are one interconnected governance issue, and not three distinct research projects. The thread of connection is a continuing asymmetry between measure and power of governance. Specific conflict emissions can now be estimated with a revealed, source-verifiable margin of error; the mismatches between military and climate expenditure can be expressed in exact dollar amounts; and the boundaries of the climateconflict causal assertion can be quantified by expert elicitation. In both instances, though, the attendant governance or institutional reaction, such as compulsory reporting, rebalancing the finances or a more conditional security-sector discourse is missing or insufficiently developed. This is the substantive contribution of placing the three research questions in the continuum of one study as opposed to three different literatures and this is the direct motivation of policy implications created in **Section 6.**

6. Policy and Governance Implications

The study results have four key policy and governance implications.

Mandatory military emissions reporting: Among the earliest reforms is to fill the long-standing gap in the reporting of military-related emissions. Even though the Paris Agreement has eliminated the official military exemption of the Kyoto Protocol, the military reporting of emissions is mostly voluntary. Consequently, the major military forces, such as India and South Korea, do not yet present complete information about the emissions produced by their military (CEOBS, 2022). To overcome this important measurement gap, the introduction of mandatory and standardized reporting of military emissions by submissions made to the UNFCCC on a national basis should be introduced.

Integrating conflict emissions into national inventories: The approaches that have been devised to estimate war-related emissions in Ukraine and Gaza indicate that it is possible to measure the emissions caused by armed conflict even in the presence of some degree of uncertainty. These strategies would be included in IPCC national guidelines on greenhouse-gas inventory formally and would allow countries impacted by conflict to recognize and report war-related emissions as a distinct and internationally comparable category. This would enhance transparency and offer a better evidence base on climate policy.

Relationship between Conflict-Related Climate Damage and Loss-and-Damage Mechanisms: The Ukrainian experience shows that it is possible and constrained to put the costs of climate damage by armed conflict into monetary equivalents. The financial burden of such emissions is estimable, but there is no efficient international enforcement mechanism to substantially exploit the results of such calculations. The Loss and Damage Fund, which was furthered at COP29, may offer a potential institutional framework that might be used to develop mechanisms through which climate damages that can be attributed to armed conflict may receive formal recognition and potentially be compensated or otherwise redressed.

Lessening the Imbalance between Military Budget and Climate Finance: The fact that the world is spending a big difference between its military spending and international climate-finance commitments points out to a significant governance issue. Military expenditures in the world amounted to about US 2.7 trillion as compared to the aim of US 300 billion every year in climate finance by 2035. This gap implies that voluntary commitments might not be sufficient to bridging the climate-financing gap. More openness in defence spending, and similar reporting of military emissions, might help expose the opportunity costs of global rearmament and enable policymakers to evaluate military and climate priorities on similar evidence.

7. Conclusion

This paper has explored three issues that are related to each other: the direct environmental costs of armed conflict, the connection between conflict, energy transitions and climate finance, and the reciprocal nature of the relationship between climate change and conflict in 20202026. As far as the first research question is concerned, the results show that the conflicts in Ukraine and Gaza have resulted in significant emissions which can be measured more and more. Notably, the process of reconstruction can leave an even bigger carbon footprint in the long-term than the destruction produced by military activities. In response to the second research question, the results have shown that, in some cases, conflict-related energy disturbances may hasten the process of switching to cleaner energy, but the impacts of such disturbances vary significantly depending on the current energy system and policy decisions of the countries. Meanwhile, there is a huge resource imbalance due to the sharp rise in military spending in the world relative to climate-finance commitments. The results of the third research question only support the climate-conflict threat-multiplier argument qualifiedly. Climate conditions are a risk factor to conflicts in a specific situation, but they are only one of many, with the opposite scenario, conflicts undermining environmental governance, being relatively unexplored.

The main contribution of the work is to unite these three lines of research as the parts of one issue of global governance. There is growing evidence to quantify the environmental and climatic cost of warfare

but the international institutions have not come up with similarly powerful mechanisms to report, regulate, or address the cost. This generates a huge disparity between the ability to quantify the emissions of conflict and the ability to respond to the conflict using a viable governance systems.

To bridge this gap, technically feasible reforms are needed such as obligatory reporting of military emissions, inclusion of conflict related emissions in national greenhouse-gas inventories and more robust mechanisms to acknowledge conflict related climate damage under loss-and-damage framework. Nevertheless, the introduction of such reforms will eventually rely on the global political collaboration and the readiness of nations to enhance the levels of transparency in regards to military operations.

There is also a major limitation to the study: it is based more on a synthesized examination of available secondary evidence as opposed to original field information. Future studies ought to thus extend the conflict-emissions accounting to additional contemporary conflicts besides Ukraine and Gaza, whether the patterns of energy-transitions can be generalized to additional regions and elaborated on more specific and empirical models of understanding the ways in which armed conflict undermines environmental institutions and governance capacity.

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