



ADVOCACY AND
OUTREACH BRIEFING

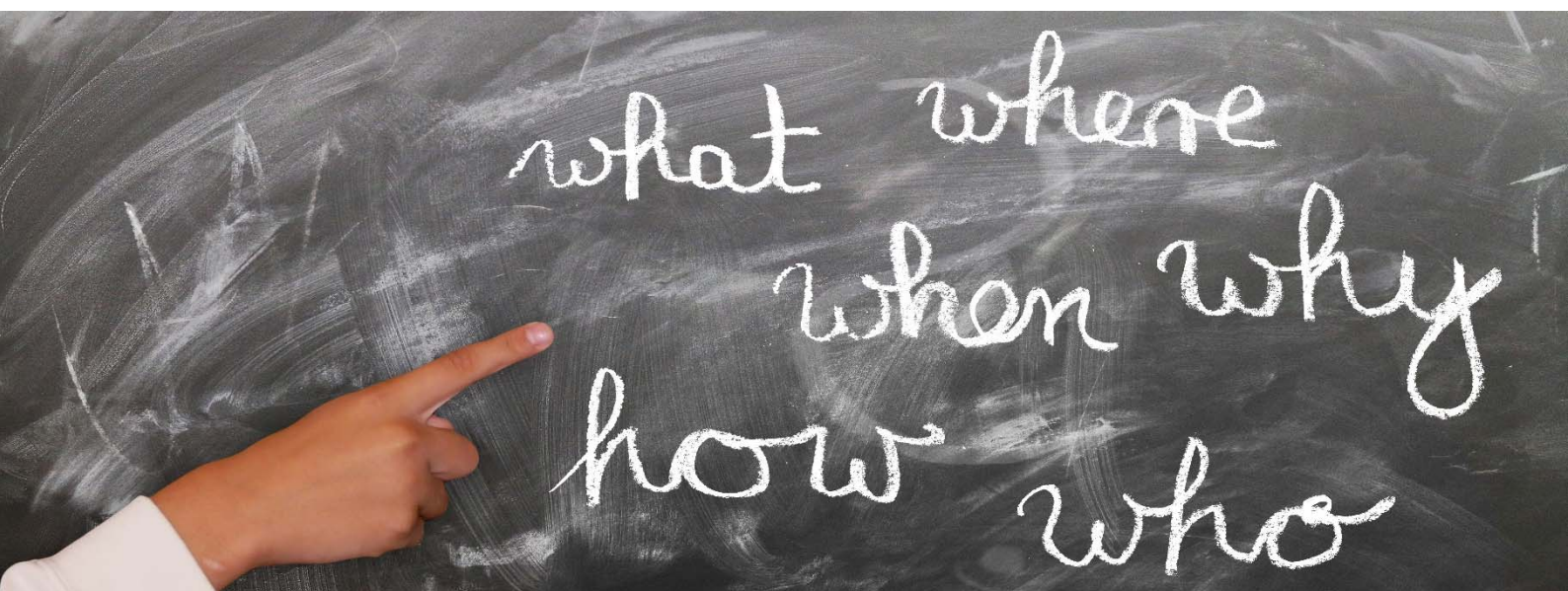
MILITARY AND CONFLICT- RELATED EMISSIONS: KYOTO TO GLASGOW AND BEYOND

This advocacy briefing is prepared by Tipping Point North South
based on the main report written by
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with contributions by Deborah Burton and Ho-Chih Lin

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TIPPING POINT NORTH SOUTH



Perspectives Climate Group

Perspectives Climate Group gGmbH provides independent, high-quality and innovative advice to its public and private clients enabling them to pursue rapid decarbonisation and climate resilient development at all levels in line with the objectives of the Paris Agreement, in particular limiting global warming to 1.5C. In its research and advisory work, Perspectives draws upon the latest available science and develops ambitious, transparent, and fair solutions.

Authors

This advocacy briefing is drawn from the main report Military and Conflict-Related Emissions: Kyoto to Glasgow and Beyond led by Axel Michaelowa, Tobias Koch, Daniel Charro, and Carlos Gameros with contributions by Deborah Burton and Ho-Chih Lin.

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Audiences

Greenhouse gas emissions from the military and armed conflicts and their treatment under the UNFCCC process is still a new topic. The report will be fed into the UNFCCC negotiation process.

In addition to relevant UN offices, we also wish to bring the report and its companion advocacy briefing to the attention of policy-makers, journalists and thought leaders; development, environment, peace, human rights NGOs and faith groups.

Introduction

Perspectives has been commissioned by Tipping Point North South to review the current state of the art on military greenhouse gas emissions in peace-time and war and their treatment under the UNFCCC process. The report will be fed into the UNFCCC negotiation process.

Axel Michaelowa and his co-author Tobias Koch were the first experts worldwide to address this topic in a research article in the renowned journal “Climatic Change” in 2001 and their 2022 report builds on that important early work.

The report highlights that

- **The Paris Agreement transparency framework** should be developed further to include rules for reporting of military and conflict-related emissions. In this context, **an end to confidentiality** regarding the reporting of fuel consumption for military purposes is necessary.
- **The IPCC National Greenhouse Gas Inventory Guidelines should be revised** to ensure that not only a narrow definition of military and conflict-related emissions prevails. National inventories need to ensure that the **all the** different types of military emissions are duly reported.
- **Military and conflict-related emissions** should be duly considered in the **Global Stocktake** on the world’s collective progress towards limiting global warming well below 2°C, due to be finalized by COP28 in 2024.
- **A department of the UNFCCC Secretariat should engage** in remote sensing of high intensity destruction of carbon reservoirs like fossil fuel deposits, cities and forest fires reported in a separate “conflict account” in the transparency regime. **The Paris Agreement** should be strengthened to allocate the responsibility to emissions from conflicts. **This should be based on the** principles for an accounting framework developed in this report.
- **An IPCC Special Report on climate change and global military in peace and war** should be put on the agenda of the AR7 cycle.

Military emissions, in peace and war, direct or indirect (e.g. generated by the defence industry more widely) are far from fully known. In this climate changed world, we are urgently looking at every aspect of human activity through the climate change lens. The Russian invasion of Ukraine has, finally, brought the world’s attention to the fact that military operations and emissions are a non-negligible part of the man-made climate crisis. This is over and above the terrible human cost of war and conflict.

We hope that civil society, alongside all those nations on the front-line of climate change, can see merit in the recommendations of this report by pushing for this matter to be addressed in international climate negotiations. As the Indian subcontinent experiences unprecedented prolonged nearly 50°C heat way ahead of summertime; as the Antarctic ice shelf collapses; as forest fires burn across the globe, UN Sec Gen Antonio Guterres’s comment in Bucha that “war is an absurdity in the 21st century” resonates more loudly than ever.

We hope this advocacy briefing and the main report from which it is taken can provide context, shed light and offer practical solutions as well as ambitious demands over the coming years on a topic that goes to the heart of how humanity maps the road ahead as we collectively face ever-greater climate chaos.

Deborah Burton & Dr. Ho-Chih Lin, Tipping Point North South/Transform Defence project

1. The problem – military and conflict-related emissions reporting gap

KNOWLEDGE GAPS EXIST ACROSS MANY ASPECTS OF MILITARY AND CONFLICT-RELATED GHG EMISSIONS

Transparency of greenhouse gas (GHG) emissions of the military in peacetime and wars is severely lacking. The military emissions reporting gap in international climate policy is notoriously overlooked not least because of the absence of robust data for direct and indirect emissions from military activities, conflicts and the defence industry as well as emissions from other associated activities such as environmental destruction, reconstruction of burned down cities and infrastructure, arms race and military occupation.

MILITARY EMISSIONS & MILITARY SPENDING

There are 193 countries in the world. The G20 alone (Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States, and the European Union) account for the vast bulk (87%) of \$2.1 trillion annual global military spending. Large military budgets are inextricably linked to expensive fossil-fuel reliant hardware like jet fighters, warships and tanks and this is especially clear in larger scale wars which are invariably waged by nations with well funded militaries (USA—Vietnam, Cambodia, Laos; USA coalition—Afghanistan, Iraq; NATO—Libya; Syria, Russia, Iran—USA coalition, Turkey; Saudi Arabia, UAE—Yemen; Russia—Ukraine with NATO assistance; not to mention WW1 and WW2).

BUSINESS AND MILITARY CONFIDENTIALITY PERPETUATES THE OPAQUENESS

Under the Kyoto Protocol agreed in 1997 industrialised countries annually have to provide a national inventory report (NIR) and stipulates that domestic military emissions are to be included in national inventories. However, bunker fuels for international transport were exempted. While the official reason was not to burden world trade, implicitly large countries with a ‘maritime empire’ (US, France, UK) as well as those operating military globally benefitted from this provision.

Data reported under these provisions suffer from a narrow interpretation of military emissions in the national inventory guidelines issued by the IPCC (2006), focusing on fuel for aviation, water-borne navigation, vehicles, and other machinery.

This leads to aberrations like the EU reporting total military GHG emissions of 4.52 million t CO₂ for 2018, while the Conflict and Environment Observatory estimates real emissions five times higher, at 24.8 million t CO₂.

While the Paris Agreement agreed in 2015 has significantly sharpened national reporting requirements under the “Enhanced Transparency Framework”, the decision to allow countries to protect confidential business and military information essentially perpetuates the opaqueness regarding military and conflict-related emissions.

2. The many aspects of military and conflict-related GHG emissions

Military and Conflict-Related Emissions: Kyoto to Glasgow and Beyond strives to ‘systematize’ emissions at all steps of the military “value chain”.

Emissions related to military action can be divided into the following types:

1. Direct emissions from operations of military forces (emissions from use of weapons and ammunition in training and conflict, fuel consumption for transport, heating and cooling of buildings, and emissions of non-fossil fuel related GHGs);
2. Direct emissions related to destruction of carbon reservoirs due to armed conflicts (with such reservoirs being either of fossil or biogenic nature);
3. Indirect emissions from the life cycle of production of weapons, vehicles and other equipment;
4. Emissions related to reconstruction after armed conflicts (which can entail human infrastructure or further damage to biological carbon stores);
5. Emissions related to restructuring of energy systems due to strategic considerations triggered by conflict.

DEVASTATION TO PEOPLE AND PLANET

Cumulated emissions of war-related activities and destruction in Iraq, Afghanistan, Pakistan, and Syria by the US military for the period 2001-2018 was conservatively estimated to be 440 million t CO₂.

Burning a large modern city can emit up to 10 million t CO₂. During the World War II, the CO₂ emissions of the burning of Hamburg would have reached as high as 21 million t CO₂ (due to its larger share of wood in building at that time). Expanding this estimate to the entire area of German cities bombed, total emissions could be as high as 215 million t CO₂.

Emissions from the destruction of natural or man-made carbon stocks during wars can reach hundreds of million t CO₂, as was the case with forest destruction in Vietnam and the burning of oil wells in Kuwait.

0.5 million hectares of tropical forest and mangroves in southern Vietnam were destroyed by the chemical “Agent Orange” by the US. Assuming a carbon content of 600 t CO₂ per ha of mature mangrove forest in Southern Vietnam, this event would have generated about 300 million t CO₂. Another relevant example is the increased deforestation and biodiversity loss in Congo due to the conflict in the eastern part of the country, particularly where the conflict resulted in the internal displacement of people, thus increasing the pressure on surrounding forests.

Indirect emissions due to the need to reconstruct cities and infrastructures after the end of a war can easily exceed 100 million t CO₂ if a conflict has led to destructions on a country-wide scale. The Syrian war has generated over 20 million t rubble through destruction of close to 50,000 buildings in Aleppo and Homs. Reconstructing these buildings would generate 11-19 million t CO₂ emissions. Reconstruction of a major populous city such as Beijing and London from scratch would generate as much as 500 million t CO₂ emissions.

3. Principles for an accounting framework: military emissions in peace and war

The very brief summary of the detailed framework found in the main technical report below is inspired by Michaelowa and Koch (2001),¹ taking into account the Paris Agreement provisions.

3.1. Peacetime: emissions and coverage by national inventories in peacetime

Emissions in own territory

As discussed above national inventories need to ensure that the different types of military emissions are duly reported. The IPCC National Inventory Guidelines should be revised to ensure that not only a narrow definition of such emissions prevails.

Emissions in foreign territory

Emissions from military bases abroad formally have to be included in the inventory of the country hosting those bases. [As far back as 2001, Michaelowa and Koch (2001) stressed that Pacific island states have had difficulties obtaining emission data for the bases located on their territories. This means that there is a high probability that these emissions are not being reported, despite probably exceeding the host state's total emissions.]

3.2. Armed conflict: emissions coverage by national inventories during armed conflicts

Emissions produced by armed conflict are difficult to measure and should be reported in different ways depending on the character of the conflict.

Michaelowa and Koch (2001) under the Decision 2/CP.3 (para. 5) of the UNFCCC (1997) propose that the emissions that result from "multilateral operations pursuant to the charter of the United Nations" are exempted in the total national inventories.

Countries providing soldiers or logistical support to UN Peacekeeping should always be exempted from accounting related emissions in order not to create a disincentive for such activities. Countries like Fiji, Rwanda or Pakistan cannot afford to cover carbon emissions cost for their overseas UN peacekeepers.

Therefore, emissions in armed conflicts can be differentiated into those operations with UN approval and those operations without UN approval.

[A full detailed breakdown of the Principles for Accounting is in the main report]

It is a fundamental principle of international law that states are prohibited from using force except in self-defence or unless its use is formally authorised by Security Council under Chapter VII of the UN

¹ Michaelowa, Axel; Koch, Tobias (2001): Military emissions, armed conflicts, border changes and the Kyoto Protocol, in: Climatic Change, 50, p. 383-394

Charter. The Security Council never authorised the use of force to justify the U.S. led coalition invasion of Iraq in 2003.² The self-defence justification also did not apply to this invasion. The resulting GHG emission of hundreds of million t CO₂ in this war was never accounted for by the U.S. and allies. The Iraqi people and their environment have suffered massively without any aggressor taking responsibility. This has to stop so the pattern does not continue, the latest example being Russian invasion of Ukraine.

Conflicts generally arise because of lack of agreement so, understandably, this probably is the hardest area to reach an agreement on by all parties in the international community. Nevertheless, resolving other aspects of military emissions accounting should not be held up by lack of agreement over this issue – which could easily take many decades.

4. Strengthening the Paris Agreement to deal with conflicts

The consensus principle of the Paris Agreement to be interpreted creatively to prevent aggressors blocking UNFCCC negotiations, such as Russia did in the June negotiations of 2013.

Short term reporting of high intensity emissions during conflicts should be embarked upon on the international level, as countries involved in the conflict will not likely devote resources to that.

A department of the UNFCCC Secretariat should engage in remote sensing of high intensity destruction of carbon reservoirs like fossil fuel deposits, cities and forest fires.

These should then be reported in a separate “conflict account” in the transparency regime. The necessary technology is similar to that used for assessment of CO₂ emissions from natural disasters like the peat and forest fires in Indonesia in 1998 or large-scale methane leaks.

The liability for this additional amount of the estimated or measured emissions should generally be addressed in peace settlements. In the ideal case the party established as the aggressor party should face an addition to its emission balance for the current NDC target.

The Conference and meeting of the Parties to the Paris Agreement could decide that countries whose territory has been (partially) occupied can apply a conservative emissions default for occupied territories derived from last inventory before occupation.

[A full breakdown of ways to strengthen the PA in relation to conflict is in the main report]

² <https://www.opendemocracy.net/en/opendemocracyuk/was-britains-military-action-in-iraq-legal/>,
https://web.archive.org/web/20030407232423/http://www.icj.org/news.php3?id_article=2770&lang=en

5. Taking the issue forward

So far, no serious attempts to account for GHG emissions from the militaries and the military industry in peacetime and armed conflicts have been undertaken under the UNFCCC. With our report, we want to launch a serious engagement of the UNFCCC with this issue.

In short we

- Call on parties to come up with **full reporting of military emissions** on their territory and overseas
- Call on **the UNFCCC Secretariat to monitor emissions of active conflicts** and report on those in a timely manner
- Call on **foundations and philanthropic actors to provide** the necessary budget for such monitoring
- Also, vitally, a solution to **overcome the barrier of confidentiality (secrecy)** regarding the reporting of fuel consumption for military purposes is necessary.

Looking further ahead.

The conclusion of the IPCC Sixth Assessment Report (AR6) Cycle this year (2022) provides us with an opportunity to look ahead to the AR7 cycle and the placing of climate change and global military emissions in peace and war on its agenda in the hope and belief that this will stimulate further scientific reports and peer-reviewed publications, in anticipation of an eventual publication of an IPCC Special Report on this subject in the AR8 cycle by 2030.



6. Roadmap to action

The calls below are in order of urgency beginning with the next 12 months.

6.1. Formal submission to UNFCCC

- The coming 12 months, we propose that civil society organisations lobby a **government of a country with high international reputation** and no military interests, e.g. Costa Rica, to make a **formal submission to the UNFCCC for the Subsidiary Body of Scientific and Technical Advice to elaborate rules** for reporting of military and conflict-related emissions under the Paris Agreement in the context of the enhanced transparency framework.
- The submission should call for **national inventory guidelines to ensure that all the different types of military emissions are duly reported**, including emissions from extraterritorial bases, and international bunker fuel consumption from military aviation and shipping.
- A standardised set of **rules for conflict-related emissions** should be made applicable, including destruction of human and biological carbon reservoirs.
- The UNFCCC Secretariat should be tasked and be provided the budget to undertake **remote sensing of such destruction and report the results in a separate “conflict account”**. Conservative default parameters should be applied if data are unavailable.
- In the submission, the UNFCCC Secretariat should be requested to **develop a technical paper discussing principles for accounting military emissions in peace and war**, and issue a call for Party and observer submissions.
- In relation to this, a window of opportunity is provided by the **UN International Law Commission** — Protection of the environment in relation to armed conflicts (PERAC) set to conclude its deliberations in autumn of 2022.³

6.2. Ensure that military and conflict-related emissions are addressed in the global stocktake

- A group of relevant **research and observer organisations should make a submission on military emissions during the Global Stocktake process**. Through side events at subsidiary body and COP sessions, the attention of the climate policy community should be drawn to the relevance of this issue for the Global Stocktake, which is due to be finalised by COP28 in 2023.
- At the same time, **civil society organisations should lobby their governments to voluntarily report in their next national inventory or Biennial Update Report military peacetime**

³ <https://ceobs.org/ukraine-invasion-rapid-overview-of-environmental-issues/>

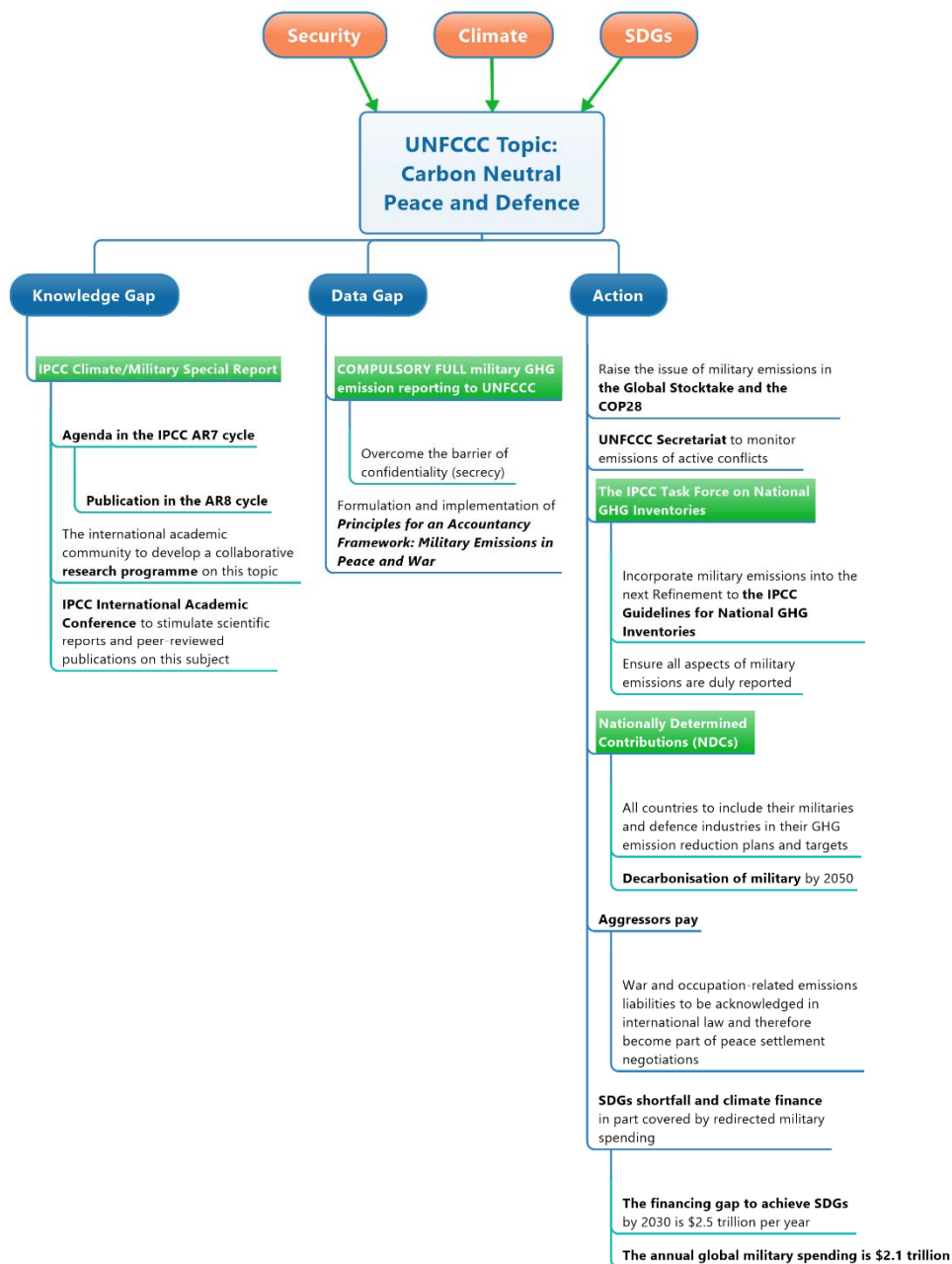
emissions according to the generic IPCC good practice guidance for national emissions sources from energy and other relevant sectors as if the military was a “normal” emitter.

6.3. IPCC Special Report on military and conflict-related emissions on the agenda of 7th assessment report cycle

- A group of observer organisations accredited with the IPCC should request **the IPCC to put a Special Report on climate change and global military in peace and war on the agenda of the 7th Assessment Report cycle.**
- Given that the IPCC is rather reluctant to agree on new special reports, **civil society organisations need to lobby their governments to support such a proposal. If a critical mass of about 30 governments from all continents** underwrites the proposal, IPCC would not be able to silently “bury” the proposal.

6.4. The next 3-5 years

- In the medium term of 3-5 years, we call **researchers active in the field to develop a joint research programme “Military emissions in peace and war” aiming at providing specific input into the IPCC 7th Assessment Report**, even if there is no Special Report agreed during this cycle. In the past, coordinated engagement with the IPCC process, e.g. through submitting papers to peer-reviewed journals early enough, serving as lead authors and strategically submitting comments at all stages of the process has been able to mobilise important topics.
- The programme should **be kick-started with an international academic conference that brings together all key researchers and develops proposals for “Special Issues”** with relevant academic journals.
- As the programme progresses, it could **develop the basis for UNFCCC agreeing to cover a new topic “Carbon Neutral Peace and Defence”**, following the same route as the approach laid out for the short term.
- Outside of the UNFCCC process, **civil society should call for war and occupation-related emissions liabilities to be acknowledged in international law and therefore become part of peace settlement negotiations.** The salience of this call could be increased by linking this issue to the research programme outlined above.



7. Conclusion

Some of our recommendations may look beyond our collective reach due to the glacially slow pace of progress in climate politics and international diplomacy, fraught as it is with a fatal mix of political ‘short-termism’ and corporate vested interests. However, desperate times call for radical change, and we have seen in the latest COVID-19 and Ukrainian crises that radical change is possible if windows of opportunity are used without hesitation, and by forming alliances that in “normal” times would seem impossible. It is the ambition of the authors and the organisations supporting this report to build support for these recommendations to help achieve this call. We only have this one chance but it is an ever-narrowing window of opportunity. We cannot afford to miss it.

United Nations Framework Convention on Climate Change (UNFCCC)

The UNFCCC's ultimate objective is to achieve the stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous interference with the climate system. The Kyoto Protocol, which was signed in 1997 and ran from 2005 to 2020, was the first implementation of measures under the UNFCCC. The Kyoto Protocol was superseded by the Paris Agreement, which entered into force in 2016.[4] By 2020 the UNFCCC had 197 states parties.

Its supreme decision-making body, the Conference of the Parties (COP), meets annually to assess progress in dealing with climate change.[5][6]

"UNFCCC" is also the name of the United Nations Secretariat charged with supporting the operation of the convention. The Secretariat, augmented through the parallel efforts of the Intergovernmental Panel on Climate Change (IPCC), aims to gain consensus through meetings and the discussion of various strategies. Since the signing of the UNFCCC treaty, Conferences of the Parties (COPs) have discussed how to achieve the treaty's aims

Intergovernmental Panel on Climate Change (IPCC)

IPCC is the United Nations body for assessing the science related to climate change. It assesses the scientific, technical and socioeconomic information relevant for the understanding of the risk of human-induced climate change. The IPCC is an independent body founded under the auspices of the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP). The IPCC is best known for its comprehensive assessment reports, incorporating summaries for policymakers from a synthesis report and from all three Working Groups, which are widely recognised as the most credible sources of scientific information on climate change.

8. About the authors

1. The main report "*Military and Conflict-Related Emissions: Kyoto to Glasgow and Beyond*" is available [here](https://transformdefence.org/publication/military-and-conflict-related-emissions-report/).
2. [Perspectives Climate Group](#) is an independent group of highly qualified consultants and researchers providing the private sector, governments and non-governmental organisations (NGO) with practical solutions for domestic and international climate policies, climate finance, and international greenhouse gas markets. Perspectives is internationally recognized for establishing and advancing the Clean Development Mechanism (CDM), including the successful design of UNFCCC-approved baseline and monitoring methodologies and the management of complex Programmes of Activities (PoAs).
3. The '*Military and conflict-related emissions: Kyoto to Glasgow and Beyond*' report is based on the Michaelowa and Koch's academic paper '*Military Emissions, Armed Conflicts, Border Changes and the Kyoto Protocol*', *Climatic Change* volume 50, pages 383–394 (2001).
4. The main report was commissioned by Tipping Point North South for its [Transform Defence](#) project. This Advocacy Briefing drawn from the main report is available online [here](#).
<https://transformdefence.org/publication/military-emissions-advocacy-briefing/>
5. Transform Defence was launched in December 2020 with two reports [Indefensible: The true cost of the global military to our climate and human security](#) and [Global military spending, sustainable human safety and value for money](#). TPNS was founded by former senior Christian Aid trade, tax and climate justice campaigners.