The global military is a major driver of climate change. At UN level it is exempt from compulsorily reporting its carbon emissions despite some countries’ militaries being among the largest consumers of fossil fuels in the world. This is a scandal that needs exposing.

These emissions are a direct result of runaway global military spending since the former cannot happen without the latter. Combined, they ensure that all human development is harmed in myriad ways.

As a matter of urgency, we need this issue taken up and addressed by the many stakeholders this serious matter falls to for action – from civil society to governments to international institutions, especially the UN.

Last but not least, policy-makers concerned with Green New Deal economic thinking (in the UK, Europe, the USA and elsewhere) must take account of the links between these closely linked issues: military spending & emissions, the green transition and sustainable human safety. We need peaceful, green, prosperity.
We are in desperate times. UN Secretary-General António Guterres warned “the climate crisis is a code red for humanity”. So desperate are these times that once orthodox ‘blasphemy’ is now breaking into the mainstream: the latest IPCC report on *Mitigation of climate change* has a whole chapter examining the idea of ‘degrowth’.

The idea of economic growth has been at the heart of the governance and organisation (whether nominally under capitalism, socialism or communism) of the global economy since the industrial age. To break with this dogma is to challenge the foundation of our current capitalist society, but as we reach the outer limits of the planet’s ability to sustain all life, how can we not challenge it? After thirty or more years of ineffective, window-dressing, ‘blah blah blah’ climate politics, we have no choice but to start thinking the ‘unthinkable’.

The authors of the most recent IPCC report pled for “prioritising human well-being and the environment over economic growth.” We have to completely transform our economic system to “prosper without growth.” We need to transition to a “post-growth economy” that is zero-carbon and well-being oriented. “Prioritizing people and planet over profits means that regardless how lucrative an activity is, its raison d’être should systematically be evaluated based on its social utility and ecological sustainability.”

But something is amiss.

Something has been curiously neglected in almost all of these discussions and policy-making.

Something so important that it often over-rides economic consideration in national priority-setting and government decision-making.

**It’s the military and the defence industry.**

The U.S. Department of Defense alone is the biggest institutional greenhouse gas (GHG) emitter in the world, emitting on average around 66 million tonnes of CO2 equivalent (tCO2e) a year. The UK’s MOD is, by its own admission, by far the largest single contributor to greenhouse-gas emissions within the UK central government and has an annual total direct GHG emissions of around 3 million tCO2e.

National militaries have not been required to fully and compulsorily report their GHG emissions to UNFCCC, but the best estimate we currently have indicates the global military carbon boot-print is at least 1% of the global total and potentially as high as 6%. Despite its high (historical)
climate impact, the global military (and by extension the global defence industry) has been omitted from all climate negotiations. A growing number of researchers and campaigners are working to change this, for example tracking military emissions gaps\(^5\) or calling for an IPCC Report into the role of the military in climate change.\(^6\)

Global military spending topped $2.1 trillion in 2021, in the midst of the global COVID pandemic and before the Russian invasion of Ukraine. That's more than what we spent at the peak of the Cold War and almost the same amount of annual investment IPCC said is need to transition global energy system until 2035 if we are to limit temperature rise to below 1.5 °C from pre-industrial levels.\(^7\)

Since the start of the Global War on Terror in 2001, more than $30 trillion have been on militaries and weapons, such as the F-35 fighter jet that drinks 6,000 litres of fuel per flight hour\(^8\). The largely wasted $30 trillion did not prevent invasions but it did manage to fuel an international arms race as well as help turn countries such as Afghanistan and Iraq into climate time-bombs, ill-equipped for further climate emergencies.

Moreover, military spending is the least effective way to create jobs. Spending on health care, education, clean energy, and infrastructure instead of waging the 'War on Terror' (Iraq and Afghanistan) would have created a net increase of 1.3 million jobs in the United States.\(^9\) $1 billion invested in education will create over twice as many jobs as $1 billion spent on the Pentagon.

So, after the COVID-19 pandemic, what better initiative to kick start economies than the Green New Deal, creating good and green jobs while tackling the biggest threat to sustainable human safety, climate emergency.

What's not to like about that? Nothing except, once again, there's something missing.

Progressive GND plans are incomplete unless they also call for the break-up of the military-oil industry relationship and complete decarbonising of the world's militaries. If all areas of human activity must decarbonise, why are we letting the oil-dependent militaries of the big spenders follow a different path? Economic anthropologist Jason Hickel made this point: “A Global Green New Deal must address excess resource consumption in the North. We can reduce resource use in rich nations quite dramatically while still meeting human needs at a high standard by scaling down forms of economic activity that are socially less crucial. SUVs, fast fashion, private jets, advertising, planned obsolescence, the military industrial complex...there are huge chunks of production that are organised primarily around corporate power and elite consumption and are actually irrelevant to human needs.”\(^10\) [our emphasis]

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\(^5\) [https://militaryemissions.org/](https://militaryemissions.org/)
\(^6\) [https://transformdefence.org/icesculpture/#Scotsman](https://transformdefence.org/icesculpture/#Scotsman)
\(^7\) [https://www.nature.com/articles/d41586-019-02712-3](https://www.nature.com/articles/d41586-019-02712-3)
\(^10\) [https://www.greeneuropeanjournal.eu/degrowth-is-about-global-justice/](https://www.greeneuropeanjournal.eu/degrowth-is-about-global-justice/)
U.S. Senator Bernie Sanders understood how this all came together. In his Green New Deal offer during the presidential race he included this courageous, paradigm-shifting pledge,11

“Bring together the leaders of the major industrialized nations with the goal of using the trillions of dollars our nations spend on misguided wars and weapons of mass destruction to instead work together internationally to combat our climate crisis and take on the fossil fuel industry. Bernie recognizes that the Pentagon is the largest institutional emitter of greenhouse gases in the world and that the United States spends $81 billion annually to protect oil supplies and transport routes. We are uniquely positioned to lead the planet in a wholesale shift away from militarism.”

GND Plus (decarbonising the military) is one way of bringing GND thinking to meet the hidden reality of military emissions.12

Degrowth applied to the big military spending nations mean less cash for their big-ticket hardware, overseas bases and war and by extension, reduced emissions. The world’s militaries are the biggest institutional users of oil in the world and are therefore a major driver for climate change, both in terms of day-to-day operations as well as wars, many of which are conducted for oil. Runaway global military spending enables all this. Fossil fuel is not cheap and the more we use, the higher the fuel bill. There is therefore a strong positive correlation between military spending and carbon emissions, especially for top military spenders.13 This is to be expected since higher spending reflects larger proportion of big-ticket purchase, such as F-35, J-20 or Su-57 fighter jets, that are all massive gas-guzzlers. In short, higher global military spending means higher greenhouse gases emissions.

A carbon-neutral world demands we cut military budgets and fully decarbonise our militaries.

Vitally, a decarbonised military, defence and security sector is not about delivering ‘greener ways to conduct war‘: weaponry and war will always kill living beings, will always destroy and pollute environments. Rather, climate change itself is the starting point for much needed if challenging discussion on foreign and defence policy one that must lead us to a paradigm shift in international relations for a carbon-neutral world.

We have to challenge the dogma of “economic growth” to create a post-growth future, but that future will be incomplete if we do not also challenge the dogma of “national security”.

How can degrowth principles be applied to the military? Degrowth is a planned and democratic reduction of production and consumption in rich countries to lower environmental pressures and inequalities while improving people’s well-being. How can this be achieved? The IPCC report discussed three ways: avoid (by consuming less), shift (by substituting one for another), and improve (by greening the existing). There is no reason why this model cannot be

11 https://berniesanders.com/issues/green-new-deal/
12 Green New Deal Plus, https://transformdefence.org/green-new-deal-plus/
applied to transform our current way of thinking about national defence and international relations.

**Avoid**

Avoid locking into expensive and gas-guzzling weapon systems. The F-35 is a case in point: the whole programme is projected to cost the U.S. alone $1.7 trillion in its expected nearly 70-year life cycle. When the whole world is expected to reach carbon net-zero by 2050, isn’t it absurd that the F-35 will still be the backbone of the U.S. Air Force (and many other national air forces) at that time, flying above and laughing at us at a rate of 1 tCO2e per 80km?

Avoid military aggressions/interventions. After the humanitarian (and climate) disasters of invasions by some of the top military spenders into Iraq, Yemen and Ukraine to name but a few in recent times, is there no rationale argument to be made that says conflicts and wars are anything other than incompatible with the new post-carbon (post-growth) world?

**Substitute**

Substitute “great power competition” with “non-offensive defence”. Defence should be about our collective human safety, not power projection and exploitation. All conflicts eventually lead to a negotiated settlement one way or the other so why not cut out the human and environmental suffering and go straight to diplomacy as soon as possible. We are at an all time low on trust and confidence in international relations and this has to be reversed if we are to successfully find the co-operative routes forward in dealing with climate chaos.

Substitute the defence industry with the clean-energy economy. Many skills in the high-tech defence industry are interchangeable with those required by the green industry. The continued growth of the production of weapons (whose sole purpose is destruction of lives and environment) will only lead humanity to doom either before or during full-on climate chaos. UN Secretary General Gutteres is right: “war is an absurdity in the 21st century”. Time is running out for our wholesale clean-energy transformation of our economy and we must include the defence industry in this endeavour.

**Improve**

Improve (by electrifying) the existing defensive weapons while gradually getting rid of offensive weapons, including nuclear weapons. We may never be able to get rid of all offensive weapons but if we are well protected by defensive weapons, isn’t it reasonable to expect sometime in the post-growth future that we should start the conversation around how few offensive weapons we actually need to not just to feel safe but be literally safe?

Improve our (energy, transport and health) infrastructure to make them more resilient to crises and disasters in the understanding that when human safety is protected, it follows nationally security is also secured.

**Military power seen through the degrowth lens**

Global military spending is now more than $2 trillion a year, 87% of which is spent by the G20 (top economic powers) and 85% spent by the top 20 military spenders, many of whom are the
same nations. The “climate villains”\textsuperscript{14} and the top military spenders are basically the same countries.

Historically, military spending has been central to re-enforcing power, poverty, unjust distribution of resources, economic and environmental collapse. And this damage done in war, conflict or occupation is mirrored in and inextricably linked to the longstanding destructive role of those same nations’ corporate interests across the global south, notably through the extraction of resources. To place the military in this frame is also to see clearly why we must include it in the climate justice and reparation frame. Hickel explains, "Degrowth has roots in the anti-colonial movements, going back to key leaders and thinkers such as Gandhi, Franz Fanon, and Thomas Sankara. They recognised that the growth of the North depended on the plunder of Southern resources and labour, as it still does today. From as early as the 1930s, their position has always been to refuse to be exploited by the North. Degrowth is about demolishing the imperial arrangement.\textsuperscript{15}

To apply degrowth to the military is to raise necessary if difficult questions about defence in this climate changed era. But to cut military budgets in order to divert excessive spending to the myriad activities in need of funds\textsuperscript{16} and which are about the protection of all life on earth is a legitimate (tax-payers’) demand. It is to create the “double dividend” for our global society.

To paraphrase Tim Jackson, author of’ Live Better by Consuming Less?: Is There a “Double Dividend” in Sustainable Consumption?\textsuperscript{17}, the “double dividend” of degrowing military spending would look like this: If the fossil-fuelled way of national defence is both ecologically damaging and psychologically flawed, then the possibility remains that we could live better and safer by spending less on militarism and reduce our impact on the environment at the same time.

The ‘peace of mind’ secured by nations through foreign and defence policies derived from fossil fuel dependent militaries is – on many critical counts – no longer fit for the 21\textsuperscript{st} century (and definitely not the 22\textsuperscript{nd}), and outdated notions of national security must now be replaced by the concept of sustainable human safety. The challenge now is how to turn it around for the good of everyone.

The report Indefensible: The true cost of the global military to our climate and human security highlights the destructive merry-go-round of war, devastation and rebuilding all at the same time emitting ever more greenhouse gases – as we see in Ukraine now, war and conflict is madness heaped upon madness, all the time, adding to the profit margins of the big defence corporations who really do love war. If we don’t try to transform foreign and defence policy as a parallel effort to that required for the global economy, we will only be part-way there. At Tipping Point North South (TPNS) we sum this up: Transform Defence for Sustainable Human Safety\textsuperscript{18}.

We could all do worse than heed these wise words of Mikhail Gorbachev:

\begin{footnotes}
\item[14] https://www.carbonbrief.org/analysis-which-countries-are-historically-responsible-for-climate-change/
\item[15] https://www.greeneuropeanjournal.eu/degrowth-is-about-global-justice/
\item[16] https://transformdefence.org/publication/value-for-money/
\item[17] https://onlinelibrary.wiley.com/doi/abs/10.1162/1088198054084734
\item[18] https://transformdefence.org/
\end{footnotes}
"What we urgently need now is a rethinking of the entire concept of security. Even after the end of the Cold War, it has been envisioned mostly in military terms. Over the past few years, all we’ve been hearing is talk about weapons, missiles and airstrikes... The overriding goal must be human security: providing food, water and a clean environment and caring for people’s health. To achieve it, we need to develop strategies, make preparations, plan and create reserves. But all efforts will fail if governments continue to waste money by fueling the arms race... I’ll never tire of repeating: we need to demilitarize world affairs, international politics and political thinking." \(^{19}\)