

TRANSNATIONAL CORPORATIONS, WARMONGERING AND THE CLIMATE EMERGENCY

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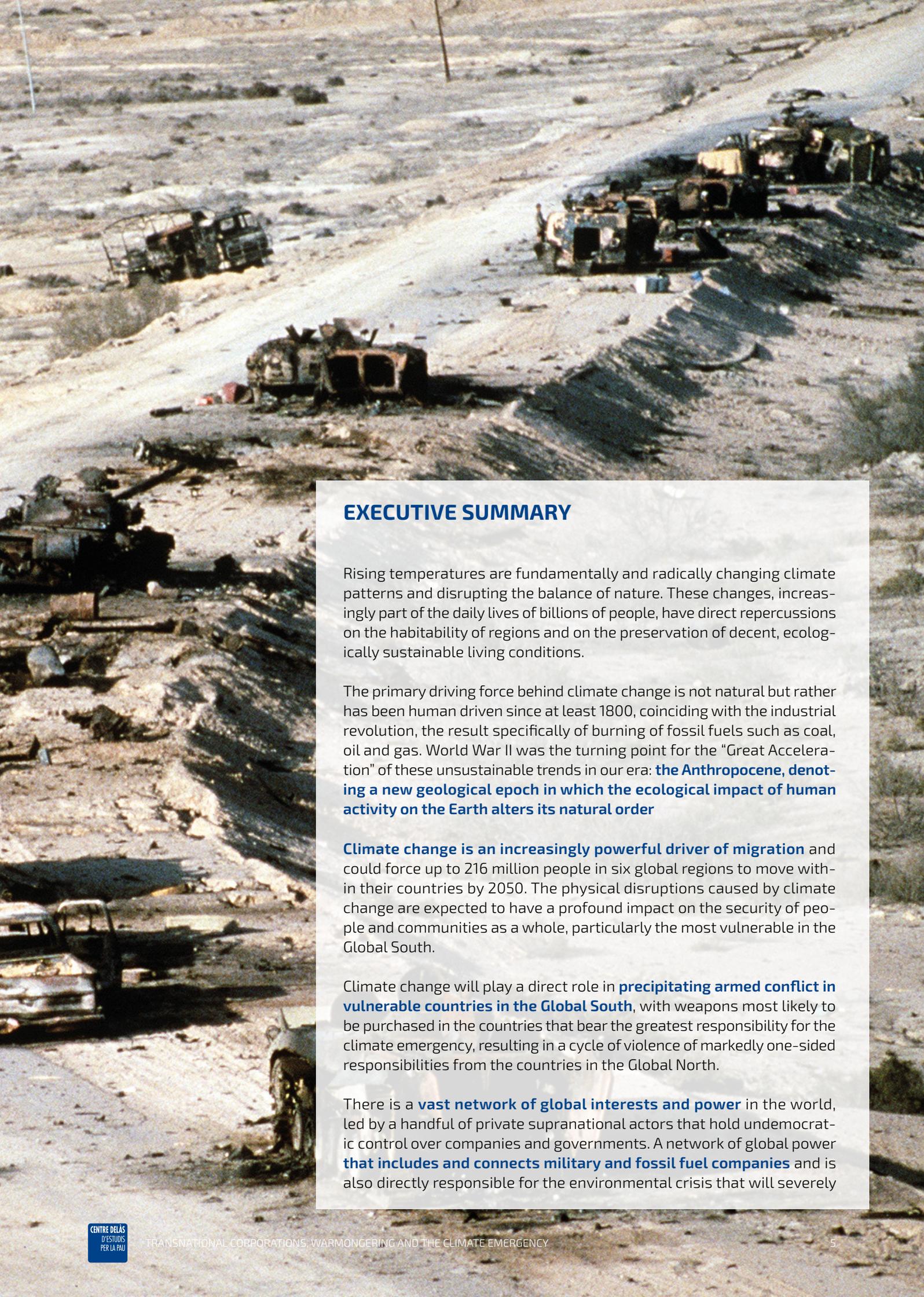


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EXECUTIVE SUMMARY

Rising temperatures are fundamentally and radically changing climate patterns and disrupting the balance of nature. These changes, increasingly part of the daily lives of billions of people, have direct repercussions on the habitability of regions and on the preservation of decent, ecologically sustainable living conditions.

The primary driving force behind climate change is not natural but rather has been human driven since at least 1800, coinciding with the industrial revolution, the result specifically of burning of fossil fuels such as coal, oil and gas. World War II was the turning point for the "Great Acceleration" of these unsustainable trends in our era: **the Anthropocene, denoting a new geological epoch in which the ecological impact of human activity on the Earth alters its natural order**

Climate change is an increasingly powerful driver of migration and could force up to 216 million people in six global regions to move within their countries by 2050. The physical disruptions caused by climate change are expected to have a profound impact on the security of people and communities as a whole, particularly the most vulnerable in the Global South.

Climate change will play a direct role in **precipitating armed conflict in vulnerable countries in the Global South**, with weapons most likely to be purchased in the countries that bear the greatest responsibility for the climate emergency, resulting in a cycle of violence of markedly one-sided responsibilities from the countries in the Global North.

There is a **vast network of global interests and power** in the world, led by a handful of private supranational actors that hold undemocratic control over companies and governments. A network of global power **that includes and connects military and fossil fuel companies** and is also directly responsible for the environmental crisis that will severely

affect the countries of the Global South in particular. A network that works, directly and indirectly, to **prevent measures that could defuse or halt both the global environmental crisis** and the suffering that millions of people will endure.

Military spending not only takes away resources that could be devoted to tackling climate change, investing in global justice and promoting peaceful conflict transformation and disarmament, but also heavily contributes to the climate crisis, due to the **substantial GHG emissions from the military and arms industry and other environmental damage for which it is responsible**.

War and war preparation are fossil fuel-intensive activities. Since 2001, the US Department of Defense (DoD) has continuously accounted for 77-80% of all US government energy consumption. Adding the CO₂ emissions associated with DoD activities (59 million tonnes of CO₂e) and those associated with weapons production (153 million tonnes of CO₂e), **US military activity was responsible for the emission of 212 million tonnes of CO₂e in 2017**.

Surprisingly, the global trend is for military spending to increase in the coming years. In the specific case of NATO, there is an agreement to increase military spending to 2% of the GDP of its members. **NATO or EU military operations outside Europe are drivers of increased emissions**. In our view, **military responses will never be the solution to any problem**, including the climate and environmental emergency. However, as long as the military-industrial complex exists, it is clear that it is **essential to incorporate the emissions generated by the military complex into the overall emissions calculation** if the European Green Pact's goal of zero net emissions by 2050 is to be met.

The Security Strategy documents of NATO, the EU and Spain illustrate that these organisations and states are adopting positions to prevent the scarcity of fossil fuels, which is cited in some of these documents as a threat to energy security. **NATO's Madrid**

2022 strategic concept, for example, cites climate change as a trigger for conflicts, including migration, as well as non-military threats to the economy, to which military responses will be inevitable. The document also mentions, for the first time, Russia as a direct threat and China as a destabiliser of global security.

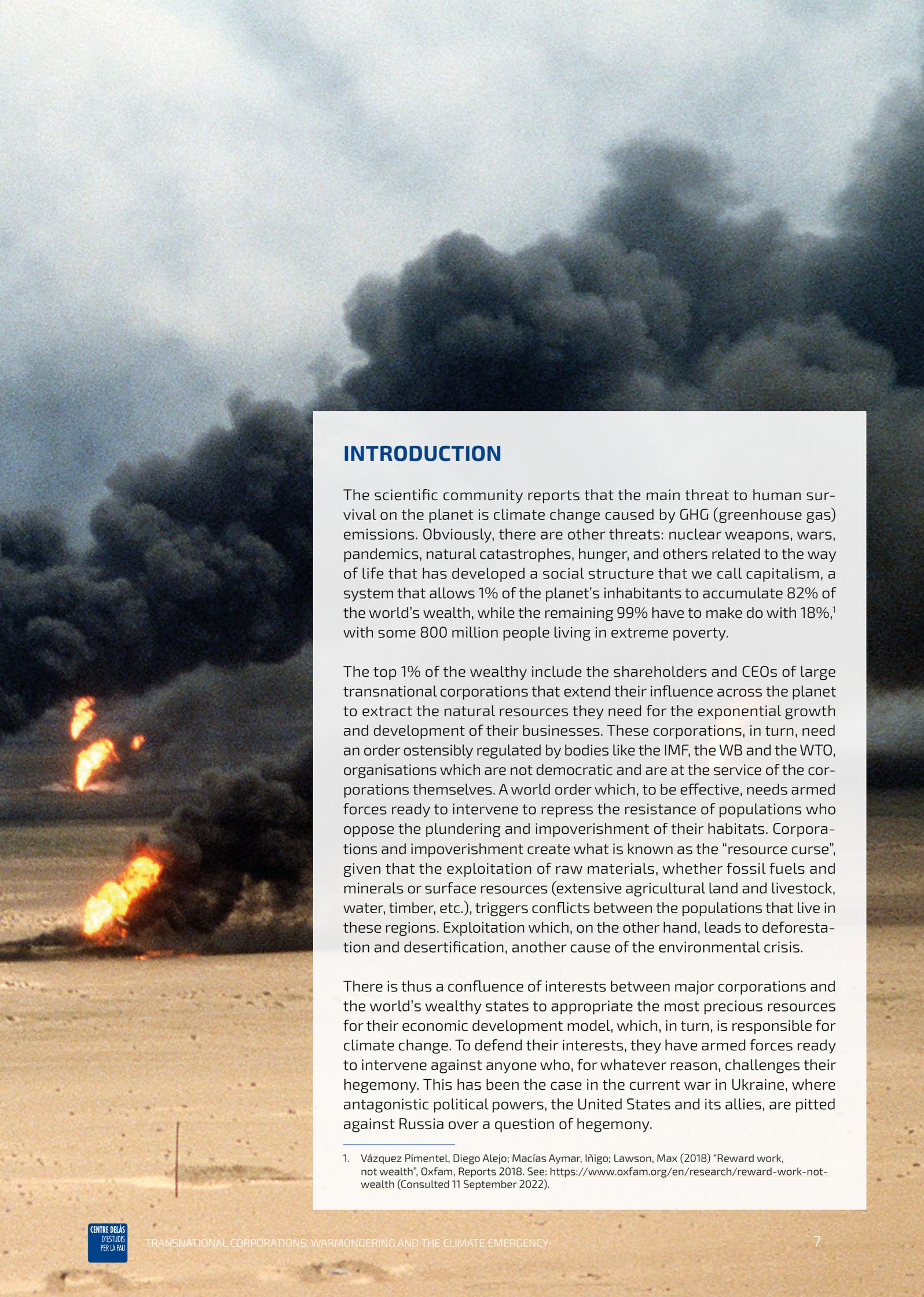
These Security Strategies predict new conflicts between powers. The Western world is keen to safeguard its environmentally unsustainable way of life by strengthening its military capabilities to safeguard its resources, raw materials and fossil fuels.

This paper argues that the **threats are not the ones we are being told they are**. The threats come from the elites who continue to contribute to the destruction of the planet and promote both the arms race and armed conflict; elites that include large extractive corporations, the leaders of the world's major powers, arms manufacturers and NATO leaders. As we have seen, if we do not shift the course of their current policies and practices, the prognosis is the destruction of the lives of millions of people and irreversible damage to the biosphere.

Governments must **shift priorities**. The current emergency requires a united and coordinated global effort. What we now need is **new geopolitics to save the human species, the biosphere and the planet**. The priority is to preserve the natural world that we humans belong to, through rational consumption that prevents the overexploitation of the planet's resources, and by moving beyond militarism, and allocating resources from military spending to social and human development.

New policies are needed to shift the focus from profit and violence to people and their protection.

Hope lies in mobilising civil society, in ecofeminist solutions and in our collective actions. The climate emergency implies recognising our responsibility and the need to move past a civilisation based on weapons and fossil fuels.



INTRODUCTION

The scientific community reports that the main threat to human survival on the planet is climate change caused by GHG (greenhouse gas) emissions. Obviously, there are other threats: nuclear weapons, wars, pandemics, natural catastrophes, hunger, and others related to the way of life that has developed a social structure that we call capitalism, a system that allows 1% of the planet's inhabitants to accumulate 82% of the world's wealth, while the remaining 99% have to make do with 18%,¹ with some 800 million people living in extreme poverty.

The top 1% of the wealthy include the shareholders and CEOs of large transnational corporations that extend their influence across the planet to extract the natural resources they need for the exponential growth and development of their businesses. These corporations, in turn, need an order ostensibly regulated by bodies like the IMF, the WB and the WTO, organisations which are not democratic and are at the service of the corporations themselves. A world order which, to be effective, needs armed forces ready to intervene to repress the resistance of populations who oppose the plundering and impoverishment of their habitats. Corporations and impoverishment create what is known as the "resource curse", given that the exploitation of raw materials, whether fossil fuels and minerals or surface resources (extensive agricultural land and livestock, water, timber, etc.), triggers conflicts between the populations that live in these regions. Exploitation which, on the other hand, leads to deforestation and desertification, another cause of the environmental crisis.

There is thus a confluence of interests between major corporations and the world's wealthy states to appropriate the most precious resources for their economic development model, which, in turn, is responsible for climate change. To defend their interests, they have armed forces ready to intervene against anyone who, for whatever reason, challenges their hegemony. This has been the case in the current war in Ukraine, where antagonistic political powers, the United States and its allies, are pitted against Russia over a question of hegemony.

1. Vázquez Pimentel, Diego Alejo; Macías Aymar, Iñigo; Lawson, Max (2018) "Reward work, not wealth", Oxfam, Reports 2018. See: <https://www.oxfam.org/en/research/reward-work-not-wealth> (Consulted 11 September 2022).

However, there are communities that resist this resource-predatory model, and in defence of their habitats, they stand up to the corporations (extractive industries or extensive agriculture and livestock farming) which, backed by their governments, plunder resources by destroying the environment. Corporations which, on a global scale, are the cause of the environmental crisis and climate change that threatens the lives of millions of people.

In this paper, we specifically address how this “war” is being waged by the enriched Global North against the impoverished Global South, and how the **environmental crisis** leads to **human insecurity** which, in many cases, can end up multiplying the escalation of tensions and the **outbreak of armed conflicts** that affect so many people in many parts of the world. In a second chapter, we examine the close relationships between **power networks** (large transnational corporations) and the **military-industrial complex**,

both of which are complicit as stakeholders in continuing their destructive economic growth. The third chapter analyses how the **armed forces** are a determining factor in **GHG emissions**, since through missions, interventions or wars, armies are major emitters of CO₂e, just like the development of weapons that consume strategic minerals. The chapter closes with an analysis of the security and defence documents from the Madrid 2022 NATO Summit, those of the EU and Spain, which justify that **energy security** is a factor that requires military defence against **hybrid attacks**. The paper concludes by summarising the key elements of the analysis, offering recommendations and observing that in the face of the critical situation for human survival, the priority is to preserve the nature world to which humans belong, with rational consumption that prevents the overexploitation of the planet's resources and moving past militarism to allocate military spending to social development.



1. FROM ENVIRONMENTAL CRISIS TO HUMAN INSECURITY, FROM HUMAN INSECURITY TO ARMED CONFLICT

Anna Montull Garcia

When forests are destroyed, as they are everywhere in America by the European planters, with an imprudent precipitation, the springs are entirely dried up, or become less abundant. The beds of the rivers, remaining dry during a part of the year, are converted into torrents, whenever great rains fall on the heights. The sward and moss disappearing with the brush-wood from the sides of the mountains, the waters falling in rain are no longer impeded in their course: and instead of slowly augmenting the level of the rivers by progressive filtrations, they furrow during heavy showers the sides of the hills, bear down the loosened soil, and form those sudden inundations, that devastate the country.

Alexander von Humboldt, pioneer of ecological thinking and trailblazer in writing about climate change.² Written in 1845.

2. Carl Vogt, January 1845, Beck 1959, p.201; quoted in "The Invention of Nature: Alexander von Humboldt's New World" by Andrea Wulf.

1.1 BACKGROUND

The impacts of human economic activity on the land and the environment were first brought to the fore as early as the 19th century. Intensive logging and deforestation were in full swing at the height of the timber crisis. Humboldt warned that the consequences of human interference on the environment were already "incalculable", arguing that they could be catastrophic if humans continued to disrupt the world in such a "brutal"³ way, and warning that mankind's actions across the planet could lead to repercussions for future generations.⁴ "Everything", he thus wrote, "is interaction and reciprocal".⁵ The primary driving force behind climate change is not natural but rather has been human driven since at least 1800, coinciding with the industrial revolution, the result specifically of burning of fossil fuels such as coal, oil and gas.⁶ World War II was the turning point for the "Great Acceleration" of these unsustainable trends in our era, called the Anthropocene – or Capitalocene or Occidentalocene according to the most critical schools of

3. Thoreau, 28 August 1851, Thoreau, Diary 1981-2992, vol.4, p.17; quoted in *ibid*.

4. Humboldt to Bonpland, 4 October 1853, p. 131, 133; quoted in *ibid*.

5. Thoreau, "Natural History of Massachusetts", Thoreau, *Extrusion and Poems* 1906, p.105; quoted in *ibid*.

6. UN home page about climate change. Available at: <https://www.un.org/en/climatechange/what-is-climate-change>

thought,⁷ denoting a new geological epoch in which the ecological impact of human activity on the Earth alters its natural order.⁸

In 1992, 1,700 scientists from around the world, including most of the Nobel laureates in science who were alive at the time, signed a statement saying that resources for war should be diverted to the new great challenge facing humanity: the climate crisis.⁹ However, military spending budgets have not been diverted towards managing the climate crisis¹⁰ (military spending reached an all-time high of \$2.11 trillion globally in 2011), nor has the international community risen to the task of dealing with the climate emergency. Although the rate of growth of net greenhouse gas (GHG) emissions from 2010–2019 was lower than during 2000–2009, the annual average has continued to rise across all major economic sectors, including during the post-Paris Agreement period, with a small hiatus due to the global lockdown in the wake of the COVID-19 pandemic. Just 25 state and private fossil fuel producers are responsible for 51% of global GHG emissions and 100 producers are responsible for 71%.¹¹ At the state level, the top 10 emitting countries are responsible for 68%, while the 100 countries that emit the least are responsible for only 3%.¹²

These figures not only reveal the strong and unwavering role of the power centres in the climate crisis, but they also lay bare the ineffectiveness of the alleged efforts to reach global agreements to reduce emissions to keep global temperature rise below 2°C above pre-industrial levels and limit this rise to 1.5°C. Neither the temperature records of recent years nor the forecasts for the coming decades are overly favourable. GHG concentrations are at their highest levels of the past 2 million years,¹³ and emissions continue to rise. The planet is now 1.1°C warmer than

it was at the end of the 19th century and the last decade (2011–2020) has been the warmest on record.¹⁴ If we continue with the same trend in terms of the bulk of emissions and without policies and agreements that are truly capable of curbing it, the temperature increase could skyrocket in the coming decades.

In terms of forecasting temperature increases, several different probabilities are used, based on hypotheses about different scenarios and variables. According to the Intergovernmental Panel on Climate Change (IPCC), global warming is likely to reach +1.5°C between 2030 and 2052 if it continues at its current rate.¹⁵ This would be the most optimistic scenario compared to a growing body of scientists and organisations who predict these figures could be reached much earlier and go even much higher if we do not shift course with current patterns and policies. The World Meteorological Organization predicts that there is a 50% chance that global temperatures will temporarily reach the 1.5°C threshold in the next five years (2022–2026) and estimates that there is a 93% chance that at least one year during this period will become the warmest year on record, dislodging 2016 from the top ranking.¹⁶ The OECD predicts that if we do not implement new corrective measures, GHG emissions (incidentally, militarism is responsible for at least 6%) will increase by 50% by 2050, with a consequent effect on temperature, which could rise by up to 3°C.¹⁷ In Spain, a report by the Observatory for Sustainability warns that the average temperature has risen by 0.72°C in the last 10 years and predicts that it will rise to 3.5°C by 2050.¹⁸ It is believed that the global average could be as high as 4°C by 2100.¹⁹ In any event, most hypotheses assume that +2°C is likely to be reached during the 21st century, and the problem with reaching this threshold, as explained more extensively in the next chapter, is that predictions how this increase triggering an entire series of unstoppable cascading effects that would rapidly lead to a global average of 4°C,²⁰ with all the environmental and social consequences that this would have for humanity.

7. Liz-Rejane Issberner and Philippe Léna. (2018). "Anthropocene: the vital challenges of a scientific debate" in the UNESCO Courier. Available at: <https://es.unesco.org/courier/2018-2/antropoceno-problematica-vital-debate-cientifico>
8. The term Anthropocene was popularised in 2000 by Paul Crutzen, winner of the Nobel Prize in Chemistry, who believes that the influence of human activity on the Earth in recent centuries constitutes a new geological epoch. The proposed use of this term as an official geological concept has gained considerable traction since 2008 and is increasingly used within the scientific community but requires the approval of the International Commission on Stratigraphy to become official.
9. Abragam, Anatole, Aguirre, Carlos, et al. (1997) "World Scientists Warning to Humanity", a Union of Concerned Scientists. Available at: <https://www.ucsusa.org/sites/default/files/attach/2017/11/World%20Scientists%27%20Warning%20to%20Humanity%201992.pdf>
10. SIPRI. (2021). Trends in World Military Expenditure. Available at: https://www.sipri.org/sites/default/files/2022-04/fs_2204_milex_2021_0.pdf
11. The Carbon Majors Database. (2017). "CDP Carbon Majors Report". Available at: <https://cdn.cdp.net/cdp-production/cms/reports/documents/000/002/327/original/Carbon-Majors-Report-2017.pdf?1501833772>
12. UN. Website on climate change. Available at: <https://www.un.org/en/climatechange/what-is-climate-change>
13. Ibid.

14. Ibid.
15. IPCC. (2018). "Special Report: Global Warming of 1.5°". Available at: <https://www.ipcc.ch/sr15/chapter/spm/>
16. WMO, press release, 9 May 2022: <https://public.wmo.int/en/media/press-release/wmo-update-5050-chance-of-global-temperature-temporarily-reaching-15C%B0c-threshold>
17. OECD "Environmental Outlook to 2050: The Consequences of Inaction - Key Facts and Figures". Available at: <https://bit.ly/3yB9NmG>
18. Sustainability Observatory. (2021). "Temperature increase by cities in Spain 1893–2020". Available at: <https://www.observatoriosostenibilidad.com/2021/09/11/aumento-de-las-temperaturas-en-las-ciudades/>
19. ACCIONA. "100 companies are responsible for 71% of GHG emissions". Available at: https://www.activesustainability.com/climate-change/100-companies-responsible-71-ghg-emissions/?_adin=02021864894
20. Will Steffen, Johan Rockström, Katherine Richardson et al. (2018). "Trajectories of the Earth System in the Anthropocene". Available at: <https://www.pnas.org/doi/full/10.1073/pnas.1810141115>

1.2 FROM CLIMATE CRISIS TO HUMAN INSECURITY

Rising temperatures are fundamentally and drastically changing weather patterns and disrupting the balance of nature. These disruptions, which are having a growing impact on the lives of billions of people, have direct repercussions on the habitability of regions and the continuity of decent living conditions, since they affect the basic resources on which the subsistence and security of populations depend. If these dynamics are exacerbated, which is what the experts predict if economic activity continues to fuel global warming at its current rate, it could have much more severe and even deadly implications in the coming decades, with dire repercussions on the security and vulnerability of humans as well as the rest of the planet's species.

For other species, the IPCC estimates that the increase in extreme heat levels has caused hundreds of local losses of species and reports that some of these losses are irreversible. Not surprisingly, approximately half of the species assessed globally have shifted polewards or to higher elevations for their survival.²¹ As for humans, the United Nations warns that the new impacts of the climate crisis, such as air pollution, natural disasters, forced displacement and food insecurity, take the lives of some 13 million people every year.²² On the other hand, there are studies that even claim that the environmental crisis could lead to the death of billions of people in regions of the Global South.²³ Although the environmental crisis affects us all on a planetary level, rising temperatures and the resulting impact and consequences on the world's population is not and will not happen uniformly. Rather, there will be drastic differences between regions, with the Global South being hit the hardest.²⁴ An average global temperature increase of 4°C could translate into an increase of 1.5 or 2°C in colder areas compared to an increase of 5 or 6°C in warmer areas. According to the Ecological Threat Report, at least 141 countries will face at least one ecological threat between now and 2050. The Sahel-Banya belt of Africa (from Mauritania to Somalia), the Southern belt of Africa (from Angola to Madagascar) and the Middle East and Central Asia

belt (from Syria to Pakistan) have been listed as the ecological hotspots that are particularly susceptible to collapse.²⁵ Thus, we see how regions of the Global South, home to those who have had the least historical responsibility for the climate emergency, will suffer the most from its consequences over the coming decades.

According to the IPCC, some of the key areas in which climate change will impact human security are water stress, food security and environmental migration, all of which are consequences of a range of ecological phenomena like changing precipitation patterns and overall reduction in annual rainfall, rising sea levels, and more and more extreme natural disasters.

With changing precipitation patterns and reduced average annual rainfall, some of the most basic resources will become increasingly scarce. This in turn is likely to lead to over-consumption of groundwater, leading to depletion or possible contamination of aquifers and further reducing the supply of and access to safe drinking water. Given that there are already 748 million people worldwide who currently have significant issues accessing safe drinking water and that nearly 1,000 children die every day from diarrhoeal diseases associated with unsafe water, according to figures from UNICEF,²⁶ and further decline in the availability of safe drinking water could pose a major humanitarian disaster.

In terms of food insecurity, more extreme precipitation could exacerbate topsoil erosion, making soil less fertile for agricultural and productive purposes and potentially turning large areas of land into deserts that would no longer be arable. This would have a direct impact on agriculture and livestock production and lead to increased poverty, vulnerability and loss of livelihoods. In this sense, the Food and Agriculture Organisation of the United Nations (FAO) estimated that at least 2.37 billion people, or 30.4% of the world's population, were food insecure by 2020,²⁷ a year-on-year increase of 318 million people. South Asia, sub-Saharan Africa and South America were the most affected regions, where the number of food-insecure people increased by 128 million, 86 million and 40 million, respectively. Based on the current number

21. IPCC. (2022). "Impacts, Adaptation and Vulnerability". Available at: https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf
22. ONU. Climate Action Fast Facts. Available at: <https://www.un.org/en/climatechange/science/key-findings>
23. The Guardian, 18 May 2019. "The heat is on over the climate crisis. Only radical measures will work". Disponible a: <https://www.theguardian.com/environment/2019/may/18/climate-crisis-heat-is-on-global-heating-four-degrees-2100-change-way-we-live>
24. Buhaug, H; Gleditsch, N; Theisen, O. (2010). "Implications of Climate Change for armed conflict" from the book "Social Dimensions of Climate Change: Equity and Vulnerability in a Warming World". Available at: <https://books.google.es/books?hl=es&lr=&id=07FAyBQVxCMC&oi=fnd&pg=PA75&dq=climate+change+link+armed+conflict&ots=0AS1YA1m4&sig=ymQJrZaDXwLGqVfgEJOa9THmWxM#v=onepage&q=climate%20change%20link%20armed%20conflict&f=false>

25. Institute for Economics and Peace. (2021). "Ecological Threat Report: Understanding ecological threats, resilience and Peace". Disponible a: <https://climate-diplomacy.org/magazine/environment/ecological-threat-report-2021>
26. UNICEF. "World Water Day: 1,000 children die every day from a lack of safe drinking water" press release. Available at: <https://www.unicef.es/noticia/dia-mundial-del-agua-1000-ninos-mueren-cada-dia-por-falta-de-agua-potable#:~:text=Cerca%20de%201.000%20ni%C3%B1os%20mueren,problemas%20para%20acceder%20al%20agua>
27. FAO. (2021). "The State of Food Security and Nutrition in the World". Available at: <https://www.fao.org/state-of-food-security-nutrition/2021/en/>

of undernourished people and accounting for population growth, the Institute for Economics and Peace (IEP) predicts that the number of undernourished people will increase by 343 million to 1.1 billion by 2050, a 45% increase.²⁸

On the other hand, rising sea levels and an increase in the frequency of natural disasters could cripple communities and regions, resulting in millions in economic losses and turning into major drivers of mass population displacements. The rising number of natural disasters over the course of the 20th century, an increase that is often interpreted as an indicator of global warming,²⁹ is not a positive sign.

In terms of mass displacements, 30.7 million people from 145 countries and regions were displaced by climate disasters in 2020, according to the Internal Displacement Monitoring Center (IDMC).³⁰ Likewise, the World Bank's updated 2021 Groundswell report³¹ concludes that climate change is an increasingly powerful driver of migration and could force up to 216 million people in six global regions to move within their countries by 2050. Broken down by region, it predicts that sub-Saharan Africa could see up to 86 million climate-related internally displaced persons (IDP); East Asia and Pacific, 49 million; South Asia, 40 million; North Africa, 19 million; Latin America, 17 million; and Eastern Europe and Central Asia, 5 million.

Thus, all the natural disturbances that the climate crisis causes have had and are expected to have an even greater impact on every aspect that affects the security of people and communities as a whole, particularly the most vulnerable. While geography is a key factor in predicting the degree of impact that climate change will have on the security of populations, this impact is expected to be greater or lower depending on other major variables like demographic and socio-economic variables, including the level of economic and development, type of governance and the existence or not of tensions or conflicts, which will determine whether or not the resources and in-

frastructures that are needed for people to adapt and cope can be mobilised.

1.3 FROM HUMAN INSECURITY TO ARMED CONFLICT

When people's lives, livelihoods and a country's economic development are directly impacted by the effects of climate change, it can have implications for the peace, stability and security of people, communities, regions and the planet. Tensions escalate once security is threatened and can lead to conflict. But to what extent does climate change have the potential to fuel armed conflict?

The climate crisis is increasingly on the security agendas of states, regional intergovernmental bodies and even military organisations like NATO, which has identified it as the "overarching challenge of our time" that will "significantly" increase security risks and "worsen as the world warms further".³² As for the United Nations, the first Security Council meeting to examine the relationship between climate change and insecurity was held in 2007. Since then, a series of meetings, discussions and concrete actions, such as the adoption of Resolution 2349, which underscored the need to address climate-related risks when dealing with the conflict in the Lake Chad Basin, have continued to discuss this link. However, the current UN position and consensus is that climate change is a "threat multiplier" for peace and security. Antonio Guterres, the current UN Secretary-General, has described climate change as a "crisis multiplier with profound implications for international peace and stability".³³ Along these same lines, he said that "where climate change dries up rivers, reduces harvests, destroys critical infrastructure and displaces communities, it exacerbates the risks of conflict" and that "the forced displacement of more people around the world will clearly increase the risk of conflict".³⁴ Professor Pavel Kbat, chief scientist at the UN's World Meteorological Organisation (WMO), said that "climate change is increasingly regarded as a national security threat".³⁵

In recent years, growing concern about the issue at the intergovernmental level, as well as mounting research on the relationship between global warming and the outbreak of conflict, suggest a possible link. However, results are mixed and contradictory.

28. Ecological Threat Register. "1.26 billion people at highest risk of conflict and displacement caused by environmental damage". Available at: <https://www.gcsp.ch/global-insights/institute-economics-peace-releases-ecological-threat-register-2021>

29. Buhaug, H; Gleditsch, N; Theisen, O. (2010). "Implications of Climate Change for armed conflict" from the book "Social Dimensions of Climate Change: Equity and Vulnerability in a Warming World". Available at: <https://books.google.es/books?hl=es&lr=&id=07FAyBQVxCMC&oi=fnd&pg=PA75&dq=climate+change+link+armed+conflict&ots=0AS1YAI1m4&sig=ymQJrZaDXwLQqVfgEJOa9THmVwXm#v=onepage&q=climate%20change%20link%20armed%20conflict&f=false>

30. Internal Displacement Monitoring Center. Available at: <https://www.internal-displacement.org/research-areas/Displacement-disasters-and-climate-change#:~:text=In%202020%2C%20we%20recorded%2030.7,causing%2028.6%20million%20new%20displacements>

31. World Bank. (2021). Groundswell report. Available at: <https://www.worldbank.org/en/news/feature/2021/09/13/millions-on-the-move-in-their-own-countries-the-human-face-of-climate-change>

32. NATO. (2022). "Climate Change and Security Impact Assessment - The Secretary General's Report". Available at: https://www.nato.int/cps/en/natohq/news_197241.htm

33. United Nations. Press release, 23 February 2021. Available at: <https://press.un.org/en/2021/sc14445.doc.htm>

34. US News article, 29 October 2021. Available at: <https://bit.ly/3clxWGN>

35. United Nations article, 25 January 2019. "Climate change recognized as 'threat multiplier', UN Security Council debates its impact on Peace". Available at: <https://news.un.org/en/story/2019/01/1031322>

On the one hand, there is a body of literature that claims that it has found no significant evidence of a direct relationship between climate change and the outbreak of armed conflict.³⁶ However, the differences in research design, methods and data leads to significant divergences and uncertainties about when and how climate has caused conflict to date and under hypothetical future scenarios.³⁷ Other considerations would be the different delimitations of conflict (state-based armed conflict, non-state armed conflict, personal conflict, number of fatalities, etc.). As for research based on past scenarios, an obvious limiting factor is that the impacts of climate change on populations in the past were much less extreme than those predicted for the coming decades. Thus, while some studies have identified it as a low or non-existent risk factor to date, the impacts and thus the consequent relationship on conflict could be changed by a drastic increase in global warming. However, the literature generally agrees on the need for additional theories and data that better explain the processes that lead from changes in climate to violence, that is, to establish supported and substantiated evidence of the causal link between climate change and violence.³⁸

With regards to the literature that does identify links between climate change and armed conflict, there is general agreement that, although there are socio-economic variables that play a much bigger role in the outbreak of conflict, climate change is certainly a risk factor. This argument is supported by evidence that many of the socio-economic factors that increase the risk of conflict are also sensitive to climate change.³⁹ For example, climate change can slow economic growth rates and hinder per capita income growth in some low-income countries, particularly in Africa, where the risk of conflict is highest. In the Sahel region, for example, where 90% of the economy depends on agriculture and livestock, even higher temperatures and further drought would directly impact the economy and livelihoods.⁴⁰ Extreme weather events that may be precipitated by climate change may also produce economic shocks. Climate change may also be a catalyst for food crises that can weaken state governance and increase the risk of conflict.

This literature would be consistent with the position of the UN's specialised agency on climate change: ac-

ording to the IPCC, the direct influence that climate change has on triggering armed conflict would be low compared to other socio-economic factors. However, it warns that with higher levels of global warming causing more extreme weather and climate impacts, especially drought, vulnerability would increase and could have a growing effect on the outbreak of armed conflict.⁴¹

Consequently, climate change can now be considered a "threat enhancer", as the UN calls it, in terms of peace and security. Along these same lines, UN Deputy Secretary-General Amina Mohammed argues that "we need to understand climate change as one of a web of factors that can lead to conflict. Within this web, climate change acts as a threat multiplier, placing additional stress on existing political, social and economic pressure points".⁴²

This last remark leads to the following final consideration: in cases where climate change will play an (in)direct role in precipitating armed conflict in vulnerable countries in the Global South, with weapons most likely to be purchased in the countries that bear the greatest responsibility for the climate emergency, resulting in a cycle of violence of markedly one-sided responsibilities.

1.4 HOTSPOT: SAHEL BELT-HORN OF AFRICA

A UN Security Council Presidential Statement issued in 2018 noted that "the Security Council recognises the adverse effects of climate change and ecological changes among other factors on the stability of West Africa and the Sahel region, including through drought, desertification, land degradation and food insecurity, and emphasizes the need for adequate risk assessments and risk management strategies by governments and the United Nations relating to these factors".⁴³

According to the Fund for Peace's State Fragility Index, the Horn of Africa in particular is home to some of the most vulnerable states in the world. The region also exhibits some of the strongest evidence of a link between climate change and conflict between farming and herder communities, the result of climatic conditions that exacerbate droughts and compound water variability. One example is the extreme and prolonged drought that Somalia suffered in 2011 due to climate

36. Cullen S. Hendrix. "Searching for climate-conflict links". 2018. Available at: <https://www.nature.com/articles/s41558-018-0083-3>

37. Katharine J. Mach, Caroline M. Kraan et al., 11 July 2019. "Climate as a risk factor for armed conflict". Nature magazine. Available at: <https://go.nature.com/3cfhJSR>

38. Ibid.

39. Ibid.

40. United Nations article, 11 July 2018. "Fragile countries risk being 'stuck in a cycle of conflict and climate disaster,' Security Council told". Available at: <https://news.un.org/en/story/2018/07/1014411>

41. IPCC report. (2022). "Climate Change 2022: Impacts, Adaptation and Vulnerability". Available at: <https://www.ipcc.ch/report/sixth-assessment-report-working-group-ii/>

42. Ibid footnote 39.

43. Megan Darby, 31 January 2018. "Climate change affecting stability across West Africa and Sahel: UN security" a Climate Home News. Disponible a: <https://www.climatechangenews.com/2018/01/31/climate-change-affecting-stability-across-west-africa-sahel-un-security-council/>

change, which exposed the region to worsening tensions and conflicts between communities over scarce resources.⁴⁴ In this and similar cases, climate change would not be the direct cause of conflicts caused by limited access to water resources, but a multiplier of the pressure on water resources.

There are several situations in which climate and security issues converge in the Horn of Africa. These include rising sea levels and the vulnerability of coastal cities, for example in Djibouti, Mombasa (Kenya) and Mogadishu (Somalia); the threat to shipping routes, where a drop in sea levels could increase the incidence of piracy and reduce trade; the decline in fish stocks and food security due to acidification and warming of the sea, which could lead to tensions between coastal populations; and the militarisation of water. Regarding this last factor, following the case of the 2011 drought, the jihadist group Al Shabab cut off water supplies to liberated cities as a war tactic. Coupled with the existing conflict, this strategy caused the deaths of 250,000 people and hundreds of thousands of displaced persons.

If nothing is done to mitigate the effects of climate change in this region, forecasts suggest that security conditions may seriously deteriorate and the potential for outbreaks of conflict may increase.⁴⁵

1.5 FINAL COMMENTS

To address all the challenges associated with the climate crisis and the drivers of insecurity that are particularly sensitive, it is essential to jointly work towards reducing emissions, economic degrowth and the ecological transition to more sustainable societies.

"Climate finance", which refers to spending to address climate change through the transition to more sustainable economies, is an essential first step towards the agreed reductions in GHG emissions and to address the impacts of the environmental crisis. In the Copenhagen Accord, adopted at COP15 in 2009, rich countries committed to increase both public and private climate finance on an annual basis so that \$100 billion per year could be made available to "developing" countries by 2020 to address climate change through adaptation, resilience and transition to new renewable energy structures. This commitment was reiterated in the Paris Agreement in 2015, where aid was extended to 2025. However, efforts still far well

short of reaching this figure. While this group of countries received 70% of this figure from 2016 to 2018, their overall share of public funding in 2020 only reached 21%,⁴⁶ which can be partially explained by the severe economic impact of the global COVID-19 pandemic.

Poor countries fare even worse, as there is a stark disparity in the amount of funding they receive compared to middle-income countries. Estimates indicate that this group received just 14% of total climate finance from 2016 to 2018.⁴⁷ In some of these most vulnerable countries in particular, such as impoverished island states, economic losses related to natural disasters precipitated by climate change have already reached 200% of the size of their entire national economies.⁴⁸ Figures like these underscore the urgency of activating funding for adaptation and resilience. Improved meteorological data, together with warning systems and emergency prevention and management, could significantly reduce physical damage and economic losses. However, only 21% of climate finance is allocated to concrete climate change adaptation and resilience measures.⁴⁹

Globally, an investment of \$1.8 trillion from 2020 to 2030 in prevention systems could deliver results of \$7.1 trillion in avoided costs and social and environmental benefits.⁵⁰ To this end, only 85.3% of global military spending in 2021 would be needed to activate the necessary prevention systems worldwide to address climate change; resources that would have a direct effect on improving the security of people and regions, particularly the most vulnerable; resources that can (in)directly contribute to managing and mitigating escalations in tensions that could eventually lead to violence and the outbreak of armed conflict.

If there is no accountability for the current situation and consequent mobilisation of resources at the global level, the cost of the global insecurity generated by this human-provoked and human-fuelled environmental crisis could be extremely high, affecting the stability of several regions of the planet and the lives of billions of people, particularly in the Global South. Investing in an ecological transition means investing in measures to prevent the escalation of tensions and conflicts triggered by economic and social factors that are directly correlated with the climate crisis.

44. Jean-François Maystadt, Olivier Ecker (2014). "Extreme Weather and Civil War: Does Drought Fuel Conflict in Somalia through Livestock Price Shocks?" in the American Journal of Agricultural Economics. Available at: <https://onlinelibrary.wiley.com/doi/full/10.1093/ajae/aau010>

45. Caitlin E. Werrell and Francesco Femia. (2018). "Climate change raises conflict concerns", The UNESCO Courier. Available at: <https://es.unesco.org/courier/2018-2/cambio-climatico-riesgo-nuevos-conflictos>

46. <https://www.un.org/es/climatechange/science/key-findings>

47. International Committee of the Red Cross, 21 October 2021. "COP26 – Three calls to strengthen climate action in conflict zones". Available at: <https://www.icrc.org/en/document/cop26-three-calls-strengthen-climate-action-conflict-zones>

48. UN Data on climate action. Available at: <https://www.un.org/es/climatechange/science/key-findings>

49. Ibid.

50. Global Commission on Adaptation (2019). "Adapt Now: A Global Call for Leadership on Climate Resilience". Available at: <https://www.wri.org/initiatives/global-commission-adaptation/adapt-now-report>



2. THE DESTRUCTIVE NETWORK OF INTERESTS THAT EXACERBATES THE ENVIRONMENTAL CRISIS

Pere Brunet

2.1 THE NETWORK OF GLOBAL POWER AND CONTROL

Vitali, Glattfelder and Battiston conducted a rigorous study of the network of global corporate control for the first time in 2011.⁵¹ They observed that there is a small, tightly knit core of a handful of transnational corporations or TNCs (mainly financial institutions) that exert powerful control over a substantial number of other corporations in all countries. They started from a sample of about 30 million economic actors contained in the Orbis 2007 database as well as a list of 43,060 TNCs identified according to the OECD definition. Their study was based on the construction and analysis of a mathematical graph of control relationships between companies (with 600,508 nodes (companies) and 1,006,987 ownership ties), specifically studying companies that control other transnational companies. They found that a group of only 737 top holders accumulate 80% of the control of all

transnational companies in the world. In other words, 0.61% of the shareholders of transnational corporations control 80% of the world's large corporations. Vitali and his colleagues also presented the list of the top 50 actors that control the entire network of companies in the world, demonstrating that these 50 actors (many financial institutions) now control 39.78% of all transnational corporations.

The work of Stefania Vitali and her colleagues also reveals that many of these global power players belong to a small, extremely dense and strongly interlinked core of control. They do not operate in isolation but are connected. Her work has subsequently been followed up by other researchers such as James B. Glattfelder and Stefano Battiston, who have shed further light on the study of the global power network. The following table shows the eight transnational players that most influenced the global economy every year between 2008 and 2012, according to Glattfelder and Battiston.⁵²

The table reveals that six of the eight organisations (all except Shell and Axa) are exclusively involved in finance and are based in the US. The "influence" column

51. Vitali, Stefania; Glattfelder, James; Battiston, Stefano (2011) "The network of global corporate control". PLoS ONE, 6, 10. See: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0025995> [Consulted 10 September 2022].

52. Glattfelder, James B. and Battiston, Stefano (2019), "The architecture of power: Patterns of disruption and stability in the global ownership network", University of Zurich, SSRN 3314648, pages 5 to 42. See: https://papers.ssrn.com/sol3/Papers.cfm?abstract_id=3314648 [Consulted 10 September 2022].

Table 1. The eight transnational actors that most influenced the global economy every year between 2008 and 2012

Name	Country	Type	Influence (2012)
BLACKROCK INC	US	Financial asset management	2.18
STATE STREET CORPORATION	US	Financial services, investments	1.19
VANGUARD GROUP INC	US	Investment funds and financial consulting	1.31
FMR, Fidelity Investments	US	Financial services, investments	0.96
CAPITAL GROUP COMPANIES	US	Financial services, investments	0.68
ROYAL DUTCH SHELL PLC	NL, GB	Oil, natural gas, chemical company	0.62
JPMORGAN CHASE & CO	US	Financial services, investments	0.57
AXA	FR	Insurance and investment management	0.53

Source: Compiled by the authors based on Vitali, Stefania; Glattfelder, James; Battiston, Stefano (2011) "The network of global corporate control"

indicates their economic influence, in trillions of dollars, measured as the sum of the consolidated annual revenues of all the companies and corporations they control. This value for the top three alone (BlackRock, State Street and Vanguard) translates into a total of \$4.681 trillion, 2.6% of the total operating revenues of all the companies studied by Glattfelder and Battiston (more than 35 million companies: 35,839,090).

BlackRock, Vanguard and State Street all use their voting power at annual shareholders' meetings to influence the long-term strategy of investee companies, in addition to advising governments and large companies.⁵³ It is worth noting that Glattfelder and Battiston's findings are consistent with those of other recent studies, like the one by Stefania Vitali and those of Takayuki Mizuno and his team.⁵⁴ These recent studies illustrate how the financial world is an enormous network of interlocking corporate controls that follows the dictates of a select few transnational top brokers who have also co-opted national governments and set their policies.⁵⁵

53. Mas de Xaxàs, Xavier (2018), "Why BlackRock dominates the world's present and future", La Vanguardia, 6 May 2018: <https://www.lavanguardia.com/economia/20180506/443279727124/blackrock-investigacion-primera-gestora-fondos.html> [Consulted 10 September 2022].

54. Mizuno, Takayuki; Doi, Shohei; Kurizaki, Shuhei (2020), "The power of corporate control in the global ownership network", Waseda University, Tokyo, PLOS ONE. See: <https://doi.org/10.1371/journal.pone.0237862> [Consulted 10 September 2022].

55. Buxton, Nick i Hayes, Ben, Eds (2017), "Cambio Climático S.A.", FUHEM Ecosocial. See: <https://www.fuhem.es/cambioclimaticosa/> [Consulted 10 September 2022].

We can therefore assert that a vast global network of economic interests has emerged over the last decades and is being controlled by a select few supranational actors, all of them concentrated in the Global North.

2.2 THE MILITARY AND FOSSIL FUEL COMPANIES

The three investment funds mentioned above, BlackRock, State Street and Vanguard, have significant influence over large corporations in the oil companies such as Shell, Chevron, BP, ExxonMobil and Conoco Phillips, as well as control over large arms manufacturing and border control companies. This is demonstrated in table 2.

The figures list their investments, in billions of dollars, in large military industry companies ("Military" column), in cluster munitions ("Cluster" column) and in nuclear weapons (manufacturing and services, "Nuclear" column).⁵⁶ The last column ("Climate + Borders") reflects their investments in fossil fuels, in activities that create environmental destruction and in

56. Figures from weaponfreefunds.org. See <https://weaponfreefunds.org/families?q=Vanguard>, <https://weaponfreefunds.org/families?q=BlackRock%2FIShares>, <https://weaponfreefunds.org/fund/blackrock-equity-dividend-fund/MADVX/weapon-investments/FSUSA001M1/FOUSA00DTN> i <https://weaponfreefunds.org/fund/state-street-equity-500-index-fund/SSSWX/weapon-investments/FSUSA04AUI/F00000QT2E> [Consulted 10 September 2022].

Table 2. Influence of the three big investment funds on large corporations in the fossil fuel companies and large arms manufacturing and border control companies

Name	Country	Military	Cluster	Nuclear	Climate + Borders
BLACKROCK INC	US	36.02	0	22.96	171.5
STATE STREET CORPORATION	US	36.98	0	26.52	116.3
VANGUARD GROUP INC	US	115.86	115.32	80.34	386.6

Source: Compiled by the authors based on Vitali, Stefania; Glattfelder, James; Battiston, Stefano (2011) "The network of global corporate control"

border policing, according to a recent TNI study.⁵⁷ It is interesting to note that these three powerful investment funds, which we have identified as having the greatest global influence based on the above-mentioned study by Glattfelder and Battiston, are exactly the same as those mentioned in the TNI and *Friends of the Earth* study. Their power of global control is indisputable, spanning two domains, the military and the fossil fuel sector, which are highly profitable and mutually dependent, calling for and providing militarised energy security systems.

Furthermore, in 2022, against a geopolitical backdrop marked by wars (Ukraine among many others), the arms race and the forecasted increase in military budgets, fossil fuel companies have had record profits thanks to the war. In the US, Exxon has recorded profits of almost 17.6 billion euros, and Chevron more than 10 billion. In Europe, Shell's profits were more than 17 billion euros, while TotalEnergies' profits totalled almost six billion euros.⁵⁸

These figures are examples which, in the absence of further study, indicate the existence of a global power network that includes and ties military and fossil fuel companies together. And it does so against a global context which, as Noam Chomsky says, creates "euphoria in the headquarters of the major oil producers."⁵⁹

2.3 THE ENVIRONMENTAL CRISIS AND THE RESPONSIBILITY OF THE NETWORK OF ECONOMIC INTERESTS

In its latest report for 2022,⁶⁰ the IPCC forecasts a 2.3 to 2.7°C planetary temperature increase by 2100. However, in light of the inaction of the major seats of power, increasingly more scientists predict these figures could be reached much earlier, over the next few decades, a critical development according to a key scientific paper published by Will Steffen, Hans Joachim

Schellnhuber and others four years ago.⁶¹ They noted that when warming exceeds 2°C, it will trigger a series of cascading phenomena that will be impossible to control, which will irrevocably push global warming beyond 4°C. These include the disappearance of permafrost, reduced carbon sequestration capacity of the oceans, forest fires, the melting of glaciers and snowfields, spontaneous methane emissions, deoxygenation of the oceans, lack of marine nutrients, emergence of new micro-organisms, pests and epidemics, desertification and much more.

This early warning from scientists underscores that no effective measures are being taken to stop the rise towards two degrees of warming and that, beyond this threshold, it will be too late to do anything about it.⁶² The planet will be on a downhill slide that will take us beyond 4° without the masters of world power being able to prevent it.

But secondly, science indicates that the current path is leading to a dramatic outcome, as David Spratt explained in 2019, quoting Johan Rockström.⁶³ Rockström said that in a 4°C+ degree scenario it is difficult to see how the Earth will be able to "accommodate a billion people or even half of that", adding that there will certainly be a rich minority of people who will survive with modern lifestyles, but in a turbulent and conflict-ridden world.

The messages are clear: in all probability, the environmental crisis and the ensuing conflicts will eventually scourge entire countries of the Global South with billions of fatalities.

However, the causes of the current climate and environmental crisis are concentrated in a few countries (China, USA, Europe, India, Russia and Japan, which emit 66.9% of the world's total) and in very specific economic sectors: energy production and use, transport and land use (89% of global CO₂ emissions are due to fossil fuels).⁶⁴

57. TNI (2022), "Cashing in on Crisis", Friends of the Earth & TNI, March 2022. See: <https://www.tni.org/en/publication/cashing-in-on-crisis> [Consulted 10 September 2022].

58. See CBS News, 29 July 2022: <https://www.cbsnews.com/news/oil-companies-record-profits-2022-exxon-chevron/> - Also in La Vanguardia: <https://www.lavanguardia.com/economia/20220731/8442083/petroleras-estados-unidos-beneficios-ganancias-record-carbon.html>

59. Chomsky, Noam (2022), "Intervention in Ukraine: Negotiated Solution. Shared Security", seminar organised by the Secretary of State for the 2030 Agenda and Carlos III University on 30-3-2022: "...a sharp reversal of efforts to reduce the use of fossil fuels, that is a virtual sentence of death. The euphoria in the headquarters of the major oil producers even exceeds the unrestrained joy in the offices of arms producers. Fossil fuel producers are now liberated from the carping by silly environmentalists. They are demanding to be loved, to be hugged, as they put it, as saviours of civilisation as they are now authorised to race forward to destroy the prospect for organised human life on earth". See <https://youtu.be/n2tFqRtVka> - also: <https://blogs.publico.es/otrasmiradas/58497/lo-que-la-historia-reciente-nos-ensena-sobre-el-papel-de-eeuu-en-ucrania/> [Consulted 10 September 2022].

60. United Nations Intergovernmental Panel on Climate Change, IPCC: <https://www.ipcc.ch/>

61. Steffen, Will; Rockström, Johan; Richardson, Katherine; Schellnhuber, Hans Joachim (2018), "Trajectories of the Earth System in the Anthropocene," PNAS. See: www.pnas.org/cgi/doi/10.1073/pnas.1810141115 [Consulted 10 September 2022].

62. According to the IPCC Working Group III report endorsed by 195 IPCC states on 4 April 2022, limiting warming to about 2°C requires that global greenhouse gas emissions reach their maximum before 2025 and that by 2030 they have been reduced by a quarter. These targets are extremely difficult to achieve, given the current policies and the immense short-term economic interests behind them.

63. Spratt, David (2019), "At 4°C of warming, would a billion people survive? What scientists say", The Guardian, 18 August 2019, quoting Johan Rockström, director of the Potsdam Institute for Climate Impact Research, who took over the post from Schellnhuber. See: <http://www.climatecodere.org/2019/08/at-4c-of-warming-would-billion-people.html> [Consulted 10 September 2022].

64. Brunet, Pere; Meulewaeter, Chloé and Ortega, Pere (2021) "Report 49: "Climate crisis, armed forces and environmental peace"", Centre Delàs d'Estudis per la Pau (Centre of Studies for Peace). See: <http://centredelas.org/publicacions/maloshumosdelejercito/?lang=en> [Consulted 10 September 2022].

The global network of economic power that has been created over the last decades around resources, specifically around fossil fuels, includes large transnational corporations that continue their predatory and colonial policies in the countries of the Global South, and are in turn directly responsible for the perpetuation of this fossil fuel-dependent civilisation that fuels and accelerates the environmental crisis. It is a network controlled from the countries of the North, where the 45 main global economic actors operate,⁶⁵ but which also requires military protection that is absolutely essential when it comes to continued resource extraction policies. According to the aforementioned report, the US spends \$81 billion annually on military protection for fuel transport and supply, 16% of its Department of Defense budget.

Aside from the (unfortunately self-interested) lack of action from world governments, we can argue that the responsibility for the environmental crisis essentially lies with both the major fossil fuel companies (which are directly responsible) and the military security systems that protect them (which, as indispensable cogs in the wheel, are instrumentally responsible for this process of climate and environmental degradation).

2.4 THE INTERESTS THAT STAND IN THE WAY OF SOLUTIONS

There is a common feature between the major fossil fuel corporations and military systems: their efforts to influence politics through energy and military-industrial lobbies,⁶⁶ employing undemocratic methods for their short-term economic benefit and ignoring the major global climate crisis. The military-industrial complex lobbies have been well-studied and documented (see, for example, the work of William Hartung and others⁶⁷) and easily achieve results such as the 2022 NATO summit agreement to increase military spending. As Christopher Coyne explains, defence contractors profit while passing the costs on to citizens at large, with a revolving door between the military and private companies that military personnel cross repeatedly and without

any type of democratic oversight of the military-industrial complex. The examples of bad-faith practices by energy lobbies are innumerable. To name just a few, in May 2022, the lobby managed to derail a key climate proposal in the European Parliament that sought to impose tough restrictions on free carbon market credits.⁶⁸ At the COP26 meeting in Glasgow, energy lobby representatives were instrumental in boycotting key agreements. There were 503 of these lobbyists, more than the representatives of any country and more than the sum of the eight delegations from the countries most affected by the climate crisis: Puerto Rico, Myanmar, Haiti, the Philippines, Mozambique, the Bahamas, Bangladesh and Pakistan.⁶⁹

The undemocratic network of economic interests between large extractive corporations and the military industrial complex not only aggravates global warming and the environmental crisis, but actively works to prevent solutions and to keep this current colonial and ecocidal System that brings them massive economic profit.

2.5 FINAL COMMENTS

By analysing the network of economic interests that exacerbates the environmental crisis, we have attempted to make the following four points:

- A vast network of global interests and power has been created in the world, controlled by a very few private supranational players that control companies and governments, operating from countries in the Global North.
- This global power network includes and connects the military and fossil fuel companies. Much of why the military exists is to protect fossil fuel industry operations, while the fossil fuel industry would be unable to extract and transport oil without militarised security systems.
- Moreover, this global network is directly responsible for the environmental crisis that will hit the countries of the Global South the hardest.
- It works, directly and indirectly, to prevent measures that could defuse or halt both the global environmental crisis and the suffering that millions of people will endure.

65. Meulewaeter, Chloé and Brunet, Pere (2021), "Gasto militar y cambio climático", Chapter 7 of "Gasto militar y seguridad global", Jordi Calvo, Ed., Icaria 2021. See: <https://icariaeditorial.com/antrazyt/4692-gasto-militar-y-seguridad-global.html> [Consulted 10 September 2022].

66. See, for example, the article by Ng, Jonathan (2022), "Arms Industry Sees Ukraine Conflict as an Opportunity, Not a Crisis", published in Truthout on 2 March 2022: <https://truthout.org/articles/arms-industry-sees-ukraine-conflict-as-an-opportunity-not-a-crisis> [Consulted 10 September 2022].

67. See, for example, Hartung, William (2001), "Eisenhower's Warning the Military-Industrial Complex Forty Years Later", *JSTOR, World Policy Journal*, Vol 18, 1: <https://www.jstor.org/stable/40209730> - See also Coyne, Christopher i Goodman, Nathan (2022) "The Military-Industrial Complex", SSRN, See: <http://dx.doi.org/10.2139/ssrn.4135811> - And also Calvo, Jordi (2015), "The Arms Industry Lobby in Europe", *American Behavioral Scientist* Vol 60, 3: https://www.researchgate.net/publication/283663192_The_Arms_Industry_Lobby_in_Europe [Consulted 10 September 2022].

68. Weise, Zie (2022), "The lobbying war over cutting EU emissions" *Politico*, 9 June 2022: <https://www.politico.eu/article/europe-emissions-climate-change-lobbying-war/> [Consulted 10 September 2022].

69. Tena, Alejandro (2021), "The fossil fuel lobby has more representatives at COP26 than any attending country.", *Diario Público*, 8 November 2021. See: <https://www.publico.es/sociedad/lobby-combustibles-fosiles-representantes-cop26-pais-asistente.html> [Consulted 10 September 2022].

Faced with the enormous environmental crisis, faced with global challenges, faced with fires in our home here in Gaia, the extensive network of global interests and power adds fuel to the fire, blocking potential solutions while working with the arms industry, telling us that we need to buy more weapons to "control" more of our home as it burns down around us.

Denise Garcia said it clearly in Nature magazine.⁷⁰ Military budgets need to be redirected towards climate and pandemics, and governments should stop spending billions of dollars on weapons and instead protect citizens from the real threats they face. Because protecting the climate and the well-being of people costs less than perpetuating violence. In fact, as Denise Garcia explains, the total cost of violence

in the world in 2019 was 10.6% of global GDP, while the investment that would be required to reach the Paris climate summit agreements would be only 1% of global GDP (meeting the UN Sustainable Development Goals would cost 5% of global GDP, half the cost of global violence).

The threats are not the ones we are being told they are. The threat is the elites who continue to destroy the planet and who want us to continue to wage and fight in armed conflicts: the major extractive corporations, the leaders of the great world powers and those of NATO. Their actions and policies will ultimately destroy the lives of billions of people, the ones they call "expendable".

70. Garcia, Denise (2020) "Redirect military budgets to climate and pandemics", Nature 584, 521-523. See: <https://www.nature.com/articles/d41586-020-02460-9> [Consulted 10 September 2022].

THE LINKS BETWEEN TRANSNATIONAL CORPORATIONS, WARMONGERING AND THE CLIMATE EMERGENCY

Source: Report 55 of the Centre Delàs for Peace Studies "Transnational corporations, warmongering and climate emergency" available at www.centredelas.org

INTERCONNECTED GLOBAL ISSUES



RESPONSIBLE ACTORS: THE GLOBAL NETWORK OF INTERESTS



SOLUTIONS



TRANSNATIONAL CORPORATIONS, WARMONGERING AND THE CLIMATE EMERGENCY

With the support of:



⊙ EMISSIONS FROM THE MILITARY AND EXTRACTIVE SYSTEM

⊙ MILITARY PROTECTION OF PREDATION

⊙ FORTRESS AND BORDER MILITARIZATION

AGAINST PEOPLE



SUPPORTED BY LOBBIE

⊙ ENERGY LOBBY: GEOPOLITICS BASED ON THE FOSSIL BUSINESS

⊙ MILITARY LOBBY: THE BUSINESS OF WARS

NEW SECURITY STRATEGIES (NATO, EU, ...)



PEOPLE'S REVOLT

⊙ PEOPLES' REVOLT: "WE ARE NOT EXPENDABLE"

FOR PEOPLE ⊙ CARE FOR ALL PEOPLE, THE BIOSPHERE AND THE PLANET
ANTICAPITALIST AND DEMOCRATIC GEOPOLITICS

The threats are not the ones we are being told they are. The threats are now global, cross-border, and will affect future generations

It is urgent to radically reverse priorities, moving from business and violence to ecofeminism, disarmament and the reduction of military spending

The money from military spending is urgently needed to build security focused on people's needs



3. THE MILITARY'S IMPACT ON THE CLIMATE EMERGENCY

Xavier Bohigas · Teresa de Fortuny

Military activities are not only highly polluting, but they are also not required to report their GHG emissions to the UN. In the 1997 Kyoto Protocol debate, the US strongly insisted on keeping both military emissions data and potential reductions out of the agreement, citing national security concerns. The 2015 Paris Agreement removed the Kyoto exemption but makes reporting on military emissions voluntary and leaves the reduction of military emissions to the discretion of each country. All EU countries are parties to the United Nations Framework Convention on Climate Change (UNFCCC) and have signed on to the 1997 Kyoto Protocol and the 2015 Paris Agreement. Currently, 46 countries in addition to the European Union are required to report their emissions annually under the UNFCCC.⁷¹ Under-reporting is the standard. There are many countries that have not committed to annual reports to the UNFCCC, including some with large military budgets, such as China, India, Saudi Arabia and Israel.

71. Doug Weir, Benjamin Neimark and Oliver Belcher; "How the world's militaries hide their huge carbon emissions". *The Conversation*, 9 November 2021. <https://theconversation.com/cop26-how-the-worlds-militaries-hide-their-huge-carbon-emissions-171466> [Consulted on 6 September 2022].

The UNFCCC obliges its signatories to publish annual GHG emissions figures but reporting on military emissions is voluntary and often not included. Even when it is, data on military GHG emissions is often incomplete. Even international bodies are not adequately rigorous.⁷² A few examples: the UN Office for Disarmament Affairs does not include fuel expenditure in protocol expenditure reports and the International Energy Agency's statistics also exclude military energy use.

As major energy consumers, armed forces are major contributors to the climate emergency. A full assessment must consider the full life-cycle environmental costs of military activities, associated technology and their supply chains. When armed forces report on their emissions, they typically report only on the energy used by military bases and fuel for aircraft, ships and land vehicles. Thus, counting both direct emissions (base energy consumption and fossil fuel consumption of military vehicles) and indirect emissions (weapons production and military supply chain) is necessary.

Military operations pollute terrestrial and aquatic ecosystems with toxic substances or hazardous ma-

72. Linsey Cottrell and Eoghan Darbyshire; "The military's contribution to climate change". Conflict and Environment Observatory (CEOBS), 16 June 2021. <https://ceobs.org/the-militarys-contribution-to-climate-change/> [Consulted on 6 September 2022]

terials,⁷³ consume tremendous amounts of fossil fuels for aircraft, ships and land vehicles, are responsible for deforestation and biodiversity loss. Unexploded mines and bombs render land unfit for agricultural use and pose permanent hazards to the population. The production, storage, transport and disposal of biological, chemical and nuclear weapons are potential drivers of environmental aggression.

One rarely discussed form of military environmental pollution is radioactive contamination, even though it lasts for extremely long periods of time, as much as thousands of years. For decades, nuclear-armed states tested their nuclear weapons. Polynesia was one of the worst affected regions. Several islands had to be evacuated because inhabitants could neither grow crops nor fish due to the high level of radioactive contamination of the land and sea. Another military source of this type of contamination is the use of depleted uranium in artillery shells (this increases their penetration capability). When the shell hits, it spreads radioactive material in the area.

Arms manufacture and the military supply chain play a significant role in the carbon cost of war. Each arms sale has its individual carbon cost, from the extraction of raw materials to the manufacturing of the weapons by arms companies, to the use of the weapons by armed forces, to their dismantling and disposal at the end of their useful life.

Aviation is a major GHG emitter within the military, both during the manufacturing process and during operations. Aircraft contrails can also produce large expanses of cirrus clouds, which contribute to global warming. These potential effects of contrails must therefore be added to the effects of GHG emissions and fuel consumption.

Ships using highly polluting fuel produce 2.5% of total GHG emissions. While the civilian navy has recently begun to address its GHG emissions, the military is lagging far behind.

It is estimated that military training sites and bases account for 1-6% of the earth's land surface. The way these lands are managed can therefore have a significant influence on global emissions. The climate emergency is ushering in a future of droughts and extreme summer temperatures. Unless action is taken, firing ranges on military land may increase the risk of fires.

Fires are a major source of emissions and decrease the capacity of vegetation and soil to store carbon. When fires break out on military training grounds, firefighting can be complex and dangerous due to the existence of unexploded ordnance. Military training exercises alone also produce significant GHG emissions and soil degradation.

Waste management accounts for approximately 3% of total GHG emissions. Armed forces produce waste military material and equipment, such as ammunition, which is usually destroyed by detonation or burning. This pollutes the land, emitting harmful gases and GHGs. Militaries used to dispose of waste by burning it in open pits, a system that has yet to be eradicated from all armed forces. Moreover, highly polluting and unhealthy chemicals have been found in groundwater and drinking water in areas near some US bases, like those in Okinawa and China Lake in California.⁷⁴

In terms of energy efficiency, buildings that belong to the armed forces are not required to meet minimum energy performance requirements. Energy efficiency requirements for products, services and buildings procured by central governments are only required in armed forces contracts if their implementation poses no conflict with the purpose and nature of the armed forces' operations. The EU requires non-financial information from large public interest companies, including GHG emissions, yet this aspect of reporting is not mandatory. Therefore, large arms companies are not required to report on their emissions.

The European Green Deal is an action plan for reaching zero GHG emissions by 2050. However, the European Environment Agency's (EEA) annual report, which sets out trends and forecasts based on national GHG emissions figures, renewable energy sources and energy consumption, does not include the military as a specific sector.

The EU's Military Concept on Environmental Protection and Energy Efficiency for EU-led military operations recognises the need for EU-led military operations to adequately address environmental protection. However, it also notes that military needs may justify overriding environmental protection standards during Common Security and Defence Policy operations and that these operational imperatives will typically take precedence.

73. Chloé Meulewaeter and Pere Brunet (coordinators); *Report 47: "Militarism and environmental crisis. A necessary reflection"*. Delàs Centre of Studies for Peace; 2021. <http://centredelas.org/publicacions/militarismeicrisiambiental/> [Consulted on 6 September 2022]

74. Pat Elder; "The Tyranny of Contamination: The US Military is poisoning Okinawa", *World BEYOND War*, 31 December 2018. <https://worldbeyondwar.org/the-tyranny-of-contamination-the-us-military-is-poisoning-okinawa/> [Consulted on 6 September 2022].

3.1 GHG EMISSIONS FROM THE DEFENCE SECTOR

It is difficult to assess the impact of the defence sector (armed forces and military industry) on the climate emergency because information is scarce and the data that does exist is not entirely reliable. The most studied and explored issue is emissions, which is why we are devoting this section to this topic.

There are two ways of calculating GHG emissions: the direct emissions approach and the life-cycle approach, known as the "carbon footprint". The carbon footprint of any given activity includes emissions from all stages of the complete cycle, from extraction of raw materials, through manufacturing, use and disposal of waste.

3.1.1 UNITED STATES

The US military budget is the largest in the world, totalling \$801 billion in 2021; this is 38% of global military spending and more than double the military spending of Russia (\$65.9 billion) and China (\$293 billion) combined.⁷⁵ The proposal for 2023 is \$813 billion. The US has the world's largest war machine.

The US military consumes more fuel and emits more GHGs than most medium-sized countries.⁷⁶ The Department of Defence (DoD) is the 47th largest GHG emitter in the world based on its fuel usage alone. The number and scale of military interventions and the size of its armed forces (troops, weapons, installations around the world, etc.) make the DoD the largest consumer of energy in the US and the largest institutional consumer of oil in the world. The fact that the US has been continuously at war or involved in military operations since 2001 (the start of the global war on terror) is a determining factor.

The DoD has 1.39 million troops and one of the most technologically advanced arsenals in the world. This all requires enormous energy consumption, in addition to the associated supply chains (container ships, large trucks, etc.).

It is possible to estimate DoD emissions and fuel consumption from data published by the Department of Energy. These figures also provide an estimate of how much of these emissions can be attributed to war.

75. Diego Lopes da Silva, Nan Tian, Lucie Béraud-Sudreau, Alexandra Marksteiner and Xiao Liang; *Trends in World Military Expenditure, 2021*. SIPRI, April 2022. <https://www.sipri.org/publications/2022/sipri-fact-sheets/trends-world-military-expenditure-2021> [Consulted on 6 September 2022].

76. Neta C. Crawford. *Pentagon Fuel Use, Climate Change, and the Costs of War*. Watson Institute, 2019. <https://watson.brown.edu/costofwar/papers/ClimateChangeandCostofWar> [Consulted on 6 September 2022].

War and war preparation are fossil fuel-intensive activities. The DoD has continuously consumed 77-80% of all US government energy consumption since 2001, as both military vehicles and the logistics that support military operations burn fuel at a furious pace.

The DoD's energy consumption is split between two categories. One is the energy consumed at Pentagon military facilities and accounts for 30% of the total. The other is operational, which is needed for the mobility, training and support of military forces and accounts for 70% of the total. In 2017, the DoD spent almost \$8.2 billion on operations (fuel for ships, aircraft, combat vehicles and contingency bases).

According to the US Department of Energy, DoD GHG emissions reached 59 million tonnes of CO₂e in 2017. Estimates place the military-industrial complex's contribution to GHG emissions at 15% of what the entire US industry emits, since it employs 14.7% of US industrial sector workers. Based on this figure, the US defence industry emits about 153 million tonnes of CO₂e annually. The emissions from burning oil wells and refineries are not quantified, although this has been a widespread form of sabotage in the Iraq and Syrian wars. Many of these fires burned for months. The energy consumed (and emissions generated) in post-conflict reconstruction and the loss of immediate and future carbon sequestration through deforestation have also not been assessed.

In summary, adding the CO₂ emissions associated with DoD activities (59 million tonnes of CO₂e) and those associated with weapons production (153 million tonnes of CO₂e), US military activity was responsible for emitting 212 million tonnes of CO₂e in 2017.

3.1.2 EUROPEAN UNION

There is currently no consolidated public reporting of GHG emissions from EU member states' armed forces and there are no overall GHG reduction targets that include the military's emissions. Information on GHG emissions from the military sector is scarce, and often incomplete where it does exist. A few military tech companies report their GHG emissions, but others do not or are inaccurate in their reporting. Despite this panorama, however, we can roughly estimate the GHG emissions the EU's military sector produces thanks to the study by Parkinson and Cottrell.⁷⁷

77. Stuart Parkinson and Linsey Cottrell; *Under the Radar. The Carbon Footprint of Europe's Military Sectors*. The Left in the European Parliament and Conflict and Environment Observatory and Scientists for Global Responsibility. February 2021. <https://www.sgr.org.uk/publications/under-radar-carbon-footprint-europe-s-military-sectors> [Consulted on 6 September 2022].

According to the UNFCCC, Member States are obliged to disclose annual GHG emission inventories and report regularly on their climate policies and progress towards emission reduction targets. The military is not listed as a specific sector under the EU's Monitoring Mechanism Regulation (MMR). In terms of energy efficiency, buildings owned by the armed forces (except individual dwellings or offices) are not subject to the minimum energy performance requirements for buildings.

Many of the major French companies that manufacture military technologies publish data on their total GHG emissions (Thales, Airbus, Naval Group, Safran and Dassault Aviation). Based on these figures and taking into account each company's share of military sales, calculations put the emissions of the entire military industry in France at approximately 799,000 tonnes of CO₂e. Adding the supply chain emissions within the country (estimated at 1.1 million tonnes CO₂e), the total emissions of the French military industry were 1.87 million tonnes CO₂e. Thus, the GHG emissions of the French military sector, including the armed forces and the military industry, were 4.56 million tonnes CO₂e.

The same study provides a similar assessment of the GHG emissions of other EU countries, those with a larger military-industrial complex with available emissions data for 2019: Germany, Italy and Spain. It also estimates the emissions of the EU-27 military sector as a whole, which also includes the armed forces and the military industry. The results are shown in Table 3. France emits approximately one third of the EU's military emissions.

The sector's carbon footprint has also been calculated by extrapolating data provided by Thales for the entire French military industry. Indirect emissions from the supply chain have also been added in addition to the direct emissions of the armed forces and the military industry. This results in a carbon footprint of more than 24 million tonnes of CO₂e for the entire military sector in the EU-27 for 2019. This is equivalent to the CO₂ emissions of about 14 million average cars or the annual emissions of states like Croatia, Slovenia and Lithuania. The authors of the report believe that this is a conservative estimate given the poor quality of the data used, underscoring the shortcomings in the information that member states provide about their military emissions. Mitigation measures (where they exist) lack rigour and oversight. The report concludes that the European Green Deal has "totally and deliberately" ignored all that needs to be done about the climate impact of militarisation. The study also argues that "demilitarisation needs to be part of any credible Green Deal".

3.1.3 UNITED KINGDOM

The UK's military sector, including the armed forces and military industry, is a major GHG emitter, since the UK has a large armed forces and a significant defence industry. The UK has consistently ranked among the top five states in the world in terms of military spending; for example, the UK's military expenditure in 2021 was⁷⁸ \$68.4 billion. Some of the largest weapons manufacturers are based in the UK.

The UK Ministry of Defence (MoD) releases annual data on their environmental impact, but the figures do not include, for example, their GHG emissions. There is a rather mixed picture in the military-industrial sector, with many companies reporting data on their emissions (for example, Serco and Rolls-Royce), others providing limited information (BAE Systems, Leonardo and Babcock), and some not publishing any data at all (MBDA, Elbit, to name a few of the most well-known).

One report⁷⁹ estimates the Ministry of Defence's direct GHG emissions from both UK and overseas operations in the 2017-2018 financial year at 3.03 million tonnes CO₂e.

The defence industry's direct emissions total 1.46 million tonnes CO₂e. The UK-based company with the highest number of GHG emissions was BAE Systems with 440,000 tonnes CO₂e, 30% of the UK arms industry's total. The second largest emitter was Babcock International with 93,000 tonnes of CO₂e, 6% of the total.

If we add together the emissions from the MoD and the UK arms industry, we get 4.49 million tonnes of CO₂e of GHG emissions in a year.

The report also adds the emissions associated with companies that supply goods, services, raw materials, etc. to the UK defence industry and the emissions associated with arms exports. The total GHG emissions from the armed forces and the military-industrial complex over the 2017-2018 financial year were 6.5 million tonnes of CO₂e, more than the direct CO₂e emissions of about 60 states.

Based on a life-cycle approach (carbon footprint), emissions were around 11 million tonnes of CO₂e. UK-manufactured arms exports represented emis-

78. Diego Lopes da Silva, Nan Tian, Lucie Béraud-Sudreau, Alexandra Marksteiner and Xiao Liang; *Trends in World Military Expenditure, 2021*. SIPRI, April, 2022. <https://www.sipri.org/publications/2022/sipri-fact-sheets/trends-world-military-expenditure-2021> [Consulted on 6 September 2022].

79. Stuart Parkinson; *The Environmental Impacts of the UK Military Sector*, Scientists for Global Responsibility (SGR), May 2020. https://www.sgr.org.uk/sites/default/files/2020-05/SGR-DUK_UK_Military_Env_Impacts.pdf [Consulted on 6 September 2022].

Table 3. GHG emissions from the armed forces and military industry of selected EU states

	Farmed forces GHG emissions (million tonnes of CO ₂ e)	Military industry GHG emissions (million tonnes of CO ₂ e)	Total (million tonnes of CO ₂ e)	Carbon footprint (million tonnes of CO ₂ e)
France	2.68	1.87	4.56	8.38
Germany	1.45	1.67	3.12	4.53
Italy	0.68	1.16	1.84	2.13
Netherlands	0.40	0.21	0.61	1.25
Spain	0.89	0.19	1.09	2.79
EU (27 Member States)	7.95	5.29	13.23	24.83

Source: Compiled by author based on Stuart Parkinson and Linsey Cottrell; *Under the Radar. The Carbon Footprint of Europe's military sectors* (2021)

sions of 2.2 million tonnes of CO₂e in the 2017-2018 fiscal year, not including emissions associated with the use of weapons in warfare.

Given an expected increase in military spending, it seems unlikely that GHG emissions in both the UK military and UK industry will decrease in the future.

3.2 NATO AND THE CLIMATE EMERGENCY

Spending by NATO countries now accounts for more than half (56%) of global military spending. EU countries' military spending is at least 162 billion euros. Russia's military budget is less than 50 billion euros and the US's is 561 billion euros.

Given NATO's contribution to global military spending and the fact that its member states are home to a sizeable part of the defence industry, the Atlantic Alliance is the world's largest military emitter of GHGs.

NATO adopted⁸⁰ the Green Defence Framework in 2014, which was aimed at improving energy efficiency, but it does not incorporate any GHG or carbon emission reduction targets or any environmental actions.

In its 2018 report⁸¹ on critical energy infrastructure, NATO admits that "the armed forces are a large consumer of energy that is a significant vulnerability in military capabilities".

According to Sipri,⁸² NATO recognises that climate change has security implications. But member states' different approaches to the relationship between climate change and security have made it difficult for NATO to reach a consensus on the issue. As a result, there is no joint policy to address it. Over the past 20

years, intergovernmental organisations—like the European Union (EU) and the Association of Southeast Asian Nations (ASEAN)—have explored the security consequences of climate change and engaged in climate security governance. NATO has not explicitly taken part in these debates.

3.3 FINAL COMMENTS

Military spending not only diverts resources away from tackling climate change, investing in global justice and promoting peaceful conflict resolution and disarmament, but also substantially contributes to the climate crisis as a result of the major GHG emissions from the military and arms industry and the other environmental damage discussed above.

The global trend is for military spending to increase in the coming years. In the specific case of NATO, there is an agreement to increase military spending to 2% of its members' GDP. This increase, as well as technological modernisation programmes and NATO or EU military operations outside Europe, are all potential drivers of increased emissions. Any new military operation will result in new GHG emissions.

While it is already difficult to track GHG emissions from the military sector in peacetime, there is no clear mechanism for assessing or reporting GHG emissions caused by the use of weapons in a wartime environment, such as emissions caused by the destruction of a fuel depot or emissions created during post-conflict reconstruction.

For several years now, the US military and intelligence community have issued warnings about the threats that the climate crisis could pose to US security: increased natural disasters, conflicts over resources, food and water shortages that will lead to mass migration, etc. The perception of the climate emergency as a threat to the country's security may trigger a mil-

80. *Under the Radar*

81. *Under the Radar*

82. Rickard Söder; "NATO in a climate of change"; Sipri, WritePeace blog, 14 February 2020. <https://www.sipri.org/commentary/blog/2020/nato-climate-change> [Consulted 6 September 2022]

itary response, which in turn will further exacerbate the climate emergency. Military response will never be the solution.

To reach the European Green Pact's goal of zero net emissions by 2050, the military sector needs to be incorporated into the emissions calculation. Otherwise, the civilian sector will have to reduce emissions much

further so that the military sector can continue with its emissions.

Any serious response to the climate emergency must necessarily include the dismantling of much of the military machine. Yet at this point, it is not even on the table for discussion.



4. WARMONGERING AND ENERGY SECURITY

Pere Ortega

The entire security and defence framework of both Spain and most European countries is conditioned by the policies approved by the supranational organisations to which these states belong: the European Union and NATO. These policies are embodied in what are known as security strategies, which in turn influence the Defence White Papers or, in Spain, the National Defence Directive (NDD) of the Ministry of Defence.

This chapter will analyse the security strategies of NATO, the EU and Spain and how they reflect the policies adopted to address the increasingly acute crisis of fossil fuel scarcity which, in some of these documents, is mentioned as a threat to energy security. This article will not discuss other insecurities like climate change, which generates multiple insecurities. It is no less important, but the subject has

already been addressed by other reports from the Delàs Centre.^{83 84}

These EU and NATO documents determine the values and interests that are essential if Member States are to function properly and prioritise the main protection targets. This can be seen in the attached table on threats related to energy security, which lists other threats related to fossil fuels (such as cyber-attacks, hybrid threats or non-military threats), which are directly or indirectly equally as important for energy security when they pose a threat to energy production and distribution centres. Critical infrastructures and economic instability when they threaten energy se-

83. To find out where European states stand on climate change, see Orta, Albert, January 2021, *Militarism and Environmental Crisis. A Necessary Reflection*. Report 47, Delàs Centre for Peace Studies. http://centredelas.org/wp-content/uploads/2021/02/informe47_MilitarismAndEnvironmentalCrisis_ENG.pdf [Consulted 30 June 2022].

84. Brunet, Pere; Meulewaeter, Chloé; Ortega, Pere; *Climate Crisis, Armed Forces and Environmental Peace*, September 2021, Report 49, Delàs Centre for Peace Studies. http://centredelas.org/wp-content/uploads/2021/11/informe49_ClimateCrisisArmedForcesEnvironmentalPeace_ENG.pdf [Consulted 30 June 2022].

Table 4. Threats related to energy security

Threats	EU 2008	EU 2016	NATO 2010	NATO 2022	Spain 2013	Spain 2017	Spain 2021	NDD Spain 2020
Climate change	x		x	x		x	x	x
Energy security	x	x		x	x	x	x	
Hybrid		x		x			x	x
Cyber-attacks	x	x	x	x	x	x	x	x
Critical infrastructure				x			x	
Non-military threats		x		x	x			x
Economic instability				x			x	x

Compiled by the authors based on:

https://www.nato.int/nato_static/assets/pdf/pdf_publications/20120214_strategic-concept-2010-eng.pdf

https://www.nato.int/nato_static_fl2014/assets/pdf/2022/6/pdf/290622-strategic-concept.pdf

<https://www.lamoncloa.gob.es/documents/9BED-CF7A-estrategiaespanoladeseguridad.pdf>

https://www.lamoncloa.gob.es/documents/seguridad_1406connavegacionfinalaccesiblebpdf.pdf

https://www.dsn.gob.es/sites/dsn/files/Estrategia_de_Seguridad_Nacional_ESN%20Final.pdf

https://www.dsn.gob.es/sites/dsn/files/ESN2021%20Accesible_1.pdf

<https://www.defensa.gob.es/Galerias/defensadocs/directiva-defensa-nacional-2020.pdf>

<https://www.consilium.europa.eu/media/30808/qc7809568esc.pdf>

curity can also be added to list, all of which will be discussed below.

Fossil fuels (oil, gas and coal) and uranium ore are now a national security target for any state, particularly those in the developed Western world, considering their heavy dependence on these fuels; shortages can trigger severe economic and social instability in the affected countries and lead to major internal conflicts (transport strikes or the "yellow vests" in France, for example). Therefore, they are incorporated into these security strategies and the Spanish Ministry of Defence's NDD, because the use of force would be used to secure these resources, should the case so require. In other words, Spain would be prepared to engage in military intervention to achieve its energy security. This security is not only limited to fossil fuels, but also extends to all those minerals, also scarce, that are essential and vital for the production of renewable energy (wind, photovoltaic and storage batteries).

There is currently a struggle for control of fossil fuels and scarce minerals, a struggle that has triggered conflict when states or the communities where these resources are found have resisted. In some cases, this violence leads to war. So much so that struggles over resources have caused 40% of all armed conflicts and wars in the last 60 years,⁸⁵ particularly over the control of hydrocarbons (gas and oil) and strategic minerals. In most cases, these conflicts and wars happen in countries with weak institutions unable to control their entire territory or provide security for their population. These are the misnamed "failed" states, a relative concept because security is a polysemic term that holds different values in Western culture than in others.

85. United Nations, *Peace and security*, 16/10/2018. <https://news.un.org/es/story/2018/10/1443762> [Consulted 30 June 2022].

4.1 THE EUROPEAN UNION

In 2003, under Javier Solana's mandate as High Representative for the Common Foreign and Security Policy, the European Union adopted a Global and Security Strategy (GSS) under the name "A Secure Europe in a Better World".⁸⁶ This initial document identified the environment as an area requiring protection but did not cite it as a trigger for conflict or one whose deterioration could pose a serious threat to a state's security. However, this initial document was later revised in 2008. In this second document, climate change was cited as a factor that could provoke natural catastrophes and droughts that would primarily affect impoverished countries, leading to unrest, political instability and social conflict, which in turn would trigger large-scale migrations that would inevitably make the world more unstable, insecure and conflict-ridden. In addition, a new threat was emerging, namely energy security, along with cyber-attacks on critical structures that could affect how states function.

Although apparently unrelated to fossil fuels, other insecurities have developed that do have a direct derivation and are included in Table 4. These insecurities first emerged in 2016 when the EU drafted a new EGS, still in effect today, which, unlike the previous ones, included new threats that were listed for the first time: one related to **non-military attacks** from third countries and what are known as **hybrid threats**.

It is these last two that we will address below. Regarding the first, non-military attacks, it is important to note that their inclusion as a threat followed the financial crisis of 2008, which had a profound im-

86. "European Security Strategy. A Secure Europe in a Better World", Council of the European Union, 2019. <https://www.consilium.europa.eu/media/30808/qc7809568esc.pdf> [Consulted 30 June 2022].

pact on Europe as a whole. A threat that could come from outside to destabilise the economy of the entire EU, for example, by artificially raising the price of oil or other raw materials that are vital to the functioning of the EU economy, should therefore be a matter of concern and, if necessary, should be defended by military action to prevent a serious crisis in European economies.

Hybrid wars are triggered by threats that do not fit into the category of conventional threats, such as **cyber-attacks** waged in cyberspace via the internet against any type of installations that are considered **critical infrastructures**. In other words, they can cripple organisations and institutions that are vital for a well-functioning society, such as power plants, nuclear power plants, water treatment plants, financial centres, hospitals, airports and other similar facilities.

In September 2020, the European Commission produced a new document called "Critical Raw Material Resilience: Charting a Path towards Greater Security and Sustainability".⁸⁷ This document listed which raw materials were indispensable for Member States' economies and how resilience should be implemented to prevent shortages of these resources; it also included the minerals and natural resources that were considered vital for the functioning of the European economy. These critical raw materials numbered around thirty, including four new minerals: bauxite for aluminium production, lithium for batteries, titanium for orthopaedic implants and military missiles, and strontium for magnets and optics.

This document lists the countries in which these raw materials are found in higher percentages and what is noteworthy is that these materials are mostly found outside Europe. For example, 98% of rare earth minerals⁸⁸ (which the EU imports) are found in China.

In turn, the document listed the needs for these materials in EU countries, noting that 18 times more lithium and five times more cobalt will be needed for electric batteries and energy storage by 2030, and the need for rare earths will increase tenfold by 2050.

What is remarkable about this report is that it lists the EU's shortages of materials that are considered strategic for the development of new technologies linked

87. "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Critical Raw Material Resilience: Charting a Path towards Greater Security and Sustainability", European Commission, September 2020. <https://eur-lex.europa.eu/legal-content/ES/TXT/?uri=CELEX%3A52020DC0474> [Consulted 30 June 2022]

88. "Rare earths" are elements that are rare in nature and have become essential ingredients of many of today's technologies.

to industrial production, emphasising the need for policy instruments to provide access to these materials. It is here that the measures adopted in the EU's EGS should be taken into account, where access to energy and non-military threats are identified as an essential element for security, because energy security requires some of these scarce materials to produce renewable energies (wind, photovoltaic, geothermal and biomass) to supply EU countries. The disruption of the supply of these raw materials by third parties can be considered a non-military threat susceptible to military response and intervention.

4.2 THE EUROPEAN UNION'S STRATEGIC COMPASS

The Strategic Compass was presented by the European Commission on 24 September 2021 and ultimately adopted by the European Council on 21 March 2022.⁸⁹ In other words, it was drafted before Russia's invasion of Ukraine, and its purpose was to identify the challenges and threats that could potentially affect all EU countries so that it could protect their values and interests. However, the war in Ukraine broke out before the final draft was adopted, so the document now includes that the aggression perpetrated by Russia against Ukraine represents a threat to Europe, enhancing the conflict-oriented nature of the Compass. Specifically, this new proposal envisages the creation of a 5,000-strong military corps to cover Common Security and Defence Policy (CSDP) missions within a maximum period of 30 days, using the resources provided by the European Peace Support Fund (EFSF), to guarantee security by developing capabilities for anticipation, dissuasion and rapid response in order to act decisively in crises against the challenges and threats that affect EU countries as a whole. It is a paradox (or rather a contradiction in terms) to use peace funds for military interventions.

The Strategic Compass envisages the development of different actions:

- intelligence capabilities, that is, having a physical space with specialised staff to analyse information and thus be able to neutralise and respond to potential risks or threats to security;
- tools and capabilities to respond to hybrid threats;

89. "The Strategic Compass for Security and Defence. For a European Union that protects its citizens, defends its values and interests and contributes to international peace and security", approved by the Council of the European Union at its meeting on 21 March 2022. <https://data.consilium.europa.eu/doc/document/ST-7371-2022-INIT/es/pdf> [Consulted 30 June 2022]

- cyber diplomacy tools to respond positively to demands from civil society or, conversely, to hostile entities carrying out cyber-attacks;
- instruments to defend against fake news or other information from foreign agents;
- develop a EU Space Strategy for Security and Defence;
- strengthen the EU's role as a maritime security actor.

To implement these proposals for action, the EU announced that Member States are committed to substantially increasing defence spending to reduce shortfalls in military and civilian capabilities with a view to strengthening technological and industrial defence foundations to meet Europe's security needs. It is also proposed providing incentives for Member States to develop joint projects in the strategic, next-generation field to operate in the maritime, land, air, space and cyber domains. It also envisages boosting defence technological innovation for strategic shortfalls and reducing the EU's external dependencies.

In terms of partnerships, this document calls for strengthening communion with its strategic partners, with NATO first and foremost, followed by the United Nations, the OSCE, the African Union and ASEAN. It also calls for the development of bilateral partnerships with like-minded countries.

Ultimately, the Compass is a document that evidences how security in Europe needs to deal not only with possible conventional attacks, but also with the hybrid threats that come from cyber-attacks, fake news and securing the maritime routes through which many raw materials that are essential for Europe's economic security flow.

4.3 NATO

When NATO drew up its Strategic Concept (SC), approved in 2010,⁹⁰ the list of various insecurities that should be a cause of concern for member countries singled out energy, in addition to climate change, as a reason for operational planning for its protection. Clearly, NATO was signalling that growing energy needs could be a trigger for conflicts that would force NATO to intervene militarily. The mention of **energy**

security was clearly referring to oil and gas. NATO was warning that the increasing scarcity of fossil fuels makes them a strategic resource for the shared political and economic system of Member States and that, as the organisation's preamble describes, its main mission is to defend the collective way of life. Fossil fuels, on the other hand, are the main cause of CO₂e emissions into the atmosphere and, consequently, the driver of climate change, which NATO identifies as a trigger for conflict.

For the first time, the 2010 Strategic Concept also listed **cyber-attacks** that affect facilities and infrastructure as a threat. NATO's reference to cyber-attacks should be understood as a potential motive for a military response if the attacker is identified and comes from a country that is considered hostile.

The approval of the new Strategic Concept (SC) at the Madrid Summit on 28-29 June 2022 provides a warning about the main threats and dangers that NATO needs to address. It first mentions **Russia**, which has become a direct threat to the entire Western world following the invasion of Ukraine. It then names **terrorism**; the ambitions of **China**, which is becoming a destabilising danger for many Western countries; **cyberspace** attacks on critical infrastructure; the use of various **weapons of mass destruction** (chemical, biological, radiological or nuclear), specifically naming Iran, North Korea, Syria and Russia; conflicts in **Africa** and the **Middle East**, particularly in the **Sahel**, which are linked with failed states. It also identifies **demographic** issues which, aggravated by **climate change**, **health emergencies** (pandemics) and **food insecurity**, are described as conflict multipliers that can lead to human trafficking and illegal migration.

By identifying the demographic issue as a trigger for migration and the fact that it can be used by hostile forces to destabilise the destination countries, it de facto turns migration into a threat to the security of NATO countries. A threat that the EC notes just days after a crowd of sub-Saharanans attempted to cross the Melilla border and was viciously repressed by Moroccan forces, resulting in 37 deaths and hundreds of injuries (figures unverified).

Cyber-attacks and hostile actions (hybrid warfare) against critical infrastructure in member states, the EC notes, could be treated as a conventional attack and raised to the level of an armed attack, which could lead to the invocation of Article 5 of the Treaty. This would oblige all Member States to provide an armed response. The EC extends this to supply chains affecting energy security. Moreover, it must be prepared to deter and defend against the coercive use of political, economic, energy, information and other

90. "Strategic Concept for the Defence and Security of the Members of the North Atlantic Treaty Organisation", adopted by Heads of State and Government at the NATO Summit in Lisbon 19-20 November 2010. https://www.nato.int/nato_static/assets/pdf/pdf_publications/20120214_strategic-concept-2010-eng.pdf [Consulted 30 June 2022]

hybrid tactics by states and non-state actors, which would be considered an armed attack and the NATO Council would be called upon to respond through the use of force.

Energy security issues include attacks on supply networks, including oil and gas distribution facilities by pipeline and ship, storage and processing, as a threat to the security of its members. It also covers artificially raising the prices of fossil fuels or other raw materials. These new measures are meant to be included among the "non-military" or "hybrid" threats of the new wars as opposed to "conventional" wars. Therefore, disruption of the supply of gas pipelines, oil pipelines, ships carrying oil, an energy boycott or artificially raising hydrocarbon prices could be classified as a "hybrid attack" and be met with military action. This is undoubtedly a broadening of NATO's battlefield into these grey areas where cyber-attacks on facilities that endanger the security of a NATO Member State are located.

Finally, and once again, the demand for increased military spending on defence to guarantee the commitments adopted in this new Strategic Concept is underscored.

4.4 SPAIN

Spain first identified threats from cyber-attacks and energy security as critically important for national security in its 2011 National Security Strategy (NSS).⁹¹ This was repeated again in the 2013 NSS,⁹² in addition to which, like the EU, **non-military threats** were added, although they were removed in the 2017⁹³ and 2021 NSSs.⁹⁴ An ambiguous concept that can be used to justify that any external element that disturbs how society functions could be the object of a military response. This is perfectly normal in today's interconnected and interdependent world. But it has become relevant once again with its incorporation into NATO's new Strategic Concept 2022, which includes it as a destabilising element for security and which will therefore become part of the security doctrine of all member countries.

91. "Spain's Security Strategy: Everyone's responsibility", Spanish government, 2011. <https://www.lamoncloa.gob.es/documents/9BED-CF7A-estrategiaspanoladeseguridad.pdf> [Consulted 30 June 2022]

92. "National Security Strategy. A shared project" Department of National Security, 2013. https://www.lamoncloa.gob.es/documents/seguridad_1406connavegacionfinalaccesiblebpdf.pdf [Consulted 30 June 2022]

93. "National Security Strategy. A shared project by and for everyone", Spanish government, 2017. https://www.dsn.gob.es/sites/dsn/files/Estrategia_de_Seguridad_Nacional_ESN%20Final.pdf [Consulted 30 June 2022]

94. "National Security Strategy 2021", Spanish government, 2021. <https://www.dsn.gob.es/es/documento/estrategia-seguridad-nacional-2021> [Consulted 30 June 2022]

In addition to climate change, Spain's current 2021 NSS lists energy security, cyber-attacks, hybrid warfare, attacks on critical structures and economic instability as new threats. This, in turn, is already contained in EU and NATO strategies, which Spain adopts and introduces in its NSS.

But while the NSS is a political document drawn up by experts from diverse fields related to the economy, industry, security and politics, where the insecurities and needs for ensuring that the State's structures and institutions function properly are set out; the National Defence Directive (NDD) is a document drawn up exclusively by members of the Ministry of Defence, where the insecurities that the Spanish armed forces have to address are set out. A NDD which, evidently, takes into account the proposals developed in the NSS and which the Ministry of Defence regards as targets requiring military defence, if warranted.

In addition to the ever-present climate change, the latest NDD 2020⁹⁵ identifies insecurities such as hybrid warfare, cyber-attacks, non-military threats and economic instability. Issues that, as demonstrated in the cases of the EU and NATO, are part of their security strategies, adopting the insecurities described in these strategic documents as its own.

But what is decisive is that both Spain's NSS and NDD are strategic documents that describe the State's security and defence priorities, which require the utmost attention to determine where the State's policies will be directed to address the insecurities and which, like those described in the "Threats related to the energy crisis" table, are susceptible to military intervention by the Spanish armed forces.

4.5 CONCLUSIONS

The hostility of the United States and NATO towards Russia by drawing closer to its borders and breaking the ABM and INF treaties on nuclear weapons, which committed both powers not to install ballistic missiles or anti-missile batteries in Europe, has provoked Russia's illegal invasion of Ukraine, awakening a climate of war with disastrous consequences for Europe and the world. The most obvious proof of this was the NATO Summit in Madrid on 28 and 29 June, where two historically neutral countries, Finland and Sweden, which had served as an example for a Europe that was not aligned with the warmongering ambitions of both the US and the former USSR, were admitted. The Summit also approved a new Strategic Concept (SC) that announced an increase in milita-

95. "National Defence Directive 2020", Spanish government, 2020. <https://www.defensa.gob.es/Galerias/defensadocs/directiva-defensa-nacional-2020.pdf> [Consulted 30 June 2022]

rism by creating a rapid intervention force of 300,000 troops, which led to a rise in arms build-up and military spending that is leading Europe and the world into a new Cold War.

A NATO SC that goes beyond the alarming security documents from the EU and some European countries, including Spain, because it confirms some of the threats described therein: nuclear proliferation, terrorism, conflicts in the Middle East and Africa, and particularly climate change as a trigger for conflicts (including migrations) and warns that intervention will be inevitable. For the first time, the SC also states that Russia represents a direct threat, and that China is a country that destabilises world security. These facts once again point to a bipolar world divided into two blocs, the West led by the US and its armed branch NATO, and another formed by China and Russia together with their allies. A divided world that also heralds an arms race, including nuclear ones, and in which new conflicts will undoubtedly arise that will provoke armed confrontations.

An SC that foreshadows a more insecure world, in particular when it explicitly identifies **non-military** threats, adding that non-traditional hybrid attacks in cyberspace, or those that threaten supplies of raw materials or energy, are a threat to the security against which they must be defended. For example, disrupting fossil fuel prices or engaging in hostile actions that endanger the economy. Actions that amount to a military attack and would be grounds for the application of Article 5 of the Treaty, which obliges Member States to provide a military response.

Non-military threats were already incorporated into the security strategies of both the EU and other coun-

tries to a greater or lesser extent, including Spain, but they were not expressed in such a decisive way, but rather listed as new insecurities to be addressed (Spain took them into account in the 2013 NSS and the EU in the 2016 GSS), which subsequently were removed from their security documents, and which now, after being signed by NATO, will presumably be incorporated again.

This makes for a more insecure world, because it suggests that the West is ready to safeguard its way of life, even though it is the cause of the environmental crisis and climate change, by reinforcing its military capabilities in order to secure raw materials, including the most precious ones: fossil fuels (gas and oil) and the materials needed to produce clean energies (wind, photovoltaic, biomass and geothermal), which are vitally important for maintaining its economic system. On the other hand, it is also a plunderer of finite resources, which is deepening the environmental crisis and augurs a catastrophic future for humanity.

A future that, as the new SC from the NATO 2022 Summit indicates, destroys all the efforts of the people who have been working for a multilateral Europe and world where conflicts are handled through political negotiation based on a framework of consensus and shared security, far removed from the *Si vis pacem, para bellum* approach that is now being reintroduced. Those of us who wish to build a fairer world where coexistence is the prevailing standard among nations have no choice but to redouble our efforts to unmask and oppose the major powers that are seeking hegemony through militarism in order to continue plundering resources which, in turn, are responsible for the greenhouse gas emissions that endanger human survival.



5. CONCLUSIONS

We have presented data on the current climate emergency and its perpetrators in the previous four chapters, analysing first how the environmental crisis leads to human insecurity and how this leads to the outbreak of armed conflict. We have also shown that the world has a vast network of interests and global power, led by a handful of private supranational actors that control companies and governments, and that this network of global power includes and links military and fossil fuel industries. A network that directly and indirectly works to prevent those measures that could mitigate the global environmental crisis and the suffering of millions of people. Furthermore, the military system has been identified as a major contributor to the climate crisis, due to the military and arms industry's significant GHG emissions and other environmental damage. This is combined with a global trend that surprisingly leads us to expect military spending to increase in the coming years. Finally, we analysed the Security Strategies of NATO, the EU and Spain, observing how these organisations adopt positions on the increasingly pronounced crisis caused by the scarcity of fossil fuels which, in some of these documents, are mentioned as a threat to energy security, predicting new conflicts between world powers.

The climate emergency is upon us, and we know that it affects and will severely affect the countries of the Global South, triggering conflicts and widespread suffering. Meanwhile, the major players (armed forces, arms industry, large fossil fuel companies, financial and investment corporations) are driven only by their short-term economic interests, with utter disregard for the billions of people in the Global South.

But the threats are not what we are being told. The threat is the very elites who continue to destroy the planet and promote both the arms race and armed conflict. These are the major extractive corporations, global financial institutions, the leaders of the world's great powers, the arms manufacturers and the leaders of NATO: their actions and policies will ultimately destroy the lives of many millions of people.

Faced with the enormous environmental crisis that is already upon us, with the global challenges we face, with the fire and destruction we are causing in Gaia (our home), the vast network of interests and global power is adding fuel to the fire,⁹⁶ cutting us off from possible solutions, clearly contributing to global warming, asking us to increase military spending, and also engaging in arms deals that will only increase the

96. While wasting fossil resources (energy and minerals) that are responsible for global warming.

risk of armed conflict, particularly in the countries of the Global South, which will suffer most from the effects of the global environmental crisis.

Governments must shift priorities. The current emergency requires a united and coordinated global effort. What we now need is new geopolitics to save the human species, the biosphere and the planet. The priority is to preserve the natural world that we humans belong to, through rational consumption that prevents the overexploitation of the planet's resources, and by moving beyond militarism.

We must stop spending billions of dollars on weapons and protect citizens from the real threats they face. Protecting the climate and people's well-being costs less than perpetuating violence.⁹⁷ We need to reduce military spending and arms manufacturing and trade because the greater environmental crisis calls for a radical paradigm shift, redirecting military budgets towards social and human development. The ethics of care instead of the plutocratic network of power and business of the violent and ecocidal. A new paradigm

97. Garcia, Denise (2020) "Redirect military budgets to climate and pandemics", *Nature* 584, 521-523. See: <https://www.nature.com/articles/d41586-020-02460-9> [Consulted 11 September 2022].

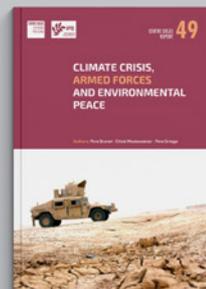
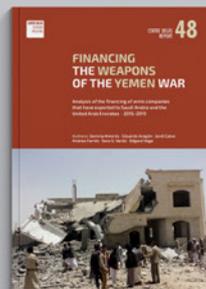
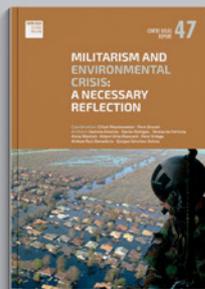
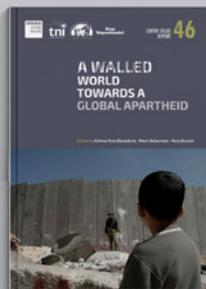
with solutions rooted in feminism and protection, that are post-patriarchal and post-violent.

It is time to reverse priorities with a new discourse that shifts the focus from business and violence to people and their needs. We will be saved by livingry,⁹⁸ not by weaponry.

Hope lies in mobilising civil society, in ecofeminist solutions and in our collective actions. The climate emergency implies recognising our responsibility. This means that we have to do everything in our power to move past a civilisation based on weapons and fossil fuels. And we have to do it now, by calling out and condemning those who are driving the climate crisis. Because, as more than fifteen thousand scientists said in 2017, the current entrenched [and self-serving] opposition to the fight against the climate emergency can [only] be overcome with a massive wave of effort from grassroots organisations, so that political leaders are forced to do the right thing right now.

98. The concept of livingry as opposed to weaponry was proposed by Buckminster Fuller (1983): "Humanity's Critical Path: From Weaponry to Livingry". See: https://designsciencelab.com/resources/HumanitysPath_BF.pdf [Consulted 10 September 2022].

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