Carbon Costs of War in the Middle East

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A Multitemporal Snapshot of Greenhouse Gas Emissions from the Israel-Gaza Conflict [updated pre-print]

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Abstract

The projected emissions from the first 120 days of the Israel Gaza conflict were greater than the annual emissions of 26 individual countries and territories. ❖ If we include war infrastructure built by both Israel and Hamas, including the Hamas' tunnel network and Israel's protective fence or 'Iron Wall,' the total emissions increase to more than over 36 individual countries and territories. ❖ The carbon costs of reconstructing Gaza are huge. Rebuilding Gaza will entail total emissions figure higher than the annual emissions of over 135 countries, putting on them par with that of Sweden and Portugal. ❖ Our upper estimate on all pre-/post-war activities are comparable to the burning of 31,000 kilo tonnes of coal-the amount of which can power about 15.8 coal-fired power plants in one year. 1 ❖ The ad-hoc nature of these calculations point to the urgent need for mandatory military emissions reporting for both war and peacetime through the UN Framework Convention on Climate Change (UNFCCC).

Keywords: Climate Change, Global Militaries, Greenhouse Gas Emissions, Israel-Gaza

Suggested Citation:

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Israel-Gaza war

Emissions from Israel's war in Gaza have 'immense' effect on climate catastrophe

Nina Lakhani
Climate justice reporter
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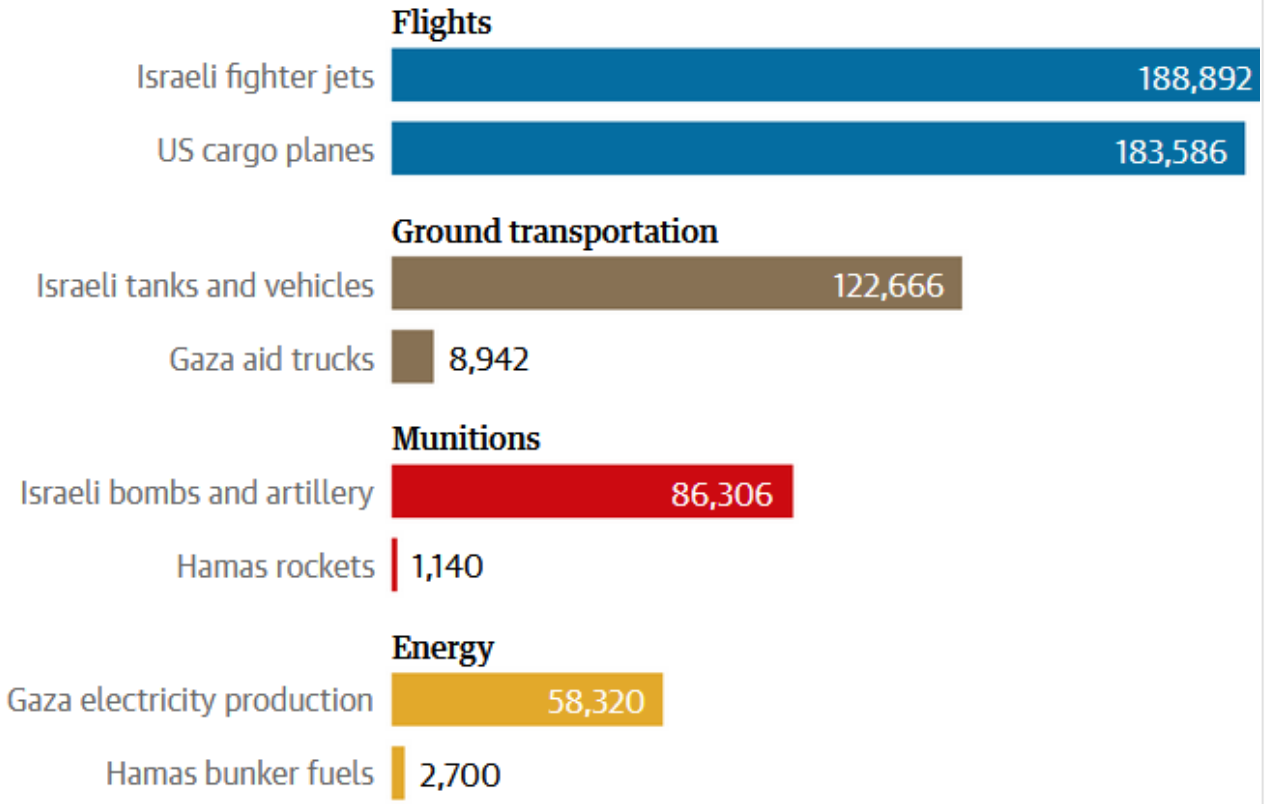
Tue 9 Jan 2024 08.30 GMT

CO_2 emissions generated by the war on Gaza

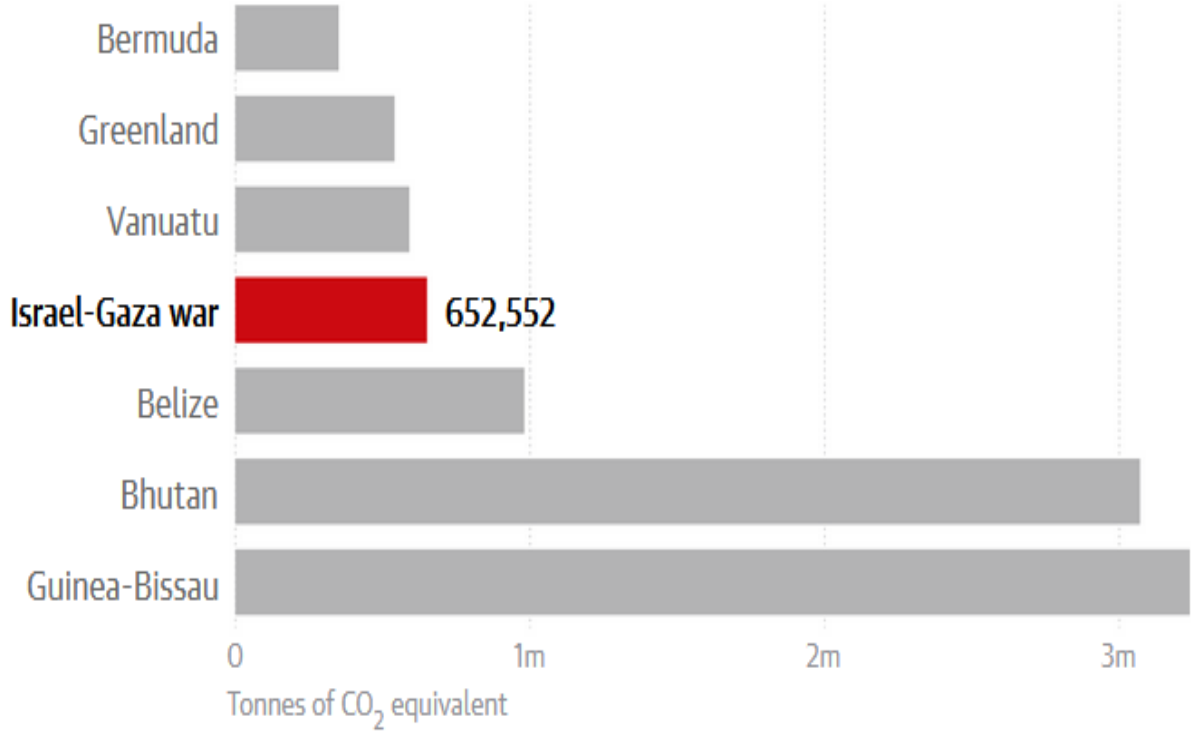
Breakdown of carbon emissions generated during the first 120 days of warfare, in tonnes of CO_2 equivalent



Guardian graphic. Source: Frederick Otu-Larbi, Benjamin Neimar et al, A Multitemporal Snapshot of Greenhouse Gas Emissions from the Israel-Gaza Conflict. Note: Emissions calculated by usage, not manufacture. Upper estimates are charted.

Emissions generated by the first 120 days of war surpass annual total for Greenland

Israel-Gaza war CO_2 emissions v select countries' 2022 annual emissions

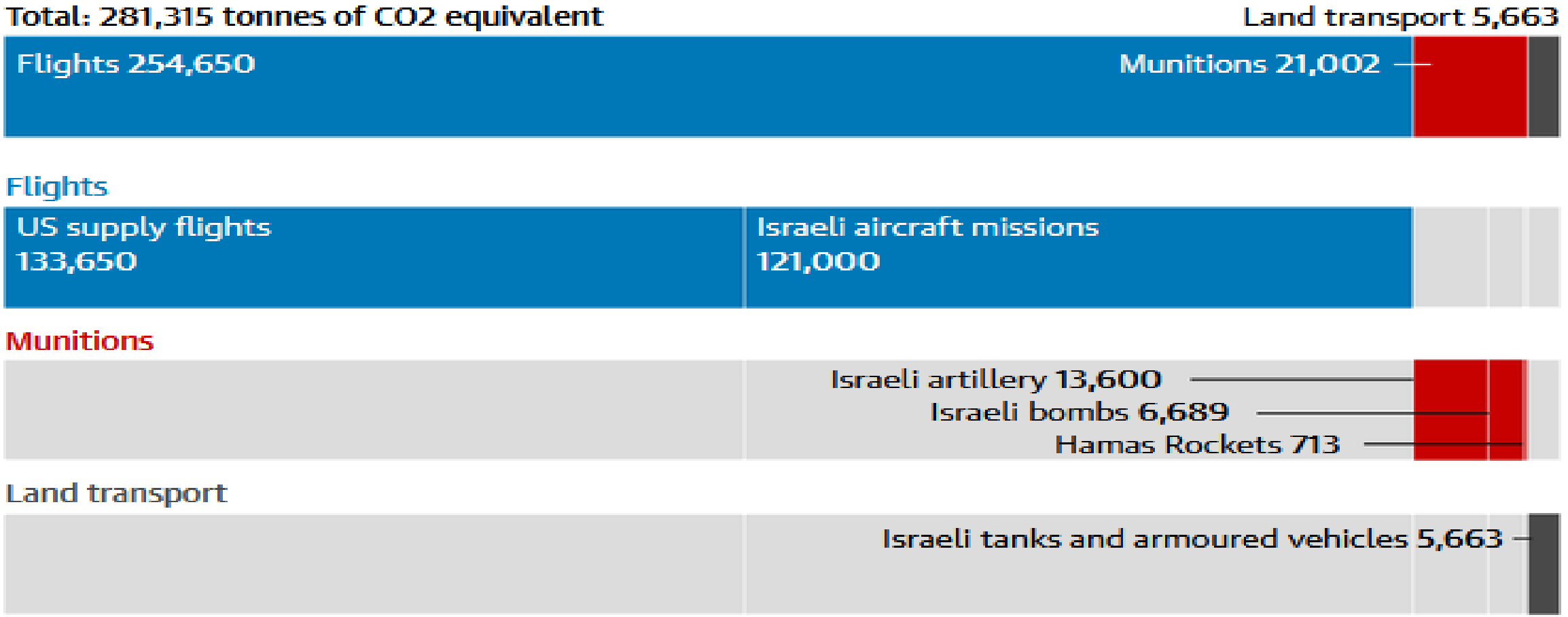


Guardian graphic. Sources: Frederick Otu-Larbi, Benjamin Neimar et al, A Multitemporal Snapshot of Greenhouse Gas Emissions from the Israel-Gaza Conflict; European Commission: Edgar.

Data based on an earlier version: Neimark, Benjamin and Bigger, Patrick and Otu-Larbi, Frederick and Larbi, Reuben, A Multitemporal Snapshot of Greenhouse Gas Emissions from the Israel-Gaza Conflict (January 5, 2024). Available at SSRN: https://ssrn.com/abstract=4684768 or http://dx.doi.org/10.2139/ssrn.4684768

Carbon emissions generated by the Israel-Gaza war

Breakdown of carbon emissions generated by the first 60 days of the war, by usage



Guardian graphic. Source: A multitemporal snapshot of greenhouse gas emissions from the Israel-Gaza conflict. Note: emissions calculated by usage not manufacture, Benjamin Neimark, Partick Bigger et al.

We are now updating our carbon costs of the Middle East Conflict analysis to include:

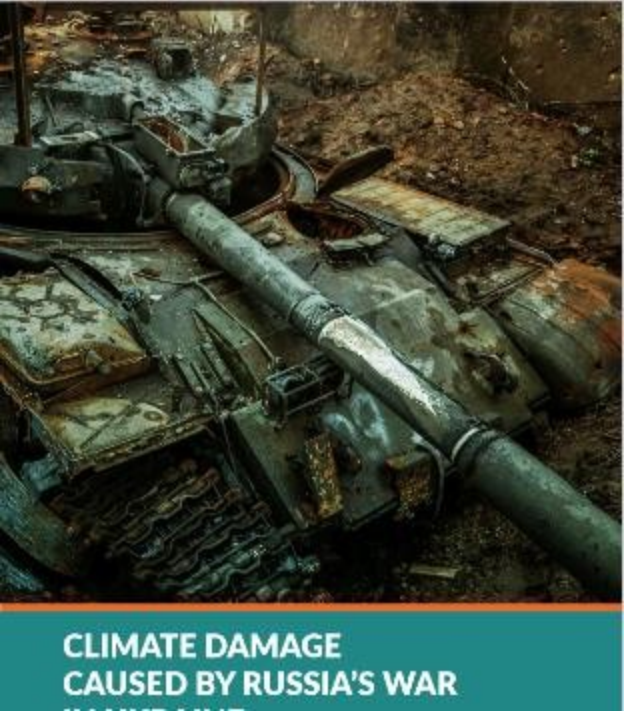
1. **Rubble removal** - Abdelnour, S., & Roy, N. (2024). Estimating Carbon Emissions from Processing Building Debris in Gaza. *Available at SSRN 4973309.*

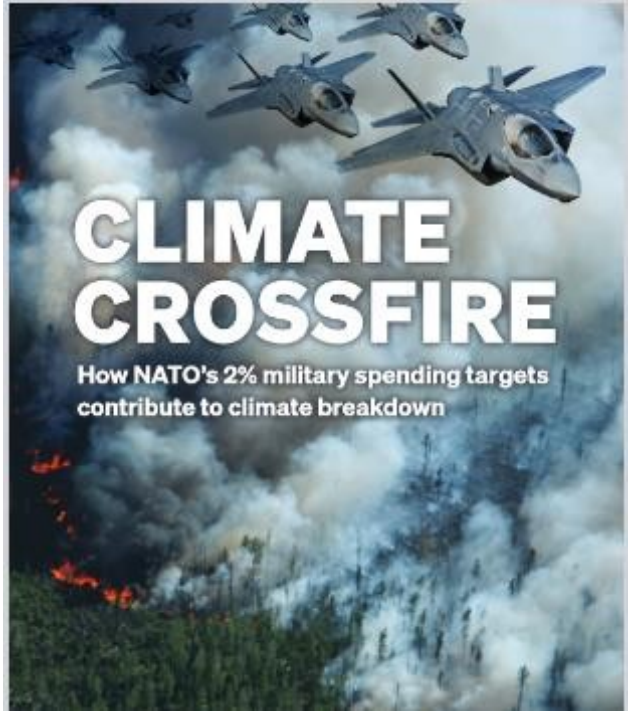
2. **Expansion of war in Gaza past first 6 months to include first full year.**

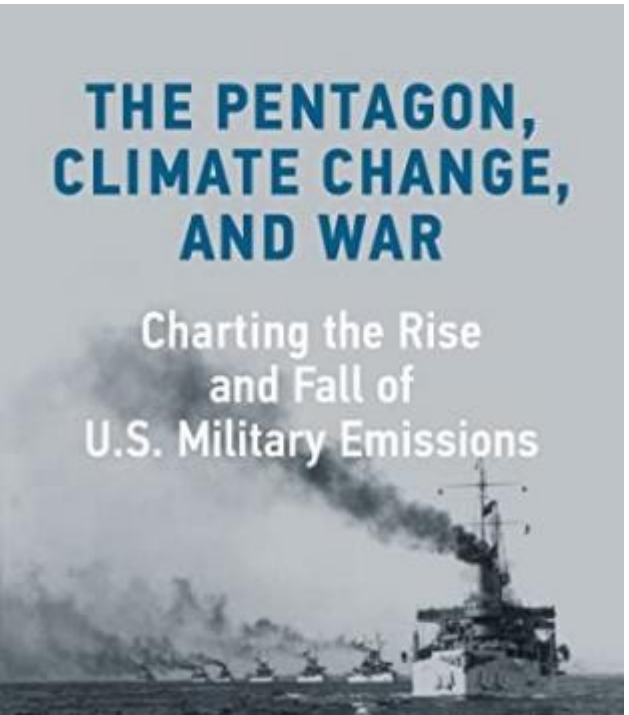
3. **Tit-for tat reprisals with Iran** – including the barrage of ~200 ballistic missiles (Oct 1st) and On 26 October 2024, Israel retaliatory strikes in three waves of strikes against 20 locations in Iran and other locations in Iraq, and Syria, (Operation Days of Repentance).

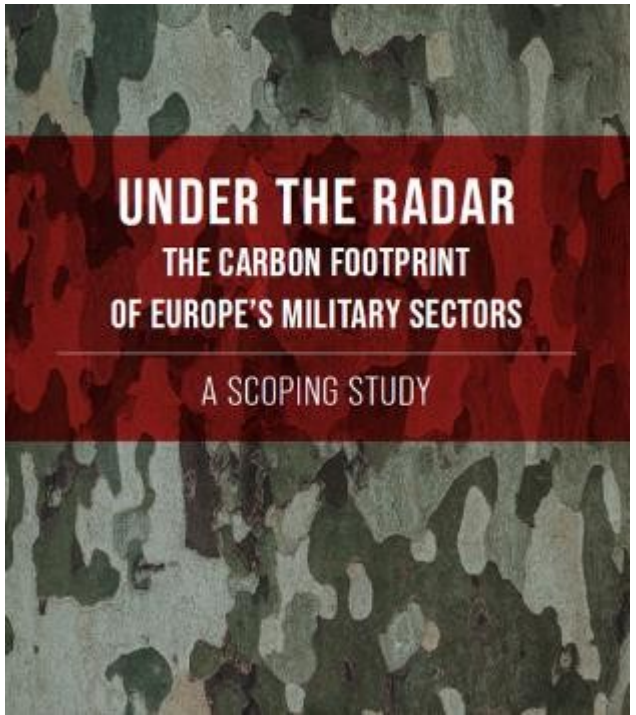
4. **Looking into the US's/IDF's response in Yemen**. This may take not account some of the recent work including studies of shipping diversion due to the now unsafe Red Sea routes

TOXIC LEGACIES OF WAR



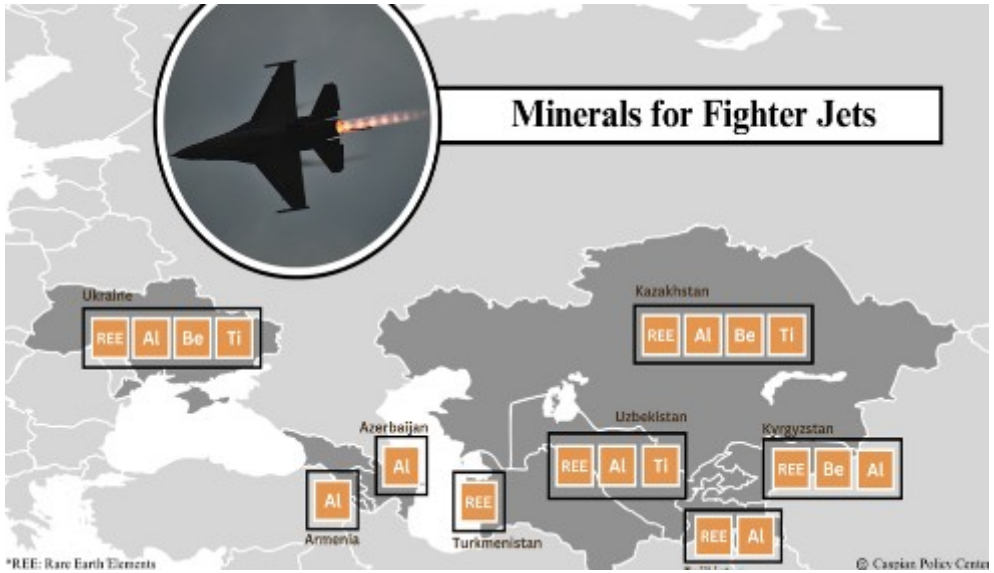


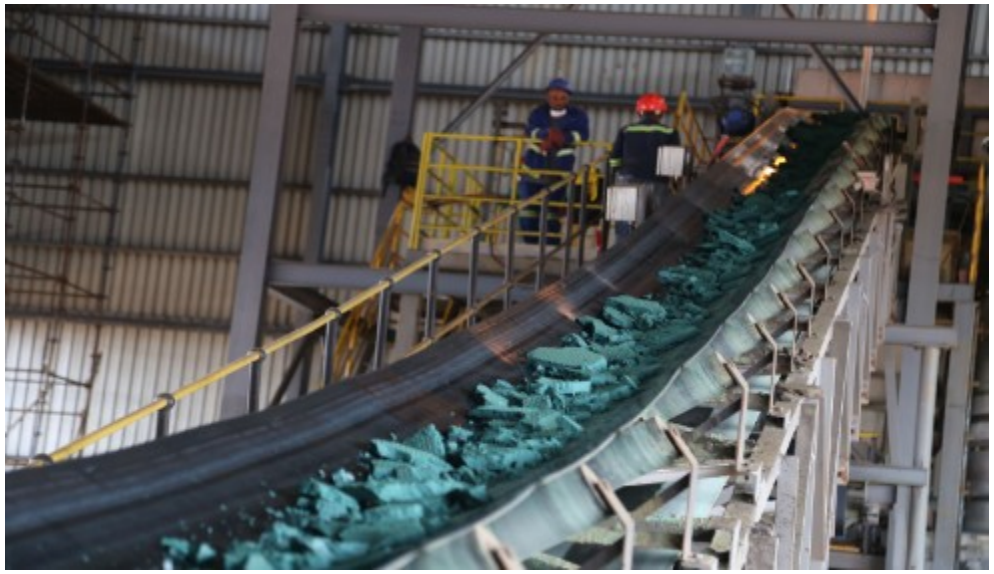




Independent research on military emissions

Critically Green: Tracing the Geopolitical, Social and Environmental Footprints of Military Decarbonisation – UKRI (new 5-year project)





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