Militarism and Environmental Destruction

They are more related, than you think

Military as a business sector

- Eisenhowers Warning
- Main figures
- Why profit and growth is not compatible with saving the planet

Military as a polluter and environmental risk factor

- CO_2 emissions
- Water pollution
- Ground pollution
- Bioweapons
- Nuclear armament

The missing link in the debate

- Absence of information
- Lobbyism and media manipulation

Final Thoughts and debate

Eisenhower’s Warning

Time code: 7:20 - 9:05 = Eisenhower speaks about the military-industrial complex during his farewell speech on january 17, 1961.

Deliberations:

- What does he mean with the term Military-Industrial Complex?
- How many people work in the Military Industrial Complex (maybe estimate for your own country or encourage further research)
- What are the economic, political and social consequences of such an all-encompassing business sector?

Main figures

Some main figures:

- World military expenditures in 2020 were estimated at 1.93 trillion US$
- The US has the highest military budget in the whole world, with $753 billion, which equals 12% of the entire federal Budget.
- The five biggest exporters are currently the United States, Russia, China, France and Germany
- The five biggest importers were India, Saudi Arabia, the United Arab
- Emirates, China and Australia.
- Data on arms trade is very unreliable, but estimates assume that SIPRI estimates an amount equivalent of $420 billion in 2018

- Military Expenditure worldwide - https://data.worldbank.org/indicator/MS.MIL.XPND.CD
- U.S federal budget is currently 6,011 trillion US$ (2022)
- World's largest importers of arms - https://www.worldatlas.com/articles/world-s-largest-importers-of-military-arms.html
- World's largest exporters of arms - https://www.worldatlas.com/articles/world-s-largest-exporters-of-arms.html
- Wikipedia - breakdown of U.S. military budget - https://en.wikipedia.org/wiki/Military_budget_of_the_United_States
- The SIPRI Top 100 Arms-producing and Military Services Companies, 2018 - https://www.sipri.org/publications/2019/sipri-fact-sheets/sipri-top-100-arms-producing-and-military-services-companies-2018

Military as a polluter and environmental risk factor

This image serves as an example of a production chain. It is good to dwell a bit around this concept, as it is key factor to understand when talking about production and environment.

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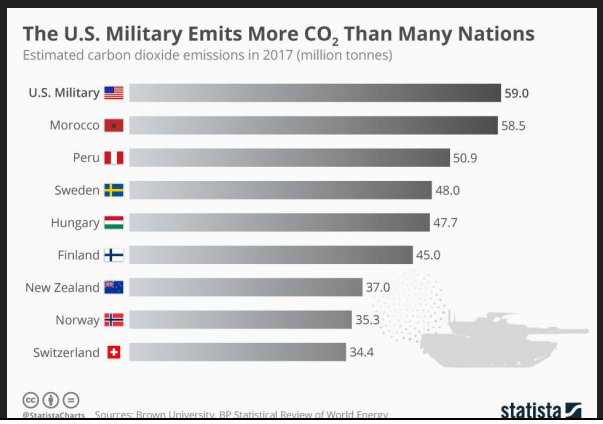
- Every item, that gets produced or consumed has a production chain.
- At every step of the process, resources are consumed, pollution takes place or the environment is impacted in some ways.
- The more complex, the item, the longer the production chain. = More pollution
- Growth and seeking profit = producing more items = bigger impact
- Modern tanks, for instance need to use steel, plastic polymers, tungsten, uranium, aluminium, sand, copper, gold for production. (Maybe try to have the participants come up with examples of raw materials needed for various items)

CO^2 pollution

- In 2017, the US military bought about 269,230 barrels of oil a day and emitted approx. 59 million tons of carbon dioxide (equivalent to 12,831,315 cars driven for the whole year)



https://theconversation.com/us-military-is-a-bigger-polluter-than-as-many-as-140-countries-shrinking-this-war-machine-is-a-must-119269

- A good example of the vast consumption of military vehicles can be found in this Quora-thread: https://www.quora.com/How-much-fuel-does-a-tank-use?share=1
- Example: a B-2 stealth bomber, which holds more than 25,600 gallons of jet fuel, burns 4.28 gallons per mile or about 9.4 litres per kilometer
- Some more figures on U.S. military emissions - https://theconversation.com/the-defense-department-is-worried-about-climate-change-and-also-a-huge-carbon-emitter-118017
- The Defense Department also maintains more than 560,000 buildings at approximately 500 domestic and overseas military installations, which account for about 40% of its greenhouse gas emissions.

Water pollution

- A major pollutant that can directly linked to the military use is PFAS, a group toxic chemical commonly found in firefighting foam.
- Polluted water sites with PFAS near military installations are also being discovered in other countries, including Denmark
- PFAS never break down in the environment.
- Apart from firefighting foam, PFAS chemicals can also be found in everyday items, such as non-stick pans, rain repellent clothing, etc., however the military regularly discharges vast quantities e.g. during firefighting exercises, etc.
- Currently 678 military sites are are thought to be contaminated with PFAS, 328 of these have been confirmed.

- A map of known and suspected sites polluted with PFAS - https://www.ewg.org/interactive-maps/2019-pfas-crash-training-military-sites-March2020/map/

- Here is a good article, that describes what PFAS chemicals are and their effect on health and evironment - https://www.ewg.org/pfaschemicals/what-are-forever-chemicals.html

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Ground pollution

- The Pentagons own estimates are that there are about 39.000 sites across 19 million acres with environmental contamination in the U.S. alone
- At least 147 military installations are Superfund sites, meaning they are among the most contaminated areas in the country
- Counting also private sites, that serve military needs, the list grows to about 900 sites.
- There are currently about 1300 Superfund sites
- ⅓ of Libyas landmass is currently considered contaminated by landmines and unexploded munitions
- The Vietnam Red Cross estimates that Agent Orange has affected 3 million vietnamese people, including at least 150,000 children. Babies in Vietnam are still being born with birth defects due to Agent Orange.

- Sources: https://www.newsweek.com/2014/07/25/us-department-defence-one-worlds-biggest-polluters-259456.html
- Sources: https://www.ecowatch.com/military-largest-polluter-2408760609.html
- What is Agent Orange - https://en.wikipedia.org/wiki/Agent_Orange
- About 76,000 m^3 of Agent Orange has been sprayed by the U.S. during the Vietnam war and an estimated 20,000 square kilometres of forest have been destroyed in the process - equivalent to about half of Denmarks landmass
- Common ground pollutants linked to warfare and military use are: depleted uranium, lead, strontium-90 (highly radioactive), chemicals from unexploded ordinance, fossil fuel leakage and many more.
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- This image is taken near Verdun, where one of the deadliest battles of WW1 took place. It was also one of the first battles, where mustard gas and other poisonous substances were being used in warfare. The area is still, more than a hundred years after, heavily contaminated and large areas are not accessible to the public

Bioweapon research

- Though banned by international treaties, bioweapon research programs exist in nearly every country, also because existing treaties have no verification regimes.
- The aim is to breed or modify viruses and bacteria to be utilized as weapons, by enhancing their ability for transmissions and/or cause serious harm
- Research is often carried out in secret laboratories with high security measures, but unintentional outbreaks are not out of the norm
- Agents released into ecosystems can seriously disrupt the integrity of these ecosystems - we know these effects from other invasive species

- Diseases of particular concern for their bioweapons potential include smallpox, tularemia, plague, Newcastle disease, FMD, classical swine fever (“hog cholera”), avian influenza, African swine fever, Rift Valley fever, African horse sickness, rinderpest, and Venezuelan equine encephalomyelitis

- Though for now discredited, the idea of a flu-like virus pandemic being caused by an outbreak from a lab is, unfortunately, an entirely plausible scenario, in fact there are numerous of examples of deadly pathogens that escaped containment through poor safety practices and resulted in the inadvertent sickening of lab workers. Examples include: Plague, anthrax, Rocky Mountain spotted fever, tularemia, brucellosis and Q fever

- During an inventory in 2009, at Fort Derrick, Maryland,, 10.000 vials of lethal pathogens have been discovered, that previously were unaccounted for. - https://www.organicconsumers.org/news/thousands-uncounted-disease-samples-found-army-biodefense-lab

Nuclear technology as ecological risk factor

- Even a “small”, localized war, using just 0,5% of the world's nuclear arsenal could put as many as as 2 billion people at risk, due to disruption of climate and ecosystems
- The United States, Russia, United Kingdom, France, China, India, Pakistan, Israel and North Korea — possess approximately 13,860 nuclear weapons in total.
- The biggest known nuclear bomb ever built is the the Tsar Bomba, with a yield of 50 megatonnes (equivalent to the power of 3,800 Hiroshima bombs)
- Short chain of command = high risk of unintentional warfare
- Sites of nuclear testing are still suffering from the impacts, even many years after.

- The people of Bikini Atoll were told they would have to leave the island for just three months before it would be safe for them to return home. More than 60 years after the detonation of the Castle Bravo bomb, the island is still too dangerous to live on.
- Here is a study that describes the environmental fallout from nuclear testing in more detail - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4165831/
- The command chain for the U.S. nuclear arms program from the presidents order to actual launch is estimated to be ~ 4 minutes

- A short animation, that explains what the fallout of a relatively small nuclear war would look like.
- Apart from the immediate destruction and radiation, nuclear winter is the most serious threat to environment and crops
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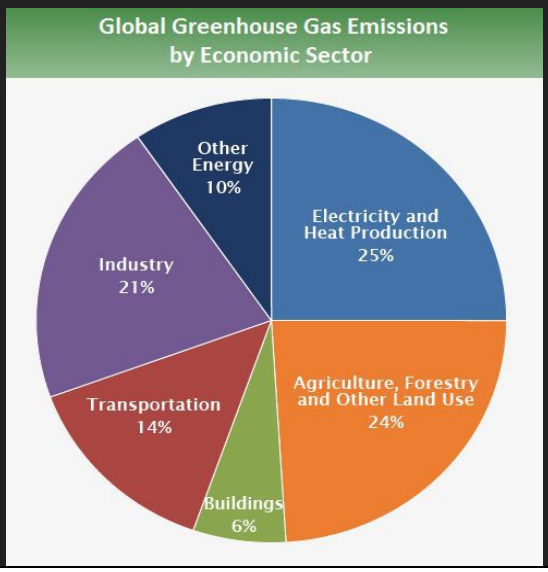
The missing link



Absence in the debate

- The U.S. military requested the original Kyoto exemption on national security grounds. he agreement was, that the military was automatically exempt from emission counting.
- In most countries, figures are hard to obtain, both because National Security is used as an argument to not disclose them, but also because the military in most countries is exempt from environmental regulations
- The Paris 2015 agreement states, that nations can freely choose whether or not the military sector should reduce its emissions, but their emissions are no longer exempt from counting.

- Most figures in this presentation are from the U.S., which might also be due to the fact that the U.S. military is present everywhere and thus the effects are harder to conceal

Lobbyism and media manipulation

- Given the size of the arms industry, there is a very present and powerful lobby that influence political decision-making
- “National Security” is often used as an argument to block information requests
- Especially since the wars in Iraq and Afghanistan, there has been a rise in ‘Embedded journalism’, where the journalists and all their works have to be ‘accredited’ by the military
- There are also powerful U.S. interest lobby groups, that have direct influence on the media. An example of this is the Atlantic Council, which was initially founded and receives major funding from the U.S. Foreign Ministry. In Germany for example, most chief editors at German mainstream newspapers are also members of the Atlantic Council

Apart from the direct lobbyism that the media is exposed to, there are also a number of structural biases that can make objective reporting difficult, if not impossible.

Final thoughts and debate

- Can you be an environmental activist if you are not a peace activist at the same time?
- Given the scope of this issue, what are immediate actions that we can take for ourselves and in our communities to address this issue?
- Can spreading information and educating about matters like this be considered activism?
- Decide on some products to bring out the message