ENVIRONMENTAL ASSEMBLY (UNEA)

Topic 2: Minimizing the environmental footprint of the conflict cycle

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1. Definition of Key Terms

Environmental footprint: The effect that a person, company, activity, etc. has on the environment, for example, the amount of natural resources that they use and the amount of harmful gases that they produce.

Environmental governance: A system of laws, norms, rules, policies and practices that regulates human behaviour towards the environment by managing political, social and economic human activities to ensure sustainability and respect for the environment.

Ecosystem: A biological community of interacting organisms and their physical environment.

Fossil fuel: A hydrocarbon-containing material formed naturally in the Earth's crust from the remains of dead plants and animals that is extracted and burned as a fuel, for example, coal, oil, and natural gas.

Greenhouse gases (GHG): The gases that contribute to the greenhouse effect by absorbing infrared radiation, for example, carbon dioxide and chlorofluorocarbons.

Pollution: The presence in or introduction into the environment of substances which have harmful or poisonous effects.

Radioactivity: The emission of ionising radiation or particles caused by the spontaneous disintegration of atomic nuclei.

Nuclear fallout: The residual radioactive material propelled into the upper atmosphere following a nuclear blast.

Landmine: An explosive mine laid on or just under the surface of the ground.

United Nations Environment Programme (UNEP): An international organization that was established in 1972 and that is responsible for coordinating responses to environmental issues within the United Nations system.

2. Introduction

The damages caused by wars do not only concern the loss of human lives and financial investments, but they also include an enormous impact on the environment.

The conflict cycle's environmental damage can be estimated by the "environmental footprint", which is the measure used to calculate the impact of a human product, company or activity on the environment.

During conflicts, military activity always involves large amounts of greenhouse gas (GHG) emissions that have a direct impact on global warming and could result in the permanent destruction of ecosystems as well as the consequent indisposition of all living beings.

Furthermore, conflict also results in the collapse of environmental governance, allowing the implementation of polluting practices and lowering the level of measures to avoid them.

The impact of war on the environment can also extend into the post-conflict period when the lack of strong institutions and governments can lead to the proliferation of unsustainable activities.

3. Background information

The environmental footprint of the conflict cycle is strongly influenced by the modernization of warfare and its increasing and more dangerous effects on the environment. The development of warfare from chemical weapons to nuclear weapons caused an increase in damage to ecosystems caused by wars because of their more destructive and dangerous impact on the environment.

The most significant examples of the environmental impact of war in history include World War I, World War II, the Vietnam War, the Rwandan Civil War, the Kosovo War and the Gulf War.

During these armed conflicts, the world's environment suffered significant long-term damage and destruction that are still visible decades after some of these wars ended and will be visible for many more decades in the future.

For example, the use of aircraft to bomb territories implied noise pollution and severely damaged habitats and ecosystems. Landscapes got devastated and suffered deforestation and desertification, marine and terrestrial ecosystems got contaminated by toxic chemicals, oceans got damaged by oil contamination from naval ships and weapons of mass destruction like atomic bombs and their radiotoxicity were used to destroy natural resources as well as marine and terrestrial ecosystems.

4. General Overview

Armed conflicts and wars are responsible for the production of an enormous amount of greenhouse gases as well as pollution and strongly contribute to the depletion of natural resources, among other environmental impacts.

First of all, the military used in armed conflicts consumes a great deal of fossil fuels such as carbon, which produces elevated emissions of greenhouse gases such as carbon dioxide. Fossil fuels are used for the production and use of military vehicles and weapons as well as for all military activities and transports. The U.S. military is estimated to be the largest fossil fuel consumer and consequently one of the largest greenhouse gas emitters in the world.

Consequently, military activities lead to a strong increase in environmental pollution because they include a large use of solvents, fuels and toxic chemicals that release toxins into the atmosphere and into the environment that remain there for decades and centuries. The pollution of military activities and vehicles contaminates water, soil and air and causes enormous damage to ecosystems. The use of toxic chemicals such as Nerve gas and Agent Orange, which is a herbicide and defoliant, can destroy ecosystems and their wildlife by contaminating the environment and producing soil erosion and deforestation. Moreover, armed forces around the world are considered responsible for the release of an extremely large amount of substances such as chlorofluorocarbons (CFCs) that caused damage to the ozone layer. Another example of the release of toxic substances is the use of the depleted toxic metal uranium in munitions because the aerosol produced during the impact and combustion of these munitions causes toxic contamination of the environment.

Moreover, methods of modern warfare such as bombing are directly responsible for wildlife harm, biodiversity destruction, deforestation and degradation of natural landscapes. Landmine and cluster munitions also cause long-term damage to the environment by producing desertification and deforestation, contaminating water and soil with toxic chemicals and destroying wildlife habitats. In particular, the use and the testing of nuclear weapons such as atomic bombs are extremely environmentally damaging since it imposes both direct and indirect effects on the environment, the physical destruction and the extremely damaging radiotoxicity, which includes radioactive contamination and nuclear fallout. An example of a radioactive isotope that is found in nuclear fallout is Strontium-90, which contaminates and strongly damages the soil and kills flora and fauna.

Additionally, the amount of explosive weapons required by military campaigns that do not detonate and become unexploded weapons is particularly dangerous for the environment because of its release of chemicals into the soil and groundwater. For example, the large number of nuclear warheads and reactors that have been dispersed in the ocean during various naval accidents cannot be removed from the ocean floor and will continue damaging the ocean for centuries.

Furthermore, militaries affect ecosystems worldwide because they are also highly resource intensive since twenty-five per cent of worldwide jet fuel is consumed by extremely carbon-intensive military vehicles. Consequently, armed conflicts contribute significantly to the depletion of the planet's natural resources which leads to the destruction of the balance of the environment and damage to ecosystems.

5. Major Countries Involved

The USA

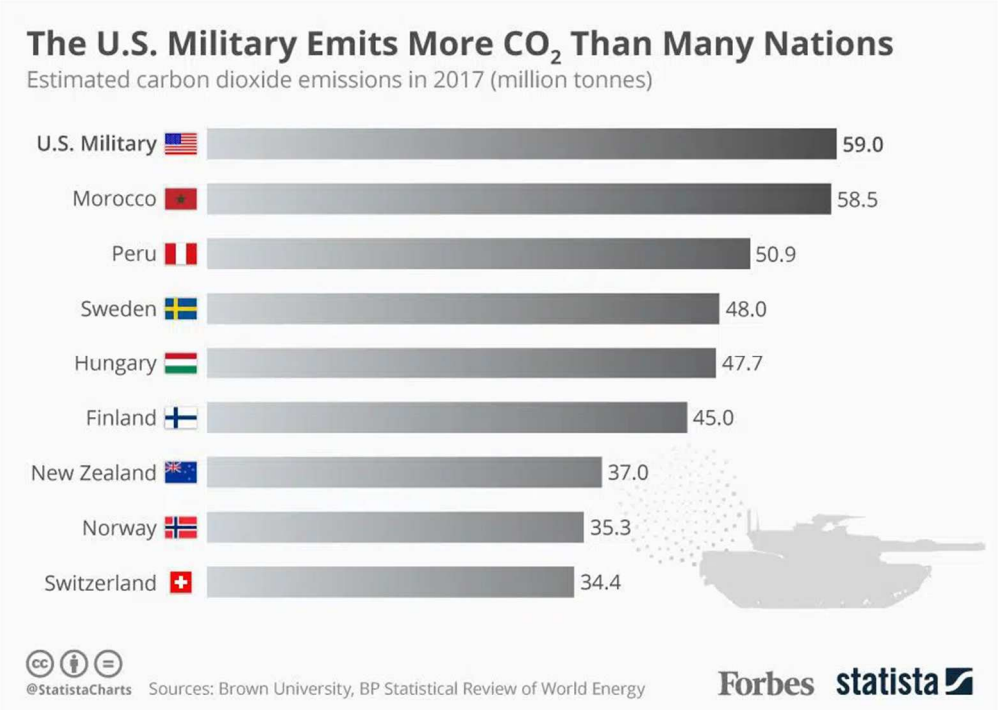
The U.S. Department of Defense is the world’s single largest consumer of oil and one of the largest greenhouse gas emitters, therefore it has an enormous impact on climate change. Due to the pressure put from the United States during the negotiation of the 1992 Kyoto Protocol, military emissions are not included in the U.S. national emissions totals.

American military activity directly harms the environment due to the air pollution and toxic dust produced by military vehicles and weapons, since the U.S. military pollution accounted for 1.2 billion metric tons of greenhouse gas emissions from 2001 until 2017.

Furthermore, the American military is also responsible for the contamination of water sources, especially the ones surrounding military bases that cause an enormous release of harmful toxic chemicals.

Moreover, the uranium mining and nuclear weapons testing and release by the U.S. military strongly damaged ecosystems and contaminated land and water. The nuclear weapons tests performed by the American military in the Native American reservations, the Marshall Islands and the Navajo Indian reservation from 1946 to 1958 as well as the atomic bombs released on Hiroshima and Nagasaki in

1945 caused enormous damage to ecosystems and the contamination of the environment with radiotoxicity.



Estimated carbon dioxide emissions in 2017 (million tonnes). Image by: Forbes/Statista

6. UN Involvement

On 5 November 2011, the United Nations General Assembly declared 6 November the International Day for Preventing the Exploitation of the Environment in War and Armed Conflict to acknowledge the devastation inflicted upon ecosystems by extremely environmentally damaging war.

In 1976, the Environmental Modification Convention was adopted to prohibit the use of warfare techniques that include environmental modification and that could cause long-term and severe damage to the natural environment.

Moreover, the UN Environment Programme (UNEP) is collaborating and cooperating with various Member States of the United Nations and other international partners to enforce the protection of the environment before, during and after armed conflict and war.

On 8 July 2019, the International Law Commission adopted 28 legal principles to increase the protection of the environment in conflict and war situations.

Since 1999, over twenty-five post-conflict assessments have been conducted by UNEP to determine the environmental impacts of war with the use of science. UNEP has established that armed conflict significantly damages the environment and strongly contributes to climate change.

Moreover, UNEP is working to develop new technologies and scientific methods to improve the monitoring of environmental damage caused by armed conflicts to strengthen the protection of ecosystems. Consequently, one of the most significant investments of UNEP will be a digital ecosystem for the planet to map, monitor and mitigate environmental risks and damages produced by wars.

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