

Hilton 2019

United Nations Environment Programme

Committee Overview

This committee will be run Harvard-Style, meaning pre-written resolutions are prohibited. To be considered for an award, delegates must arrive in committee with at least one position paper, or email it prior to committee. Although one position paper fits the requirements for an award, we highly recommend writing position papers on all topics so that delegates are prepared for interesting and productive debate.

It is necessary that each delegate come to committee with firm knowledge of every topic and their country's policies in order to facilitate an engaging and active committee. The Chairs are looking to see friendly debate and thought-provoking discussion on the topics presented. The United Nations Environment Programme focuses on caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations. Please keep these values in mind and remember that Model UN is not a competition, so enjoy researching and have fun!

Committee Description

Preventing the Exploitation of the Environment during Times of War and Armed Conflict

Minimizing the Effects of Mining in Latin America

Improving Sewage Treatment

Effects of Climate Change on Global Food Production

Chairs

Selin Akbas | selinakbas472@gmail.com

Hello Delegates! My name is Selin Akbas, and I am a junior at Pittsford Sutherland High School. This is my third year in Model UN and first time chairing. I am also the President of the Model UN club at my school. I am a member of my school's Executive Council, Science Olympiad and Girls Varsity Tennis team, and I volunteer at Strong Memorial Hospital. Additionally, I'm very passionate about music and singing. I'm involved in a cappella, jazz, show choirs, and many musicals. I am very excited about the upcoming conference and feel free to contact me with any questions!

Omid Sahar | omidsahar5@gmail.com

Hello Delegates! My name is Omid Sahar, I have been in Model UN for 3 years now and this will be my first time chairing. I am a senior at Pittsford Mendon High School where I am a part of the Tennis Team and participate in other clubs such as Student Council and Science Olympiad. Outside of school, I currently intern at Westfall Cardiology. I am ecstatic to meet you all and have great debate this upcoming conference. If you have any questions regarding committee, you can always contact me. Good luck!

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Preventing the Exploitation of the Environment during Times of War and Armed Conflict



In today's world, war and armed conflict are extremely prevalent - over 20% of the world's population lives in areas of conflict and fragile states. As a result, about 1.5 billion people who live in war zones, along with all other forms of life and the environment in these regions, are exposed to the risks of deadly warfare and armed conflict. As the world has progressed from chemical weapons of war to nuclear weapons of war, the stress on the world's ecosystems and the environment has increased, and the effect has become very prevalent.

Starting during the time of the American war in Vietnam, concerns about the environmental effects of war and armed conflict began to arise. In 1962, the United States introduced the use of Agent Orange - an extremely powerful and destructive herbicide. By using this chemical, the United States wiped out crops and forest cover that normally flourished and left the region's vegetation unable to regenerate. In addition, following the war, only 24 species of birds and 5 species of mammals remained in the affected forests, compared to 145 species of birds and 30-55 mammals that originally existed in the ecosystem.

Since then, the environment has continued to fall victim to war and armed conflict. Years of war in countries such as Afghanistan, Iraq, Columbia, Democratic Republic of Congo, and South Sudan has led to the deprivation of natural resources and the depletion of the environment. Specifically, Afghanistan has faced immense deforestation rates, reaching 95% in some areas. The area has also faced other environmental issues due to war, such as lowered water tables, desiccation of wetlands, and the destruction of vegetation and wildlife. In Gaza and Yemen, water infrastructure and groundwater are polluted and damaged during armed conflict, posing both environmental and public health risks to the population.

Former UN Secretary-General Ban Ki-moon stressed that nations must play a larger role to protect the environment from the fatalistic impacts of war and armed conflict. It is imperative that these consequences of warfare and armed conflict are not ignored and that the international community acts with greater urgency.

What role should UNEP and governments in affected nations play in protecting the environment during times of war and armed conflict? How can we regulate the use of nuclear warfare to mitigate the effects of war on the environment? Should countries such as the United States that have played a role in destroying the environment during times of war aid in restoring the ecosystems of such countries?

Sources:

<https://www.theguardian.com/environment/2014/nov/06/whats-the-environmental-impact-of-modern-war>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC80251/>

<http://www.worldwatch.org/node/5520>

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Minimizing the Effects of Mining in Latin America



In Latin America, mining is considered to be a major source of economic advancement and is promoted to the public as such. The mining industry in developing countries such as those in Latin America has the potential to improve human development, as well as create jobs and foster innovation. However, when managed poorly, mining can lead to extreme environmental degradation and thus economic and social inequality in affected regions. A study conducted by the Canadian International Resources and Development Institute revealed that economic and social conflict in areas with a high

prevalence of mining has skyrocketed since 2008— 46% of which occurring in Latin America.

Poor and injurious mining practices can lead to the ignition of coal fires, which release smoke laden with greenhouse gasses and toxic chemicals, as well as fly ash. Additionally, mining releases coal mine methane, which is a destructive greenhouse gas that is 25 times more potent than carbon dioxide, making it extremely harmful to the environment. On top of that, the erosion of mine dumps and exposed hillsides makes the area hazardous to life and property in Latin America.

Another major environmental issue attributed to mining in Latin America is the formation of acid mine drainage. Acid mine drainage or AMD is highly acidic, metal-rich water formed from the chemical reactions of particles released as a result of mining. Acid mine drainage releases toxic metals into rivers, contaminating water sources, and leaving the affected communities in shambles and economic disparity. Additionally, substances derived from explosives such as nitrates and ammonia also contaminate water sources, leading to both environmental and health risks.

Environmental damages as a result of mining in Latin America continues to be an issue as the promoters of large-scale mining projects fail to understand the long-term cost of such actions. Although there are regulations in place related to mining, the majority of these laws lack specific procedures for monitoring and repairing the various environmental damages attributed to mining.

How does the committee plan to ensure that communities living alongside mining projects are protected and informed about adverse effects of such projects? How can UNEP implement source control technologies to combat acid mine drainage and other forms of water pollution as a result of mining? Taking into consideration legal frameworks, institutional strength, and social factors, who will pay for mining damages? How will existing laws and regulations be enforced?

Sources:

<https://aida-americas.org/en/blog/understanding-the-true-costs-of-mining-in-latin-america>

<http://www.latinamerica.undp.org/content/rblac/en/home/presscenter/pressreleases/2018/mining-and-socio-environmental-issues-in-latin-america--communit.html>

<https://link.springer.com/article/10.1007/s40726-015-0011-3>

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Improving Sewage Treatment



Sewage, the accumulation of dangerous chemicals, toxic substances and debris from human activity, is a common by-product of communities across the world. Generally, this wastewater will be collected and transported to sewage treatment plants, where the contaminants can be effectively removed. Unfortunately, various disadvantaged and developing nations are unable to establish proper treatment plants. In turn, this allows for polluted waters to reach rivers and other bodies of water, compromising sources of clean water and the balance in ecosystems. This issue will only continue to prove greater detriment given the inevitability that the global population is rapidly increasing.

Primarily, this is problematic in highly populated areas where there is minimal regulation and a lack of treatment facilities. The Ganges River of India truly exemplifies this trend; although sacred, it is highly polluted. Home to roughly 500 million people, treatment plants are widely scarce and are overwhelmed by monsoons. 30% of them were not operational in 2013, while others were utilizing less than 60% of the designated capacity. Furthermore, they cannot treat toxic waste from heavy metals or pharmaceutical products or personal care products. High maintenance costs and a lack of reliable power sources make treatment plants even less ideal. This river carries great significance as it provides water for cooking, bathing and irrigating crops. Given the spiritual and cultural value this river possesses, it is imperative that it is preserved. Moreover, the further implementation of sewage treatment plants wouldn't be sufficient for developing areas given that there is not a reliable electricity supply. Although they do successfully remove harmful substances, these facilities also produce methane, contributing to excessive emissions of greenhouse gases.

Globally, unclean water poses significant risks of diarrhea, opportunistic infections and malnutrition, accounting for 1.7 million deaths annually, of which over 90% are in developing countries and almost half are children. This can be directly correlated to microbial pollution and plastic particles infiltrating sewage waters. Over two billion people are already living without a safely managed drinking water service at home. Over 80% of the world's wastewater—and over 95% in some least developed countries—is released to the environment without treatment; 2.4 billion people still do not have access to improved sanitation.

In 2010, the United Nations recognized “the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and human rights”. In order to protect public health, it is necessary to address the increasing danger of wastewater in order to establish longevity and safety in communities around the world.

How can UNEP and Governments mitigate the effects of the existing pollutants in sewage waters and its spread? Can the people be educated to become more self-aware about their deteriorating environment? What are some of the alternatives to Sewage Treatment Plants given these are not suitable in developing regions? How can nations elaborate on regulations in order to enforce proper disposal methods?

Sources:

<https://www.unenvironment.org/news-and-stories/story/better-sewage-treatment-critical-human-health-and-ecosystems>

<https://www.envirotech-online.com/news/water-wastewater/9/breaking-news/how-does-sewage-affect-the-environment/40472>

<https://www.water-pollution.org.uk/sewage-and-wastewater/>

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Effects of Climate Change on Global Food Production



As the global population is exponentially growing, this warrants a sufficient food supply in order to provide proper nutrition. By 2050, it is expected that the population will grow to almost 10 billion. With this, roughly 3.4 billion more people would need to be fed. Global demand for food could increase between 59% and 98%. The impacts of climate change—higher temperatures, extreme weather, drought, increasing levels of carbon dioxide and sea level rise—threaten to decrease the quantity and jeopardize the quality of our food supplies.

Roughly 80% of the world's crops are rainfed. This means that farmers are heavily reliant on predicted rain patterns when growing crops. Yet, this has become much more

difficult for farmers to utilize because increasing temperatures are changing rainfall patterns. As temperature increases, the warm air retains more moisture and can make precipitation much more dramatic and intense, damaging crops. Furthermore, flooding can result from intense storms and the rise of sea levels. This can destroy crops and further damages by transporting sewage, manure or pollutants from roads, farms and lawns. This then allows more pathogens to contaminate food sources. In other areas, the hot weather can cause faster evaporation, which will lead to droughts; Less water to nurture crops will only contribute to a decrease in agricultural yield.

Furthermore, warmer and more acidic oceans impose imbalances in aquatic ecosystems and act as a deterrent to the fishing industry. 540 million people around the world rely on fish for their protein and income. But since 1955, the oceans have absorbed over 90 percent of the excess heat trapped by greenhouse gas emissions in the atmosphere. In Portugal, fishermen have recently caught 20 new species, most of which migrated from warmer waters. Chinook salmon, usually found around California and Oregon, are now entering Arctic rivers. Moving into new territory, however, these species may face competition with other species over food, which can affect their survival rates. The range shifts are affecting fishermen, too, who must choose whether to follow the fish they're used to catching as they move north or fish different species.

This issue is pertinent world-wide. It is necessary that certain measures are taken to reassure that food sources can become reliant in order to establish longevity and stability for the future of the global population. Given that all food sources are at risk due to the effects of climate change, reform must be brought by the international community to address this concern.

How can these ecosystems be restored after suffering such dramatic climate change? Are there any other sustainable crops that can be used as alternatives? How can crops be protected from the detrimental consequences of climate change? Is there a way to reimburse those who have been affected by the struggle of industry?

Sources:

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<https://www.theguardian.com/environment/2012/sep/19/climate-change-affect-food-production>

https://19january2017snapshot.epa.gov/climate-impacts/climate-impacts-agriculture-and-food-supply_.html