GENERAL ASSEMBLY

UNITED NATIONS ENVIRONMENTAL PROTECTION AGENCY

Letter to the People:

Honorable delegates,

Welcome to the sixth annual Freeman Model United Nations Conference! Our names are Rohan Tumu and John Kamireddy, and we're incredibly excited to guide you through the committee: UNEP. Rohan is a sophomore at the Center for Leadership, Government, and Global Economics. He has participated in Model UN for 2 years now, and has loved every committee he has been a part of. Outside of MUN, Rohan loves playing both volleyball and tennis. John is a junior at the Center for Leadership, Government, and Global Economics. He has done MUN for 2 years now, and outside of the club, he enjoys playing soccer. We cannot wait to hear all the diverse viewpoints and well-researched ideas presented, and hope that you do as well.

As a reminder, please make sure to keep your research and presented points strictly related to the position to which you have been assigned, and not to let personal bias and opinions influence your delegate positioning. Also, while we strongly recommend that delegates write a position paper, this is not required. However, in order to win an award, the delegate must have a written paper. This, as well as the performance demonstrated by the delegate during the committee, will be considered for awards.

We look forward to being your chairs for this committee and wish you all the best for your preparations! If you have any questions or concerns, please feel free to contact us at freemunviunep@gmail.com for additional information.

Your Chairs,

Rohan Tumu and John Kamireddy

FREEMUN

Douglas S. Freeman High School Model United Nations Conference

UNEP

General Assembly

Topic I: *Regulating AI's Environmental Impact*

Topic II: *Ensuring Global Water Security*

Introduction

UNEP, the United Nations Environment Programme, was created in 1972 following the United Nations Conference on the Human Environment in Stockholm. It serves its role as the global authority on environmental issues, working on setting the international agenda, developing policies regarding environmental issues, and trying to promote a more sustainable development plan. Their headquarters are located in Nairobi, Kenya, and they coordinate efforts through member states, international organizations, scientists, and civil society in order to address issues such as climate change, biodiversity loss, pollution, and resource management. Overall, they play a central role in leading to a resilient and sustainable future through initiatives like the Montreal Protocol, the Global Environment Outlook, and work regarding advancing the Sustainable Development Goals.

In this committee, there will be a wide range of countries that are highly significant on two issues: "Regulating AI's environmental impact" and "Ensuring Global Water Security Amid Climate Change." For the first conflict of regulating AI's environmental impact, there is much discourse between countries on whether to focus on advancing AI or protecting the environment. For the second issue, 11 African nations, such as Egypt and Ethiopia, are disputing over the use of the Nile River; in Asia, there are problems with regulating the use of the Indus River. Success in this committee will depend on every delegate's ability to think critically and communicate effectively.

Topic I: Regulating AI's environmental impact

Background

Since the advent of the 2020s, Artificial Intelligence(AI) has become one of the most used forms of technology across the world. However, while AI offers significant benefits to people in various

ways, it has also raised concerns about its environmental impact. The use of many AI systems requires a significant amount of computing power. Even something such as training an advanced AI model for image recognition consumes more energy than multiple households use in a year. This energy demand mainly comes from data centers that run on thousands of powerful processors running 24/7. Since the world still heavily relies on fossil fuels, this high energy consumption often results in major carbon emissions that heavily impact the environment.

In addition to a high use of energy, AI has detrimental effects on the environment through water consumption and electronic waste. Data centers using AI often overheat and need large cooling systems to prevent it. These cooling systems are mainly water-based. In 2023, it was reported by the University of Illinois that some AI data centers use hundreds of thousands of gallons for daily cooling. Additionally, the hardware required for AI, such as GPUs and servers, has a very limited lifespan. This creates a large amount of electronic waste when discarded. These factors benefit the progression of AI, but at the same time ruin the environment we live in.

Current Situation

The environmental impact of AI has become a major issue across the world. Governments, businesses, and environmental organizations must decide how to effectively manage their growth. For example, a study in 2019 by the University of Massachusetts Amherst discovered that the process of training an AI language model could emit over 620,000 pounds of carbon. To put that amount into perspective, it is equal to the emissions of 5 cars for their entire lifetimes. Even companies such as Google and Microsoft have admitted that their AI data centers have increased water consumption by around 25% in a year. This evidence confirms that the high progression of AI has directly led to higher resource exhaustion.

Countries have had many different opinions on this matter. The United States and China, for example, which are two of the biggest countries when it comes to AI development, are continuing to push forward without any environmental concerns. On the other hand, countries in the European Union, like France, Germany, and the Netherlands, have made efforts to protect the environment from AI through measures such as the Green Deal. This enforces legal obligations on companies to cut greenhouse gas emissions by 55% by 2030. Additionally, smaller nations, such as Fiji and the Maldives, have raised concerns about how AI can worsen global warming and take attention away from sustaining the environment.

Private companies also have heavy involvement in this issue. Tech giants such as Google, Amazon, and Microsoft have all pledged to make their data centers carbon neutral by investing in renewable energy. However, it is clear that these promises will not hold up as the rising demand and growth of new technologies in AI only continue to increase. With generative AI on the rise,

companies may begin to require even more computing power than before for their data centers. Environmental organizations have started calling for international guidelines to ensure AI grows in a sustainable way.

Analysis

The environmental impact of AI is a complex issue to address because it is important to the growing world of technology but is harmful to the Earth. AI can also help predict environmental changes. It enables researchers to model climate change, improve renewable energy systems, and predict weather. At the same time, creating and running AI systems consumes resources at an alarming rate. As a result, this makes AI a part of the solution and a part of the problem. The question for UNEP is how to balance both of these situations.

The debate over AI's environmental costs also shows global differences in wealth influencing the problem. Wealthier countries with better tech industries benefit the most from AI's development. On the other hand, the environmental impacts affect everyone, especially smaller nations and Nordic countries that use little AI. This raises the question of responsibility and ownership. Should major AI-utilizing countries have a greater share of the burden in reducing emissions, or should international guidelines apply to all? Countries in the United Nations Environment Programme (UNEP) will need to consider both the opportunities and challenges of AI, while also finding common ground on how to ensure that innovation does not come at the cost of environmental sustainability. UNEP will only find success if every country is able to do its part effectively and efficiently to save the planet and to improve AI in ways that we never thought possible.

Questions to Consider:

1. Who should bear the main responsibility for slowing AI's impact on the environment, and who should be blamed if AI has any severe detrimental effects on the environment?
2. Should international guidelines be set to transition all data centers worldwide to use renewable energy?
3. What procedures should be followed in order to responsibly dispose and recycle the mass amounts of AI-related hardware?
4. Should restrictions due to environmental sustainability become mandatory precautions in approving and deploying new AI technologies, similar to safety regulations?

Topic II: Ensuring Global Water Security

Background

Billions across the world rely on natural reservoirs, but the current environmental status seeks to strip that away. Climate change is putting an increasing strain on freshwater resources; as

temperatures rise, evaporation rates increase, snowpacks get smaller, and the melting of glaciers speeds up. At the same time, the changing rainfall patterns have been increasing how often floods and droughts occur, which also disrupts agricultural systems. This also depletes consistent access to clean water.

All of these consequences mentioned are even more severe for communities already vulnerable to them. In places like the Sahel and western USA, extended droughts have already been causing migration and the required changing of agricultural practices. At the same time, water is becoming increasingly contaminated, and monsoon flooding in places like Southeast Asia is causing waterborne illnesses to spread even faster. Also, the increasing urbanization is putting tension on our existing infrastructure, which then makes it difficult for many cities to gain access to safe water while supporting a growing population. All of these troubles are related in how they show how climate change makes global water security a point of interest and one that should be taken into consideration.

Current Situation

Currently, every continent is contending with water scarcity, and if this continues, the World Bank suggests that by 2030, the demand for freshwater by the world will be 40 percent more than the supply. So far, agriculture is still the biggest use for water. But even so, the increasing and excessive extraction of groundwater, and our ineffective use of irrigation, continue to increase shortages. To add to this, the competition surrounding water resources continues to rise because of production branches like mining, textiles, and energy production, and sometimes comes at the expense of both domestic and communal needs.

In direct response to these problems, many different nations are experimenting with different solutions. For example, some countries such as Singapore are increasing their rainwater collection and water recycling, while others have tried advancing desalination technology. However, many developing countries that still don't have the resources or infrastructure needed to implement policies like the ones mentioned, and are becoming increasingly more susceptible to floods and droughts. If action is not taken to prevent the climate-driven water insecurity we are experiencing, down the line, it may lead to instability, migration, and potential conflict.

Analysis

The difficulty of maintaining water security when presented with climate change demonstrates the importance of a solution that aims for a balance of equity and sustainability. Richer countries possess the technology and the finances to advance the technology to alleviate shortages; but less developed areas, which are the most severely affected by the changes, do not have the same ability to adjust to the problems presented. The fairness and the sense of shared responsibility should be called into question as we see a growing gap

between the resilience of these different nations.

In addition to being a resource, water is also a big part of keeping the economy stable, growing food, and keeping people overall healthy. Making progress towards goals like the Sustainable Development Goals would be much harder without safe access to clean water. Because of this, delegates need to consider both short and long-term goals, some examples being making water use more efficient, and investing in infrastructure that is more resilient to climate change. Solving this problem will depend on how well countries can set aside biases and look at water security, as it is currently a problem that needs to be solved by everyone, not just one country.

<u>Questions to Consider:</u>

1. Who should bear the most responsibility for making sure water security is prioritized when presented with climate change?
2. Should we regulate how countries manage and share their freshwater resources through international guidelines?
3. How should we go about making sure larger-scale water projects like desalination and dams are more sustainable and don't do as much damage to the environment?
4. Should we limit the amount of water used for agriculture and industry during times of drought through restrictions?
5. What are some ways countries can balance the long-term necessity of water for humans and ecosystems, and the future as a whole?

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