



AIR POLLUTION

GENERAL ASSEMBLY

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Letter from Dias

Dear Delegates!

It is my honor and pleasure to welcome you to the VMUN 2022 conference. My name is Saibihai Tuersunmaimaiti and I will be serving as your chair for the duration of the conference. I am looking forward to your participation in the General Assembly on Air Pollution. The topic of our committee may seem straightforward, but it is a crucial and certainly relevant issue of our world, and I believe that the existing distinct views and priority among countries regarding the topic of air pollution can lead to different and unique solutions to the pressing issue. I am eager to witness the kinds of debate and diplomatic initiative that you will bring to the table as you represent your countries.

I am a student at Vanier College currently studying General Social Science. I started my MUN journey last year at Vanier College as a delegate and a persistent member of the VMUN club. I furthered my journey by delegating to MUN from different colleges and universities. I was drawn to MUN for many reasons. One being its eye-opening and educational setting that allows members to use their debating, research and critical skills. I also enjoyed challenging myself with the discussions of the diverse diplomatic, political, and global issues which also goes hand in hand with my academic studies. Outside of MUN, I enjoy singing and playing music, and also to discuss and debate about different world issues with my father. By bringing this general assembly to life, I hope to learn new things from everyone as I lead the procedures of our conference.

Finally, I wish all the delegates to have a wonderful MUN experience at Vanier, and encourage you to conduct research and seek out more information about the topics to better prepare yourself. I also want to say special thanks to the Vanier MUN team, we would not be

here without the effort and the hard work of the executive team. If you have any questions or concerns, do not hesitate to contact us at airpollutionvmun@gmail.com.

Best Wishes!

Saibihai Tuersunmaimaiti

GA Chair

VMUN 2022

Dear Delegates,

Welcome to Vanier's Air Pollution General Assembly! My name is Nithya Mahasenan, and I will be your Vice Chair for this committee. I am currently in my first year at Champlain St-Lambert, studying Law & Civilization with aspirations of eventually going to law school and working for a multinational law firm. Having participated in Model United Nations and Mock Trial alike, I'm passionate about politics, law, and international relations. I'm originally from the United States, so I'm excited to be chairing for the first time in the Canadian Model United Nations circuit! Outside of Model United Nations, I love traveling, trying new restaurants, and skiing.

In this committee, I will be looking forward to hearing delegates' take on this issue. Air pollution and environmental sustainability has become increasingly more relevant in the global diplomacy stage. We are reaching a point where immediate action is necessary, and international collaboration and cooperation is the only way forward. I encourage delegates to approach this committee with a solutions-oriented mindset and to look forward to seeing the creative resolutions that will be passed in this committee! We will be looking for excellent position papers, debate skills, diplomacy, and leadership both in-room and out-room! As always, do not hesitate to contact us with any questions- we are here to help!

The United Nations Environment Programme has played an increasingly important role in recent years of monitoring, managing, and debating the current global environmental crisis. This year's General Assembly will focus on the overarching theme of Air Pollution, with an emphasis on renewable and clean energy, as well as a secondary emphasis on carbon emissions and sustainable development. These issues will require international collaboration and diplomacy, as

well as innovative and effective solutions to solve this issue and promote the health and safety of our global population.

The United Nations Environment Programme, or UNEP, was established in 1972, and is the sole global authority on and about climate change, nature, pollution, and sustainability. UNEP handles all climate emergencies and helps take direct and immediate action on issues and emergencies relating to the climate and the environment. For example, UNEP handles resolutions in regards to crises like deforestation, ecosystem preservation, and water contamination. And now, delegates at Vanier MUN's Air Pollution General Assembly will be tasked with handling and acting on the global air pollution crisis.

Good luck delegates!

Your Chair,

Nithya Mahasenan

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“The Earth is what we all have in common.”
-Wendell Berry

Introduction to the Committee

Globally, our cities are seeing firsthand the effects and impact of air pollution. Air pollution, or the presence of pollutants and contaminants in our air, has been causing local, regional, and global threats to safety. In recent years, the prevalence of visible air pollution in the atmosphere has left medical and scientific experts calling upon local and national governments to act quickly, or risk severe long-term damage from this crisis. It is evident that this has spiraled into a medical, environmental, societal, industrial, and agricultural issue that requires diplomatic action. Our health, communities and environment are at risk, and the solution requires immediate global cooperation to be solved. This committee will approach air pollution with a holistic approach, with an emphasis on A) renewable energy and clean energy production and B) industrial carbon emissions and sustainable development.

Through these deliberations, the committee seeks to extend international diplomacy and cooperation to present effective solutions that can be implemented into this fast-growing world and the environmental consequences it brings. The UN calls upon this committee to act quickly and wisely to protect the health and preservation of our communities, and to act upon this great risk posing danger to our societies.

Overview

As defined by the World Health Organization, air pollution is the contamination of the indoor or outdoor environment by any chemical, physical or biological agent that modifies the

natural characteristics of the atmosphere.¹ (Some of the common sources of air pollution are household combustion devices, motor vehicles, industrial facilities and forest fires).² Pollutants of major public health concern include particulate matter, carbon monoxide, ozone, nitrogen dioxide and sulfur dioxide. Outdoor and indoor air pollution cause respiratory and other diseases and is a frequent source of morbidity and mortality.

Air pollution poses a major threat to public health and the climate. Each year, air pollution causes millions of premature deaths worldwide, largely as a result of increased mortality from heart disease, stroke, chronic obstructive pulmonary disease, lung cancer and acute respiratory infections.³ Air pollution is threatening to the health of everyone on Earth, considering that almost all of the global population (99%) breathes air that exceeds WHO guideline limits containing high levels of pollutants, with low- and middle income countries suffering from the highest exposures.⁴

Over the last five years, the UNEP's Actions on Air Quality report announced improvement in all major polluting industries, but observed severe gaps in implementation, financing, capacity, and air quality monitoring. Policy initiatives lay the groundwork for long-term air quality improvements, but they can take time to bear fruit. Other measures, like traffic limits or road closures, may be required in the most polluted locations. In recent years, developed countries have made significant improvements in air quality, but many developing countries, which still

¹ "Air Pollution," World Health Organization (World Health Organization), accessed March 7, 2022, <https://www.who.int/health-topics/air-pollution>.

² Ibid.

³ Max Roser, "Data Review: How Many People Die from Air Pollution?," Our World in Data, November 25, 2021, <https://ourworldindata.org/data-review-air-pollution-deaths>.

⁴ Communications and Marketing Branch, "Government of Canada," Science.gc.ca (/ Gouvernement du Canada, April 24, 2019), <https://science.gc.ca/eic/site/063.nsf/eng/97680.html>.

rely on wood and other solid fuels for cooking and heating, have lagged behind. They require assistance and direction in terms of resources to better access information, tools to improve air quality.

Governments must prioritize measures that set the groundwork for a green, inclusive recovery as the world begins to emerge from the pandemic. This will not be possible unless air pollution is addressed. Sustainable transportation, renewable energy production and consumption, and waste management are all areas where countries must collaborate. Businesses must innovate, and we must all do our part to lessen our carbon footprints, or risk greater climate and societal damage.

Topic I: Renewable Energy & Clean Energy Production

Renewable energy, also known as clean energy, comes from resources that are natural and constantly replenishable.⁵ Examples of renewable energy are solar, wind, biogas, geothermal, hydro, and biomass.⁶ Although the availability of these resources can vary, reusing and replenishing these resources should not bring destruction to its source. With the increasing scientific evidence, along with environmental and socio-economic awareness, people around the globe have been calling to employ renewable energy resources for decades as the pollution related challenges and parameters that influence the energy paradigm become concerning.

⁵ Nazir, Muhammad S., Ali J. Mahdi, Muhammad Bilal, Hazif M. Sohail, Nisar Ali, and Hazif M. Iqbal. 2019. "Environmental impact and pollution-related challenges of renewable wind energy paradigm." *Science of the Total Environment* 683 (May): 436-444. <https://doi.org/10.1016/j.scitotenv.2019.05.274>.

⁶ Shinn, Lora. 2018. "Renewable Energy Definition and Types of Renewable Energy Sources." NRDC. <https://www.nrdc.org/stories/renewable-energy-clean-facts>.

According to the famous “Wedges game theory,” a game that teaches the scale of the greenhouse gas problems, renewable energy is the solution to stabilizing world energy demand. Among the top four power generation solutions, wind energy is one of the top priorities.⁷ Today it produces more than 17% of the total global electricity generation.⁸ Wind energy is cost-effective, it is one of the lowest priced energy sources available today, it creates clean energy, processes completely free of the use of fossil fuels and averts the production of greenhouse gasses. In addition, it creates jobs and the use of domestic resources.⁹ Electricity production using wind energy could be an essential replacement for conventional fossil-based fuel resources, as we became more aware of its destruction towards the atmosphere.

Hydro power is one of the common renewable sources of energy. It is fueled by the movement of water, making it a clean source of energy. Research findings showed that the hydropower generation had increased 3% in 2020 as it remains to be the largest renewable source of electricity, generating more than all other renewable technologies combined. Although hydropower is an effective way of production, its efficiency can be subjected to decline due to drought in countries such as Brazil, China, United States, Turkey.¹⁰ Although hydropower

⁷ Nazir, Muhammad S., Ali J. Mahdi, Muhammad Bilal, Hazif M. Sohail, Nisar Ali, and Hazif M. Iqbal. 2019. “Environmental impact and pollution-related challenges of renewable wind energy paradigm.” *Science of the Total Environment* 683 (May): 436-444. <https://doi.org/10.1016/j.scitotenv.2019.05.274>.

⁸ Nazir, Muhammad S., Ali J. Mahdi, Muhammad Bilal, Hazif M. Sohail, Nisar Ali, and Hazif M. Iqbal. 2019. “Environmental impact and pollution-related challenges of renewable wind energy paradigm.” *Science of the Total Environment* 683 (May): 436-444. <https://doi.org/10.1016/j.scitotenv.2019.05.274>.

⁹ “Advantages and Challenges of Wind Energy.” n.d. Department of Energy. Accessed March 10, 2022. <https://www.energy.gov/eere/wind/advantages-and-challenges-wind-energy>.

¹⁰ “Hydropower - Fuels & Technologies - IEA.” n.d. International Energy Agency. Accessed March 10, 2022. <https://www.iea.org/fuels-and-technologies/hydropower>.

energy is climate friendly and does not emit gasses and waste heat, its disruption on the aquatic system continues to be debated.¹¹

To solve the challenge of climate change, countries signed the Energy Charter Treaty (ECT), a multilateral instrument that covers economical as well as environmental aspects of energy transportation. The ECT of 1994 specifically promotes energy efficiency in its attempt to reduce environmental impact of energy production and emphasizes the pursuit of sustainable development in the objection of government and large corporations. ¹² To achieve a better and more sustainable future by 2030, the United Nation designed a blueprint consisting of 17 interlinked global goals, which includes Goal 7-Affordable and Clean Energy. Goal 7 emphasizes on improving access to clean and safe fuels and technologies for 3 billion people and to expand the use of renewable energy beyond the electricity sector. It also allows the UN to conduct an Energy Progress Report to assess the progress made by each country and measure our distance away from the Sustainable Development Goal targets.¹³

Although the contemporary world has certainly created reliance on nonrenewable and dirty energy, its destruction is more apparent than ever. Thus, the world needs swift, equitable, significant and effective climate action using the idea of renewable energy and clean energy production.

¹¹ "Ecosystems & Fish." n.d. National Hydropower Association. Accessed March 10, 2022. <https://www.hydro.org/waterpower/why-hydro/clean-and-sustainable/ecosystems-fish/>

¹² "Energy Charter Treaty." 2019. Energy Charter. <https://www.energycharter.org/process/energy-charter-treaty-1994/energy-charter-treaty/>.

¹³ "Energy - United Nations Sustainable Development." n.d. the United Nations. Accessed March 10, 2022. <https://www.un.org/sustainabledevelopment/energy/>.

Questions to Consider:

1. What is your country's status on clean energy production?
2. What kind of impact has air pollution had on your country?
3. How is renewable energy and clean energy production going to impact your country? To your economy? To politics?
4. How much is your country can/ willing to contribute to the issue? How does your country plan to take measures on corporations and institutions?
5. How can your country collaborate with other countries to deal with air pollution in terms of renewable energy?

Topic II: Industrial Carbon Emissions & Sustainable Development

Discussions regarding industrial carbon emissions have been at the forefront of the air pollution debate. Energy efficiency, fuel switching, combined heat and power, renewable energy, and more efficient use and recycling of materials are just a few of the ways the industrial sector may minimize greenhouse gas emissions. Many industrial processes lack a low-emission alternative, necessitating carbon capture and storage in the long run to reduce emissions.

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The following industries — cement, iron and steel, and chemicals — account for nearly 20% of worldwide CO₂ emissions, according to a recent estimate by the International Energy Agency. Because, in addition to emissions connected with energy use, a large amount of industrial emissions comes from the process itself, these businesses' emissions are notoriously difficult to reduce. In the cement business, for example, the breakdown of limestone into lime and CO₂ accounts for nearly half of the emissions.¹⁴ While switching to zero-carbon energy sources like solar or wind power could reduce CO₂ emissions in the power sector, there are no obvious replacements for emissions-intensive industrial processes.

To keep global warming below 1.5°C this century, as set out in the Paris Agreement, annual greenhouse gas emissions must be cut in half in the next eight years. Net-zero emissions

¹⁴ Mark Dworzan, "Reducing Industrial Carbon Emissions," MIT News | Massachusetts Institute of Technology, accessed March 8, 2022, <https://news.mit.edu/2021/reducing-emissions-decarbonizing-industry-0721>.

pledges, if effectively implemented, may restrict warming to 2.2°C, bringing us closer to the Paris Agreement's well-below 2°C objective. Many national climate plans, on the other hand, postpone action until after 2030. According to the paper, reducing methane emissions from the fossil fuel, waste, and agriculture sectors might help close the emissions gap and reduce warming in the short run. Carbon markets may potentially aid in the reduction of emissions. However, this can only happen if policies are clearly defined and target genuine carbon reductions, with systems in place to track progress and give transparency.

Because highways and polluting facilities have often been built in or near low-income neighborhoods and communities of colour, the detrimental consequences of pollution have been disproportionately felt by residents of these areas. According to the Union of Concerned Scientists, for example, Asian Americans were exposed to 34 percent more soot than other Americans on average in 2019. The exposure rate was 24 percent greater for Black individuals and 23 percent higher for Latinos.

Questions to Consider:

1. How can Global South communities promote sustainability and green development while keeping associated costs low?
2. In a situation where action is needed urgently, what measures will cause immediate change?
3. How can corporations and institutions be penalized for not operating in accordance with sustainable principles?

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