UNEP

Bringing Countries to Zero Waste

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Introductions from your UNEP Dais

Dear Delegates,

Welcome to MiniMUNC 2022! My name is Jerry Yang, and I am honored to be your chair for the UNEP committee. I am currently a senior, and I've been a part of StuyMUN since my freshman year. This is my first time chairing a committee, and I am excited to use my MUN experience to make this committee enjoyable and informative. Outside of MUN, I'm also on the Parliamentary Debate team, the bowling team, the Transit and Urbanism Association, and I'm currently a Clubs and Pubs Co-Director for the Student Union. You can also find me loading up strategy games in my free time (such as HOI4).

The breadth of this topic poses a unique challenge, but it is also an opportunity. I encourage you all to embrace the unconventional when proposing solutions in this committee. MUN is all about extrapolating future actions from past ones, and I hope to see some innovative, but still effective, courses of action. I also encourage you to do standard Model UN things (i.e use the background guide, raise your placards, etc.) to guarantee that this committee will be great.

However, there needs to be balance. Resolutions to this committee should not aim to achieve wide-ranging goals that go beyond the scope of the committee(for example, ending the war in Ukraine or creating a new climate agreement). While we would be happy to read working papers about these topics, they are only peripherally related to the topic of this committee, and we advise you to be focused in your research.

Good luck with your preparations for this committee and I hope that this background guide will help you. If you have any questions or concerns, feel free to email me or Celise, and I look forward to meeting you all in October at MiniMUNC.

Sincerely,

Jerry Yang

jyang31@stuy.edu

Dear Delegates,

Welcome to MiniMUNC 2022! I'm Celise Lin, your director for the UNEP committee. Having joined StuyMUN as a freshman last year, I am looking forward to staying in this community for the rest of my high school years. This is my first year directing at StuyMUNC (I attended as a delegate last year), but I will do my best to ensure a fluid and engaging discussion. MUN is my only in-school extracurricular, but outside of school I play in a youth orchestra and enjoy any form of visual art in my free time.

Despite the prevalence of the issue at hand for this committee, a feasible solution hasn't been met due to the scale of the problem itself. I would recommend considering what methods of waste reduction have been proposed so far in the past few decades, why they haven't been as efficient as we'd like them to be, and how you could use them as platforms for you to jump off on. Keep in mind that no plan can ever just be implemented, as one factor always impacts a few dozen others when on the scale of a whole country, or even the world. Other than that, try to use the resources we provide and any information you find to be able to enter this committee more comfortably.

Don't be too daunted if this is your first conference! Use this as an opportunity to either get a sense of MUN or refine your skills if you're a returning delegate. My inbox is always open to any questions or concerns, as is Jerry's, so don't hesitate to ask.

Wishing you the best,

Celise Lin

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Committee Information

This committee is a General Assembly committee. This means that delegates take the roles of UN member countries, and should consider the measures that these countries may take based on their views and previous actions.

For many of you, this may be your first conference, so we'd like to remind you of the basic structure of Model U.N. committees (some small details may be omitted for the sake of brevity, but we will guide you through anything that's been skipped). There are more in-depth descriptions of some of the terms to be mentioned in the following paragraphs. At the start of committee, after roll call is taken, the speakers list will be opened. The speakers list is exactly what it sounds like: a list of delegates who'd like to speak to the committee as a whole. During these speeches, delegates will have the opportunity to introduce themselves and their points of view, as well as to explain what aspects of the issue at hand (in this case bringing the world to zero waste) concerns them.

After a few moderated caucuses, when delegates have introduced & debated an array of topics, your chair will likely allow you to motion for an unmoderated caucus. You'll be allowed (and encouraged) to stand up and approach delegates who you'd like to work with (whether it's because you feel similarly, because you think you could reach a compromise with them, or simply because you want to understand their point of view better). The first unmoderated caucus or two will likely be devoted to bloc-building, a process in which delegates form teams, or blocs, who they'd like to work with. Nothing official binds these blocs together, and delegates are free to move between them, but progress is usually best made in groups. Later, unmoderated caucuses (unmods) will likely be devoted to writing resolutions, a process through which delegates attempt to create a plan to tackle the issue at hand. Smaller blocs with less voting power will likely be forced to compromise a great deal with the rest of the committee, while very large blocs may not be forced to compromise at all.

This cycle of moderated and unmoderated caucuses will usually continue until resolutions are finalized and ready to be voted on. More than one resolution can pass (as long as they don't contradict each other), so make sure to listen to and participate in debate surrounding all resolutions, not just the one you're most familiar with.

One last thing to add is that throughout all of committee, notes will

be constantly passed around. This is how you will communicate with fellow bloc-members outside of unmods, and how you will invite delegates to speak to you during unmods. These notes are private, but please make sure to keep notes respectful and professional.

Below we have outlined some of the committee procedures.

Roll Call: At the beginning of each committee session, the chairs will take attendance. Delegates must respond with either, "Present" or, "Present and voting." If the delegation wishes to respond, "Present," they are able to abstain from voting for that committee session. If the delegation responds with, "Present and voting," the delegation must vote at every turn. If a delegation arrives late, the delegate must send a note up to the dais to inform them of their presence.

Motions: Motions are used for opening and closing debate, proposing a speakers list, moderated, or unmoderated caucus, and deciding to move to voting procedure. To propose a motion, lift your placard.

Speakers List: List of delegates which is often used to start committees. The speakers list is usually used to outline a country's agenda on the topic and jumpstart the networking process. If at any point during committee there are no new motions, the chair will revert back to the speakers list.

Moderated Caucus: A form of debate used to allow delegations to explain and debate their country's positions on a specific topic in front of the entire committee. For a moderated caucus to be considered, the motion must include the overall speaking time, time per speaker, and the topic which will be discussed. Subsequently, the chairs will call on countries wishing to speak until the allotted time for the moderated caucus is over.

Unmoderated Caucus: An informal style of debate used for delegates to have time to form blocs and work on draft resolutions. Formal debate rules are suspended, and delegates are allowed to leave their seats.

Although MiniMUNC 2022 does not require position papers, they are highly recommended. Position papers are a great way to summarize all of your research into one document that can be referred to throughout the committee and can help you understand and solidify your stance on the topic. If you would like to receive feedback on your position paper, please submit your paper to jyang31@stuy.edu **by October 20th.** Papers should be a maximum of about one page long (single-spaced with 12 point font.

Committee Background

Energy

87% of global greenhouse gas emissions come from energy production, with the richest countries contributing up to ninety times more than poorer ones. The disparity in carbon emissions reveals one facet of the energy problem; countries with low emissions are in such a state due to their lack of access to modern technology and efficient energy use. Lacking clean cooking fuels, 3 billion people in the world must resort to biomass like firewood, dung, and crop waste, resulting in indoor air pollution– dubbed by the WHO to be "the world's largest environmental health risk", resulting in 1.6 million deaths annually. The reliance on firewood also links energy poverty to deforestation, especially in the African continent, further contributing to climate change.

The other end of the spectrum, often more underscored due to the climate crisis the world faces, is the excess of insufficient energy use. As the rich get richer, they discharge up to 43 tonnes of carbon dioxide a year, at 9 times the global average of 4.8 tonnes.

Still, contrary to popular belief, the issue extends far beyond just the extremely rich, even with their already alarming rates. Meeting the current objective of keeping the global temperature less than 2 degrees Celsius above pre-Industrial Revolution temperatures would require immediate action in properly distributing efficient energy use. The only regions with carbon emissions close to the goal of net-zero are those suffering from energy poverty, leaving the world at a standstill, having to find common ground between too low and too high in energy use.

This double negative is worsened drastically by the world's overwhelming reliance on fossil fuels. Communities with energy poverty lack access to the fossil fuels that dominate modern energy sources, preventing them from adopting the modern technologies that grant better living conditions.

However, the immediate impacts of fossil fuels, from merely mining and gathering them, are responsible for many deaths, with fatalities rising in the oil and gas extraction industry and 10,000 workers dying a year from

exposure to coal power plant emissions. The indirect influences of burning fossil fuels are just as detrimental, with 1 in every 5 people dying from air pollution and, of course, the acceleration of climate change.

Coal remains the world's single largest source of energy, with 37% of the world's energy coming from coal. At the very bottom of both safety and non-pollutive measures, coal causes 24.6 deaths per terawatt-hour (dpt) of electricity production and emits 820 tonnes of greenhouse gasses per gigawatt-hour (tpg) of a plant's life cycle. Natural gas is currently the most widely-used alternative to coal, at 22% of global electricity, but its stance at 2.8 deaths per terawatt-hour and 490 tonnes per gigawatt-hour prevents it from being a completely viable alternative. Even oil, at only 3% of global electricity, constitutes 18.4 deaths per terawatt-hour and 720 tonnes of emissions.

In contrast, renewable sources of energy have much lower rates. There are a few major sources of renewable energy, all with much lower deaths and tonnes of CO_2 per terawatt-hour. However, there are some concerns that have delayed the implementation of renewables globally. For example, hydropower, the use of natural motion of water (usually through dams) to generate electricity, has a rate of 1.3 dpt and 34 tpg. Wind energy, which usually uses turbines, comes in at 0.04 dpt and 4 tpg. Nuclear energy, which uses nuclear fission reactors to generate energy, comes in at 0.03 dpt and 3 tpg. Nuclear waste, however, remains an unresolved problem with nuclear energy, and public perception of nuclear energy has been damaged by the Fukushima disaster in 2011. Solar energy is 0.02 dpt and 5 tpg, and solar panel construction costs have continued to decrease. However, there are concerns about the large amounts of rare earth minerals used to construct solar panels.

Currently, 66% of primary energy produced is lost in generation, transmission, and distribution. To make up for this, even more fuel is used, emitting even more gas, and even more power plants are built, depleting even more fuel. Developing technologies that could replace current power plants and circumvent the energy loss they generate is crucial in preventing more environmentally harmful plants from being built.

For the poorer quarters of the world, catching up to the good modern living conditions requires sustainable alternatives to fossil fuels. Renewable sources of energy often remain prohibitively expensive. As a result, renewable resources have actually decreased from 36% to 35% in global electricity production in the last three decades. Even so, there are hopes that as

renewables grow cheaper, more investors will recognize them as a benefit from both an environmental and an economic viewpoint. Falling energy prices also mean that overall expenses will decrease, allowing more economic growth– particularly for the poorest places in the world.

The fatalities from fossil fuels are preventable, too. Since lowering its fossil fuel emissions by 44% percent between 2012 and 2018, for instance, China has saved 1.5 million lives each year. If the world works together in moving away from its dependence on nonrenewables, a sustainable future can be achieved.

Food

Despite there being enough food production to feed everyone in the world, the goal of achieving zero hunger has been heavily burdened by waste, climate change, and poverty, all of which have been further driven by devastating events such as the COVID-19 pandemic and the war in Ukraine. Before the abrupt surge in hunger in recent years, food security had actually been on a stable path to being met. The prevalence of undernourishment had declined from 15 percent in 2000-2004 to 8.4 percent in 2019 before climbing back up to 9.9 percent in 2020. Now, up to 828 million people suffer from food shortages (when crops fail or are not distributed), most of whom are living in Asia or Africa. Up to 50 million people are on the brink of famine worldwide, particularly in Yemen, South Sudan, Ethiopia, and Nigeria.

Food available for consumption, measured by daily kilocalorie supply per capita, has increased overall throughout the past 6 decades. The world's calorie supply has gone from 2164.69 kcal in 1961 to 2939.54 kcal in 2019, with the most significant rises being in Africa and Asia.

The minimum dietary energy requirement (MDER) of an individual is used to measure the calorie intake one must meet to maintain a weight suitable for one's height– meaning the person has enough energy to expend for daily tasks. Failing to meet this threshold for an extended period of time indicates one to be malnourished. MDERs vary by country and differ each year, depending on factors like age structure, physical activity level, and agricultural work of the population.

Utilizing this metric to assess the world's food security, the FAO uses the

Coefficient of Variation (CV) to determine whether a country's average calorie intake meets its dietary needs, or its inequality of caloric intake. CV is measured on a scale of zero to one, with one being high dietary inequality. Besides having declined rather significantly in South America, from 0.31 in 1990 to 0.23 in 2020, CV values have not changed drastically, though they are particularly high in Sub-Saharan Africa, Iraq, and Haiti (0.40 and above).

Prior to the pandemic, the major reason most malnourished regions remained food insecure was the lack of uncontaminated, healthy food given to them. Currently, on top of that, food production, processing, and distribution are all halted by restricted work force, trade policies, and supply chains. The possible continuation of the pandemic poses a challenge to many proposed solutions, and so do increasing food prices and the changing will of consumers.

With household groceries being tossed at any mere blemish, restaurant meals leaving large uneaten portions, and farmers being unable to sell imperfect goods, around a third of food produced– about 1.3 billion tonnes– goes uneaten. Food loss often occurs before the products reach consumers, during processes such as production, storage, distribution, due to multiple factors, including pests and inadequate climate control. However, most of the food waste comes from consumers themselves, when they discard or don't use perfectly edible produce. 95% of discarded food ends up in landfills, where decomposition would produce high levels of methane, a greenhouse gas that contributes 40 times more per capita to global warming than carbon dioxide. Food loss and waste also contribute to resource exhaustion, including water, land, energy, labor, and capital.

In developing countries, 40 percent of losses occur at post-harvest and processing levels while in industrialized countries more than 40 percent of losses happen at retail and consumer levels. If even just one-fourth of the food currently lost or wasted globally could be saved, it would be enough to feed 870 million hungry people in the world.

Current Events

In the 21st century, countries have continued to work on industrializing themselves while being conscious of the impacts of climate change. With the adoption of the Kyoto Protocol in 1997 and the further global

cooperation in the 2016 Paris Agreement, countries have committed to a gradual transition away from fossil fuels. Many developed countries have begun to prioritize eliminating some of the largest polluters first. For example, the Nord Stream and the planned Nord Stream 2 pipelines transport Russian natural gas to Germany as an alternative to coal.

Russia's war in Ukraine has complicated matters, though. In the aftermath of the invasion, sanctions imposed on Russia by the European Union and the United States immediately led to the increase of energy prices throughout the world. Russia responded by reducing the flow of natural gas through Nord Stream and in some cases halting it entirely.

Russia's consistent threats of embargoing European countries over their support of Ukraine has further accelerated efforts to reduce dependence on Russian gas. Russia has shifted oil and gas exports to countries such as China and India for discounted prices while the rest of the world has turned to other sources, such as the USA, Saudi Arabia, and despite the widespread international sanctions against it, Venezuela.

World hunger had also been consistently decreasing, though this came to a halt in March 2020 with the beginning of the COVID-19 pandemic. Widespread pandemic lockdowns increased the popularity of food delivery services, which has led to a pivot in developed countries towards more disposable packaging. Furthermore, disruptions to the global supply chain throughout 2020 led to shortages of key supplies such as toilet paper.

Furthermore, with Russia's invasion of Ukraine in February 2022, global food prices have begun to skyrocket, since Russia and Ukraine are some of the world's largest producers of staple crops. With many developing countries being among the world's largest food importers, it is essential for countries to ensure that world hunger increases as little as possible. While progress has been made with the recent agreements to resume grain exports from Odessa, countries have also moved in the opposite direction, with a major example being India's ban on grain exports.

Questions to Consider:

- How can the world best utilize its natural resources for its collective benefit?
- What solutions work best for developing countries? How can we support developed countries as well?
- How can we change individual behavior to reduce waste on the household level?

Committee Positions

Asia

With the densest population in the world, and having many countries leading the global production markets, Asia has some of the world's largest producers of food, and the responsibility of ethical waste reduction falls heavily on a large portion of this bloc. Despite this, half the population in Asia currently lacks access to adequate food, at nearly half a billion undernourished people, adding to the steadily rising health risks to its people, especially children. The COVID-19 pandemic has exacerbated this crisis, adding to loss of household income, reduced physical activity, disruptions in essential services, and an increase of about 50% in food prices. With measures such as India's ban on exports, it is clear that regions, with four in every ten people going hungry.

Eastern Europe

With an influx of refugees and grain harvests disrupted by the war in Ukraine, this bloc includes many of the world's top producers of staple crops, and coping with the continued effects of the war will be a necessity to mitigate waste and transition from fossil fuel energy, which these countries still mainly rely on.

Africa

Africa is home to some of the fastest-growing renewable energy industries in the world, with solar and wind capacity increasing by 13 percent and 11 percent, respectively, and hydropower soared 25 percent from 2019-2020. However, with the pandemic bringing on economic crises, some African countries have begun to reject renewables in favor of economic gain.

In general, African countries are some of the world's largest importers of food, as the continent's agricultural production is hampered by accessibility problems. In the Horn of Africa, for example, an outbreak of desert locusts has wrecked agricultural production, and Sub-Saharan Africa remains a hotspot of global hunger, with malnutrition widespread. Conflict within many countries in this committee also hampers food accessibility.

Middle East

The Middle East has been a hotspot of conflict in the 21st century, and as a result, hunger is widespread in war-torn regions such as Afghanistan, Yemen, and Syria. While global programs to fight hunger have been ongoing for years, efforts to move economies away from oil have been less successful and

debate is heated on the future of energy in the Middle East, especially with the new constraints of Russia's reduction of exports.

North America + Western Europe

Countries in this group include some of the world's top producers and consumers of fossil fuels, as well as some of the world's largest producers of staple crops such as corn and wheat. However, although they do not suffer from widespread hunger, the war in Ukraine and supply chain issues have caused major inflation and energy price increases, jeopardizing progress in moving towards renewable energy.

Latin America

Implementing usage of sustainable resources may prove to be trouble for this region, due to its being a major contributor in global crude oil exports. Still, despite the potential decrease in petroleum trades, Latin America can turn to its already powerful hydropower plants and other renewable resources. Even with the improvements in energy efficiency,

The region has reported the highest rise in food insecurity compared to other

Works Cited

Aday, Serpil, and Mehmet Seckin Aday. "Impacts of COVID-19 on Food Supply Chain." *Food Quality and Safety*, vol. 4, no. 4, 24 Aug. 2020, pp. 167–180. *oup*, academic.oup.com/fqs/article/4/4/167/5896496, 10.1093/fqsafe/fyaa024.

"Coal Pollution Fatalities." *IEEE Spectrum*, 22 Oct. 2009, spectrum.ieee.org/coal-pollution-fatalities.

Harvard T.H. Chan. "Food Waste." *The Nutrition Source*, 26 Apr. 2017, www.hsph.harvard.edu/nutritionsource/sustainability/food-waste/.

Hasell, Joe, and Max Roser. "Famines." *Our World in Data*, 10 Oct. 2013, ourworldindata.org/famines#the-our-world-in-data-dataset-of-famines.

"How Much Primary Energy Is Wasted before Consumers See Value from Electricity? - Enerdynamics." *Www.enerdynamics.com*, www.enerdynamics.com/Energy-Currents_Blog/How-Much-Primary-Energy-Is-Wasted-Before-Consumers-See-Value-from-Electricity.aspx.

"Hunger in Asia." *Www.compassion.com*, www.compassion.com/poverty/hunger-in-asia.htm#:~:text=Asia%20is%20home%20to%20more.

Ritchie, Hannah, and Max Roser. "Energy." Our World in Data, 2020, ourworldindata.org/energy.

Roser, Max. "Why Did Renewables Become so Cheap so Fast? And What Can We Do to Use This Global Opportunity for Green Growth?" *Our World in Data*, 1 Dec. 2020, ourworldindata.org/cheap-renewables-growth.

Ryssdal, Kai. "How an Oil Shortage in the 1970s Shaped Today's Economic Policy - Marketplace." *Marketplace*, 31 May 2016, www.marketplace.org/2016/05/31/how-oil-shortage-1970s-shaped-todays-economic-policy/.

Tan, Jaclyn. "Global Food Scarcity: Definition, Distribution, Roadblocks | SDN | Nebraska." *Unl.edu*, 2018, sdn.unl.edu/global-food-scarcity.

Testani, Christopher. “Food Waste.” *NRDC*, www.nrdc.org/food-waste.

United Nations. *The Sustainable Development Goals Report 2022*. 2022.

““Critical”: Hunger Rises 30% in Latin America since 2019, Says UN.” *Www.aljazeera.com*, www.aljazeera.com/news/2021/11/30/hunger-increased-30-percent-latin-america-since-2019-un. Accessed 3 Sept. 2022.

World Food Programme. “Ending Hunger | World Food Programme.” *Www.wfp.org*, 2022, www.wfp.org/ending-hunger.