4th Annual High School Conference

March 1-2, 2019

United Nations Environmental Programme (UNEP)

Hello delegates and welcome to Oakland University's fourth annual Model United Nations Conference! I'm excited to chair the United Nations Environmental Program (UNEP) for this conference and look forward to moderating a lively debate! My name is Courtney Smith, I'm majoring in English and Secondary Education and minoring in Spanish, and I've participated in Model UN, both as a delegate and a staff member, for four years. Your co-chair is Reese Van Houten, she's majoring in International Relations and minoring in Spanish, and has participated in Model UN, both as a delegate and a staff member, for two years. Your rapporteur is Erica Potter, she's majoring in Political Science, and has attended one Model UN conference as a delegate.

One of the most important aspects of Model United Nations is the debate that delegates participate in in their committees. The rules that govern this body ensure that debate is productive and enjoyable for all, and, as such, it is important that all delegates understand the rules and follow them while committee is in session. In addition to sound knowledge of the rules, I will expect delegates to be well researched on the topics they will be discussing, as well as their country's position on those topics.

While I have fairly high expectations for your knowledge of the rules and of the topics, my chairing style is more lenient than not. The most important thing is to ensure that debate is moving along and everyone is participating, and, as long as this is the case, the direction that debate moves in and the actions taken by this committee are up to you.

Introduction to the United Nations Environmental Program

The United Nations Environmental Program was established in 1972 at the United Nations Conference on the Human Environment in Stockholm, Sweden.[1] The UNEP "sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system, and serves as an authoritative advocate

[1] http://www.un.org/ga/search/view_doc.asp?symbol=A/CONF.48/14/REV.1

for the global environment,"[2]. The UNEP is funded by 71 member states and uses this funding for the Environment Fund, which supports the majority of the work done by the UNEP, earmarked contributions, which contribute to specific actions being taken by the UNEP, and the regular budget, which supports the secretariat.[3] The UNEP runs Earthwatch, "an international monitoring system designed to facilitate the exchange of environmental information among governments,"[4]. Additionally, the UNEP provides technical assistance for the Montreal Protocol on Substances that Deplete the Ozone Layer (1987), which "is a global agreement to protect the stratospheric ozone layer by phasing out the production and consumption of ozone-depleting substances,"[5] the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989), which is meant to "protect human health and the environment against the adverse effects of hazardous waste,"[6] and the UN Convention on Biological Diversity (1992), which is meant to conserve biological diversity and ensure fair use of genetic resources[7]. The UNEP frequently works in conjunction with the Food and Agriculture Organization to implement environmental change.[4]

Smart Agriculture

The second Sustainable Development Goal of the United Nations is zero hunger. This goal aims to ensure safe, nutritious, and sufficient food to all by 2030. Currently, approximately 815 million people in the world are undernourished, with Southern Asia facing the greatest burden. Agriculture provides jobs for 40% of today's global population, and more than 500 million smallholder farms provide food to a large portion of the developing world. However, 75% of crop diversity has been lost since the 1900s.[8] Climate change, soil erosion, and land degradation reduce agriculture productivity, which in turn increases undernourishment. If climate change continues at the current rate, 500,000 people will die by 2050 due to food scarcity.[9] More than 50% of calories consumed by humans come from rice, maize, and wheat. Because of this lack of diversity, any event that causes the extinction of one of these plants would be catastrophic to human health. However, there are more than 5000 varieties of edible plants, and there are methods of agriculture that circumvent the effects of climate change.[10] One example of this is climate smart agriculture (CSA). This approach pursues three objectives: increased productivity, enhanced resilience, and

[2] https://www.unenvironment.org/about-un-environment/why-does-un-environment-matter

[3] https://www.unenvironment.org/about-un-environment/funding/funding-facts

[4] https://www.britannica.com/topic/United-Nations-Environment-Programme

[5] https://www.state.gov/e/oes/eqt/chemicalpollution/83007.htm

[6] http://www.basel.int/TheConvention/Overview/tabid/1271/Default.aspx

[7] https://www.cbd.int/history/

[8] https://www.un.org/sustainabledevelopment/hunger/

[9] https://www.washingtonpost.com/news/energy-environment/wp/2016/03/02/food-scarcity-caused-by-climate-change-could-cause-500000-deaths-by-2050-study-suggests/?noredirect=on

[10] http://time.com/5216532/global-food-security-richard-deverell/

reduced emissions. CSA "systematically considers synergies and tradeoffs that exist between productivity, adaptation and mitigation," and "aims to capture new funding opportunities to close the deficit in investment."[11] Another example of smart agriculture is vertical farming. Vertical farms utilize aeroponics or hydroponics, both systems of farming that don't require soil, to maximize available space and minimize resource usage.[12] Additionally, corporations have begun using "precision farming," a method that uses information about crop yields, soil-mapping, fertilizer applications, weather data, and machinery to maximize productivity.[13] Smart agriculture is important to the international community because it may be the only way to ensure food security in the coming decades.

Food security has been discussed by the United Nations time and time again, and is often brought up in relation to climate change. In 2014, at the UN Climate Summit, the Global Alliance for Climate-Smart Agriculture (GACSA) was launched, and now has 236 members, including many member nations of the UN, as well as NGOs and corporations.[14] The GACSA works with farmers and governments to create policy and practice briefs and holds an annual forum to highlight collaborative solutions to agricultural problems.[15] In addition to the GACSA, the Food and Agriculture Organization of the United Nations (FAO) has created the Mitigation of Climate Change in Agriculture (MICCA) Program which works with countries and NGOs to create resources and knowledge about the effects of the climate change on agriculture. The MICCA Program also creates Nationally Appropriate Mitigation Actions (NAMAs), which are policies that are created based on region and are enacted by governments and farmers.[16] The European Union[17] and the African Union[18] have partnered with the United Nations on measures to adapt agriculture to the changing climate, and the Asia Cooperative Dialogue has discussed improvements to agricultural methods at their triennial summit[19].

In 2014, Uruguay began to adopt climate smart agricultural practices, and has since implemented these measures on 2,946,000 hectares (7,279,724 acres; approximately 17% of Uruguay's total area) of land. By doing so, they have provided potential for carbon sequestration of nine million tons of C02 annually.[20] Uruguay has also created the Sustainable Management of Natural Resources and Climate Change Project which aims to establish an agriculture Information and Decision Support System (IDSS) to "integrate, synthesize and generate critical and timely

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[11] https://www.worldbank.org/en/topic/climate-smart-agriculture

[12] https://www.agritechtomorrow.com/article/2017/10/what-is-vertical-farming/10273/

[13] https://www.forbes.com/sites/federicoguerrini/2015/02/18/the-future-of-agriculture-smart-farming/#4d2fc013c42c

[14] http://www.fao.org/gacsa/members/members-list/en/

[15] http://www.fao.org/gacsa/annual-forum/en/

[16] http://www.fao.org/in-action/micca/international-fora/en/

[17] http://www.fao.org/europeanunion/eu-projects/climate-smart-agriculture/en/

[18] https://au.int/en/pressreleases/20171027/report-climate-smart-agriculture-practices-help-smallholder-farmers-deal

[19] https://www.mei.edu/publications/asia-cooperation-dialogue-acd-progress-and-potential

[20] https://www.worldbank.org/en/topic/climate-smart-agriculture

information in relation to natural resource management, short and medium term climate forecast, as well as potential long term changes and impacts,"[21]. This system will provide important information that will allow farmers to implement climate smart systems. In the past four years, Uruguay has made great strides towards integrating climate smart techniques into their current agricultural systems, and is a good example to look to when considering what measures must be adopted regarding this issue.

Industrial agriculture is characterized by large scale cultivation of a limited number of crops, use of pesticides and fertilizers, and confined animal feeding operations. It is the dominant food production system in the United States. This system of agriculture is harmful to humans, causing disease through direct contact with pesticides and water contamination; damaging to farmland through soil depletion, reduced drought resistance due to irrigation, and erosion; and harmful to the economy due to the cost to local governments to remove contamination and pollution caused by pesticides and waste runoff from the water.[22] The main system of agriculture utilized in the United States will not withstand climate changes and is actively harmful to the environment.

Questions to Consider:

- What systems of agriculture does your country use?
- How much food does your country produce through farming?
- What is your country's climate? Does this affect your country's use of agriculture?
- Does your country use precision agriculture (site specific crop management), vertical farming, or other forms of innovative agriculture?
- Does your country have systems in place to limit water use in agriculture?

Additional Resources:

http://www.fao.org/climate-smart-agriculture/en/

https://csa.guide/csa/what-is-climate-smart-agriculture

https://www.worldbank.org/en/topic/climate-smart-agriculture

https://www.forbes.com/sites/federicoguerrini/2015/02/18/the-future-of-agriculture-smart-farming/#3167234d3c42

[21] http://documents.worldbank.org/curated/en/669731468309575314/Uruguay-Sustainable-Management-of-Natural-Resources-and-Climate-Change-Project

[22] https://www.ucsusa.org/food_and_agriculture/our-failing-food-system/industrial-agriculture/hidden-costs-of-industrial.html

Combatting Ocean Waste

The fourteenth Sustainable Development Goal of the United Nations is life below water. This goal aims to ensure conservation and sustainable use of marine resources, such as seas and oceans.[23] One major threat to our oceans is marine waste. Marine waste is human-made solid material that is disposed of on beaches, in waterways, or into the ocean. The Trash Free Seas Alliance estimates that 8 million metric tons of plastic enters the ocean each year, and that plastic only accounts for 60-80% of marine debris. The other 20-40% is made up of paper, wood, metal, and other manufactured materials. Waste that ends up in the ocean is harmful to marine wildlife, killing over one million marine animals each year[24]. Ocean waste spreads disease to humans through contaminated sea life and through improperly disposed medical waste, which poses a serious threat to beachgoers. Additionally, it negatively impacts the economies of coastal regions that rely on tourism and the seafood industry. 85% of tourism revenue in the United States comes from coastal ocean states, and, in 2007, economic activity related to the ocean created 47 million jobs.[25] Due to the harm marine waste causes to sea life and to humans, it is an issue that needs to be dealt with swiftly by the international community.

The United Nations and other international bodies have started work on cleaning up the oceans, and have made some progress. In 2017, Fiji and Sweden co-hosted an Ocean Conference in New York to commemorate World Oceans Day. Governments, NGOs, and UN entities made voluntary commitments to keep plastics out of the oceans, phase out non-biodegradable plastics, and create protected marine areas.[26] That same year, nearly 200 countries signed a UN resolution in Nairobi pledging to eliminate plastic pollution in the sea.[27] In 1986, Linda Maraniss and Kathy O'Hara, both employees of the United States Ocean Conservancy, began a program that would grow into the International Coastal Cleanup. They asked for volunteers to pick up trash on beaches and record the items they found. Now, volunteers from more than 100 countries participate in the Clean Up.[28] The Marine Strategy Framework Directive (MSFD) requires all member nations of the European Union to ensure that "properties and quantities of marine litter do not cause harm to the coastal and marine environment" by 2020.[29] The Sustainable Seas Trust, a non-profit organization in Africa, began the African Marine Waste Network, which is working towards "zero plastics to the seas of Africa by 2035."[30] In 2013, The Ocean Cleanup was founded by Boyan Slat, a Dutch entrepreneur. The Ocean Cleanup is developing a passive system to collect ocean waste

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[23] https://sustainabledevelopment.un.org/sdgs

[24] https://conserveturtles.org/information-sea-turtles-threats-marine-debris/

[25] http://www.oceanhealthindex.org/methodology/components/trash-pollution

[26] https://oceanconference.un.org/callforaction

[27] https://www.reuters.com/article/us-environment-un-pollution/nearly-200-nations-promise-to-stop-ocean-plastic-waste-idUSKBN1E02F7

[28] https://oceanconservancy.org/trash-free-seas/international-coastal-cleanup/

[29] http://ec.europa.eu/environment/marine/good-environmental-status/descriptor-10/index_en.htm

[30] https://africanwastenetwork.org.za/

in order to reduce the garbage patches that have accumulated, specifically the Great Pacific Garbage Patch, located between the American states of Hawaii and California.[31]

Plastic is one of the world's greatest environmental challenges, and just five countries are dumping more plastic into the oceans than the rest of the world combined. Indonesia is home to the most polluted river in the world, the Citarum River, which necessitated plastic removal by the army. The city of Hong Kong, in China, goes through 5.2 million plastic water bottles per day. Street vendors and the food delivery industry in Thailand and Vietnam contribute millions of tons of plastic, mostly in the form of silverware. The Boracay Island, in the Philippines, was closed for half a year to clean up marine waste and make the beaches safe for tourists. All five of these countries; Indonesia, China, Thailand, Vietnam, and the Philippines, have begun to limit their plastic usage, but it will take years to eliminate the plastics they have introduced to the environment.[32]

Dozens of countries, including China, France, India, Italy, Kenya, Myanmar, and Rwanda, have banned the use of plastic bags in an attempt to keep them out of drains and waterways, and dozens of other countries, including the United Kingdom, Ireland, Greece, Poland, Sweden, Brazil, and Spain, have partially banned or taxed them.[33]

Questions to Consider:

- To what extent does your country directly use the ocean (fishing, hydroelectric power generation, tourism)?
- How does your country handle waste management?
- Does your country have a recycling program?
- Does your country have laws or regulations to limit pollution?
- Does your country participate in ocean clean-up efforts?

Additional Resources:

https://news.nationalgeographic.com/news/2015/01/150109-oceans-plastic-sea-trash-science-marine-debris/

https://www.marinelittersolutions.com/about-marine-litter/what-is-marine-litter/

http://web.unep.org/unepmap/un-declares-war-ocean-plastic

https://www.unenvironment.org/explore-topics/oceans-seas/what-we-do/addressing-land-based-pollution/why-does-addressing-land

[31] https://www.theoceancleanup.com/about/

[32] https://www.forbes.com/sites/hannahleung/2018/04/21/five-asian-countries-dump-more-plastic-than-anyone-else-combined-how-you-can-help/#4f603ab41234

[33] https://www.reusethisbag.com/articles/where-are-plastic-bags-banned-around-the-world/