

CERRITOS CONFERENCE 2021



FAO

TOPIC:

EXPANSION OF CLIMATE-
SMART AGRICULTURE

DIRECTOR: MIKAYLA GUERRERO

October 9th, 2021

To Delegates of CHSMUN Novice 2021

Dear Delegates,
Welcome to CHSMUN Novice 2021!

It is our highest honor and pleasure to welcome you all to our 2021 novice conference here at Cerritos High School. On behalf of the Cerritos High School Model United Nations program, we are proud to host this conference, where you will become more knowledgeable on international issues, participate in intellectually stimulating discussions, and create new and everlasting friendships.

The CHSMUN program continues to compete around the world as a nationally ranked MUN program. Our delegates utilize diplomacy in order to create complex solutions towards multilateral issues in the global community. Our head chairs are selected from only the best seniors of our program, undergoing a rigorous training process to ensure the highest quality of moderating and grading of debate. Furthermore, all the topic synopses have been reviewed and edited numerous times. We strongly believe that by providing each and every delegate with the necessary tools and understanding, he or she will have everything they need to thrive in all aspects of the committee. We thoroughly encourage each delegate to engage in all of the facets of their topic, in order to grow in their skills as a delegate and develop a greater knowledge of the world around them.

Although there will be a few changes to our conference due to Covid-19, our advisors and staff have put in countless hours to ensure delegates have an amazing experience. Our greatest hope is that from attending CHSMUN 2021, students are encouraged to continue on in Model United Nations and nevertheless, inspired to spark change in their surrounding communities. With this strong circuit consisting of over 500 delegates, CHSMUN Novice 2021 will provide a quality experience for beginner delegates to enhance their speaking and delegating skills.

If you have any questions, comments, or concerns, please contact us! We look forward to seeing you at CHSMUN Novice 2021!

Sincerely,

Anushka Panjwani & Naima Dellawar

sg.cerritosmun@gmail.com

Secretary-Generals

A Note From The Director:

Hello delegates!

My name is Mikayla Guerrero and I am currently a senior at Cerritos. I am thrilled to be your director for the UN Food and Agriculture Organization committee for the 2021 Cerritos MUN Fall Conference. I have been in MUN since my freshman year and my time in MUN has been one of the best experiences of my life. Because of this program, I have bettered my public speaking, critical thinking, and writing skills, all of which have made me feel more confident as a delegate and an individual. Through this program, I have also made many friendships that will last a lifetime. Outside of MUN, I am involved in a number of school clubs such as Key Club, Surf Rider, HOSA, and NHS. Further, I have played on my school's varsity volleyball team for the past two years. During my free time, I enjoy watching K-dramas, trying new foods, hiking, drinking coffee, and spending time with friends and family. Lastly, I am a huge fan of Ariana Grande and Olivia Rodrigo and not one day goes by without playing their songs. Feel free to reach out to me with any questions that you may have, as I want to ensure that your experience at Cerritos MUN is one to remember. Good luck!

Sincerely,

Mikayla Guerrero
Director, FAO
Committee Email: Fao.CHSMUN@gmail.com

Committee Introduction:

The Food and Agriculture Organization is one of the oldest specialized agencies of the United Nations. Since its founding in October 1945, the FAO has made strides to combat global hunger by addressing all aspects of food insecurity. Originally stationed in Washington D.C. in the United States, it was relocated to Italy, Rome. The FAO has over 194 member nations involved serving in over 130 countries, and targets worldwide climate issues. The Food and Agriculture Organization is separated into eight different sections: agriculture and consumer protection, climate, biodiversity, land and water department, economic and social development, fisheries and aquaculture, forestry, corporate services and technical cooperation and programme management. With most of the branches dealing with physical and technical issues, the branch involved by the United Nations does much more. With leadership from the Conference of Member Nations, the FAO works towards influencing policy and various global frameworks to ensure exceptional classification, correction of budgets for future societies, and consistently enhances previous efforts. During this conference, a new Director-General and the governing body consisting of 49 member states is elected for a three-year term. As a specialized agency of the United Nations, the FAO is funded by both voluntary and assessed contributions. In the past, the FAO has taken action against desertification where livestock is raised, assisted in the land management for settlements in Asia, Africa, and South America, and has worked towards building reliable eco-friendly agriculture.

Topic A: Expansion of Climate-Smart Agriculture

Background:

In the 1970s, the US Environmental Protection Agency found that greenhouse gas emissions (GHG) have increased by 90% since 1900, which was mainly caused by the worldwide expansion of technologies that utilize fossil fuel combustion. This led to one of the first climate-based conferences, the World Climate Conference in 1979, which raised awareness of human impacts on the environment. Seeing that a huge percentage of GHG emissions derived from unsustainable farming practices, the Rio Convention of 1992 -an international conference intended to address the adverse effects of human intervention with our world's climate systems- came into effect. Since the Rio Convention, the controversies regarding the promotion of sustainable agricultural policy are still in discussion today. One of the methods suggested by participating governing bodies was to implement new methods of cultivation which lessen the ecological footprint of farmers and other producers. With over 650 million people around the world facing threats of food insecurity, which is also catalyzed by a rise in crop yields and the decline of soil and water biodiversity, a need for enhanced methods of crop production to sustain a growing population in a time of rampant pollution is crucial. Hence, the FAO developed Climate-Smart Agriculture as a way to address these controversies. Climate-Smart Agriculture (CSA) is known as the process of revolutionizing agricultural practices to best fit the needs of the environment and mitigate the effects of climate change on food security. CSA systems were first developed in 2009 and have worked with numerous countries, majority of which are developing, to adjust their processes of production. The approach that CSA systems utilize include ecosystem management, identification of areas susceptible to climate change, and farming system alterations. Ecosystem management refers to procedures which safeguard the biodiversity of the landscape while managing new sustainable agricultural practices in the area in ways that include improvements in livestock feeding strategies. To identify areas of vulnerability to climate change, CSAs use a process of gathering analytical data along with lawmakers to identify which areas are in need of dire adaptation strategies. Further, CSAs collaborate with farmers at the local and international level and educate them on areas such as agro-ecosystems, livestock, crops, and local climatic patterns. Moreover, CSAs have been proven to provide food for the planet by integrating its three pillars to achieve Sustainable Development Goal 17 as well, which calls for interdisciplinary collaboration across borders. These pillars include increasing agricultural productivity and farmer incomes, adapting and building resilience of ecosystems to climate change, and reducing GHG emissions throughout the world. This was put into effect in China, where CSA projects have proven to enhance water-use efficiency in 44,000 hectares of farmland, introduced sustainable technologies which boosted production of maize by 9% and rice by 12%, and have increased the incomes of more than 29,000 farmers throughout the country. All in all, this multi-faceted approach to improve food security and the environment is one that has been researched and discussed by many. However, one problem to consider is that climate-smart

agriculture has only been launched in 33 countries. Due to the fact that agriculture accounts for 25% of the world's greenhouse gas emissions, the dominance of industrial processes in the agricultural sector overshadows the benefits of CSA. With that being said, some factors which hinder other countries from enforcing CSA include, but are not limited to, unclear standards to define what is truly considered "Climate-Smart", failure to protect farmers from evacuation of their lands, and countries' lack of funding for such sustainable activities. Therefore, more action needs to be taken on a local and international level to expand and successfully implement CSAs into more regions. But, it is important to take into consideration that CSA is not a universally applied technique, as it varies according to each country's environmental, social, and economic needs. Thus, delegates should also propose numerous ways on how to collaborate with officials to find procedures which would make CSAs more accessible and effective in each region.

United Nations Involvement:

With pressure from the international community to reduce the effects of climate change and lessen industrial emissions, the United Nations have worked all throughout the late 20th century to address these issues. The United Nations Environment Programme's statement on promoting green economies, dubbed the "Green Economy Report", was proposed to promote social equity and reduce environmental risks. The "Green Economy Report" is aligned with the 2030 Agenda for Sustainable Development and is seen as a step towards a life of sustainability. While it is important to transform communities to sustainable ideals, the FAO felt that in order to achieve a green economy, greener agriculture must be enforced to be a foundation for a green economy. As a result, the FAO proposed the "Greening Economy with Agriculture" in 2005 as a basis for green growth efforts, specifically in the Asia and Pacific Region. From then on, the FAO has worked to promote a method that would be more inclusive and align with both greener economies and food production. Consequently, the United Nations first launched Climate-smart Agriculture in 2010 and was introduced in the Hague Conference on Agriculture, Food Security, and Climate Change as a proposal to tackle the three following objectives: sustainably increase food supply while in consideration of agricultural productivity income, strengthening methods of climate change adaptation, and to remove greenhouse gas emissions. From then on, CSA has been used to incorporate approaches that align with one of the 14 themes of the FAO: supporting sustainable development in climate change. To support work on the expansion of Climate-Smart Agriculture, the FAO has made numerous programmes to integrate CSAs in more areas. Some projects include FAO's Economics and Policy Innovations for Climate-Smart Agriculture (EPIC), which supports evidence-based policy to reform institutions and current investments in sustainable agricultural development and food security. Another notable programme created by the FAO was the Mitigation of Climate Change in Agriculture (MICCA) programme which proved that the implementation of Climate-Smart Agriculture was successful in reducing greenhouse gas emissions, improving the welfare of local communities to better adjust to climate change, and increase food production through technical research and field work. This was recognized in the UN Framework Convention on Climate Change as an essential negotiation to combat climate change so that other lawmakers highly suggest these methods for their own respective countries. Climate-Smart Agriculture has also appeared in numerous resolutions passed by the UN, such as in Resolution A/C.2/75/L.56. Resolution A/C.2/75/L.56 was approved

by the General Assembly's Second Committee at the 75th session in November 2020, as it stresses the need for action for recovery and monitoring of malnutrition and hunger while ameliorating the effects of climate change in agricultural development. Moreover, CSAs were also recognized for their efforts in carrying out Sustainable Development Goals 1 and 2 specifically, which call for the eradication of poverty and hunger.

Case Study: Bangladesh

With 70% of its land reserved for agricultural development and 50% of its population employed in the agriculture sector, Bangladesh was in a dire need for alternatives to their current farming practices in order to overcome the many challenges they face such as population growth, inadequate management practices, loss of arable land, unfair pricing of produce, and ultimately, climate change. Since 2002, the country has suffered a loss of 80,000 ha of arable land annually, which has led to lesser crop productivity and worsened the ongoing food insecurity dilemma. This has negatively affected the lives of more than 40 million individuals within Bangladesh alone, and this number continues to rise in correlation with the prevalence of the climate problem. As a response, the Bangladesh government had incorporated Climate-Smart Agriculture to take an inclusive approach to this issue. However, doing so was not easy, as the agriculture sector of the country is extensive and the procedures had to be done according to the differing areas and climates of Bangladesh. In order for Climate-Smart Agriculture to be a reliable and feasible solution to the problems, the country administered the Livestock and Dairy Development Project in 2018 in collaboration with the FAO. The objective of the Livestock and Dairy Development Project focused on the improvement of the productivity and flexibility of small-holder farmers in a four pronged approach: broadening on-farm productivity, encompassing profitability and safety by utilizing climate smart livestock management, and healthier approaches to animal breeding, health, and nutrition. Through this initiative, the country was able to implement low-emissions technologies such as GHG inventory systems for activities like milk chilling and transport. These technologies were funded by the World Bank and the US, as they have provided resources to the country throughout the duration of this project. The Livestock and Dairy Development Project was also associated with Bangladesh's Low Emission Development Strategy in order to ensure its efficiency. As a result of this project, more than 80% of Bengali farmers had reported an income increase by 7% and an overall decrease in GHG emissions by 4% within a two year period. Without the use of Climate-Smart Agriculture, Bangladesh would have not seen these improvements on an agricultural, social, and economic scale.

Bloc Positions:

Western: The Western Bloc has implemented a number of initiatives in order to expand Climate Smart Agriculture into numerous regions. For example, they enforced the North American Climate Smart Agriculture Alliance in order to review the changing climatic conditions in the region, support farmer leadership, and formulate recommendations in order to meet climate

adaptation needs. This alliance has also encouraged climate smart research in collaboration with the UNFCCC and other UN bodies to enhance agriculture across the region. Further, the majority of the western bloc has utilized some sort of CSA practice in a wide range of landscapes. Whether it is through no-till agriculture, crop rotation, or cleaning runoff before entering cultivation areas, these revolutionary techniques have been extremely successful in reducing emissions from agriculture.

Latin America and Caribbean: In addition to making strides towards combating food insecurity in the region, the Latin America and Caribbean Bloc has utilized Climate Smart Agriculture in a majority of its countries, making this bloc the forefront in Climate Smart Agriculture development and implementation. Argentina, who is the regional leader in agricultural research and development, has enforced no-tillage techniques to reduce soil erosion, nutrient and fertilizer enhancers to support different soils, and the National Appropriate Mitigation Actions in order to escalate CSA uptake. The country has been a model for its neighbors and continues to expand funding and research for CSAs. As a result, food production has increased by 6.5% in the past 10 years. Hence, more than 85% of the Latin America and Caribbean Bloc has taken appropriate actions toward CSA conversion, seeing the positive effects CSAs have had on food production and the environment.

African: With fluctuations in the African Bloc's climate and weather, CSAs have been harder to implement in this region. Because climate change and food insecurity are two problems that Africa faces to this day, researchers found that Climate Smart Agriculture was one of the most appropriate solutions. However, the World Bank noted that smallholder farmers would not be able to adapt CSA practices and would have troubles maintaining them if enforced. Therefore, after a systematic literature review of approximately 500 documents with surveys from more than 200 farmers in Kenya and Burkina Faso, researchers found that this conceptual framework would be difficult to consistently practice each day by farmers. Although the African bloc has made efforts to adapt to CSA, it has not been able to successfully implement it without intervention from individuals at a local and national level.

Asian-Pacific: Similar to the African bloc, many smallholder farmers were unable to integrate CSAs into their current farming practices due to a lack of support from outside factors. In 2017, about 518 million people were found to be insecure in the Asian-Pacific region. Unfortunately, climate change can cause this number to exponentially increase. To combat this, organizations such as the International Rice Research Institute and the ADB have partnered with countries such as Bangladesh, Nepal, and Cambodia in 2019 to introduce resource-saving technologies, which were found to be extremely climate-smart and a great way to slightly increase food production. One of the most notable technologies was implemented in Cambodia, where the direct-seeded rice technology had decreased human labor by 60%-79% and increased rice yield by 26%-50%. Further, greenhouse gas emissions from rice production had decreased from 98 kg/ha to 68 kg/ha, which ultimately reduced GHG emissions throughout the country. Seeing the successes in such countries, more organizations have begun partnerships with other Asia-Pacific governments to ameliorate the effects of climate change and food insecurity.

Basic Solutions:

To ensure efficacy of proposed solutions, delegates should be knowledgeable about subtopics in regards to this issue which include the socioeconomic impact of CSA, methods of implementation in varying climates, ability to sequester greenhouse gases, and cross-sector approaches to expand CSAs. Further, it is important to keep in mind that solutions must align with the needs of countries in all regions of the world so that it can be effective for a much broader community. This was seen in the works of the World Business Council for Sustainable Development (WBCSD) for CSAs which provided a blueprint for farmers to decrease GHG emissions and general resource use in rural communities. This has been enforced in more than 23 countries and has worked with over 10,000 farmers in mitigating climate change in agriculture. This blueprint served as the backbone for future initiatives and was successful in bettering capacity building. That being said, the creation of the WBCSD has opened up opportunities for farmers to adapt to climate change and enhance crop production to address food insecurity. Another area that delegates need to examine is to determine which countries are in need of aid and which countries are fortunate enough to provide for others. For example, India's Zero Budget Natural Farming works with the Natural Academy of Agricultural Sciences to promote scientific validation of the newly developed agricultural practices. This natural farming method includes chemical free agriculture, relies on agro-ecology, reduces the need for fertilizers and pesticides, and brings down the cost of production to nearly zero percent in order to avert back to a pre-green revolution approach. As it is based on four pillars such as Jeevamrutha (mixture of dung with soil to convert it into "green manure" for fertilizer), Bijamritha (concoction of leaves and other plants as a biological method of integrated pest management), Acchadana (to protect topsoil by tilling), and Whapasa (to combine water and air molecules in the soil to reduce irrigation requirements), India's farms have converted into greener agricultural systems. Just like India, delegates should look for programs which have been effectively implemented in other countries to provide as a resource for those who lack sustainability. Through this, delegates will be able to form alliances to expand CSAs and introduce solutions which can further address all aspects of the problem.

Questions to Consider:

1. What is your country's position on utilizing climate-smart agriculture? Are there any social or economic factors which influence your country's stance?
2. Does your country currently have any climate-smart agriculture practices in place? If so, what are they and how have they been successful?
3. How will you encourage the expansion of climate-smart agriculture in other countries while not infringing on their sovereignty?
4. Which programs have worked to promote climate-smart agriculture? If successful, what did these programs do to ascertain that CSA practices were effective and informative?
5. What can be done to ensure that CSA practices will provide and sustain future generations?

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