

FAO

Food and Agriculture Organization

TOPIC:

**Ensuring Agricultural
Security in the Face of
Extreme Weather Events**

**President: Mohammad Khalifeh
Deputy President: Celine Baba
Chair: Anwar Bekai**



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I- Committee Description:

A. Definition:

The Food and Agriculture Organization (FAO) is an agency of the United Nations. The FAO leads efforts to stop hunger around the world. The FAO was founded on 16 October 1945 in Quebec City, Canada. It aims to achieve food security for everyone and ensure that people have regular access to enough high-quality food to have a healthy life. With 193 countries and the European



Union, FAO works in over 130 countries worldwide. Its Latin motto, "fiat panis," translates to "let there be bread."

B. FAO's Duties and Roles:

FAO's mission is to combat hunger and promote sustainable agricultural practices that can manage the pressure of climate change and population growth. It provides a platform for knowledge, assistance, analysis, and policy recommendations, allowing countries to improve their agricultural branches while ensuring environmental sustainability. During assessments for food security and nutrition, the organization equips governments with the tools needed to understand the causes of food insecurity and develop interventions.

C. Prominent Accomplishments:

FAO has achieved multiple achievements in sections. In Major Health and Disease Eradication, it aided the eradication of a deadly cattle virus called the "cattle plague," making it the only second animal disease in history to be completely wiped out. It also eliminated a tropical disease known as onchocerciasis across 11 West African countries through decades of public health partnerships. In Global Standards and Governance, it championed and secured adoption

of the first binding international treaty specifically designed to prevent, deter, and eliminate illegal, unreported, and unregulated fishing. While, in Data and Policy Frameworks, it promoted the human right to adequate food, helping over 30 countries embed food security guarantees into their national constitutions and legislative frameworks.

II- Introduction to Topic:

A. Significance/Importance:

Global warming, caused by the increase in greenhouse gas emissions, has emerged as a pressing global concern. Its impact on agriculture and food security stands out as a grave challenge for the future. As temperatures rise, extreme weather events intensify and ecosystems face disruption. This shows how agricultural systems face an onslaught of challenges.

The balance between crops, livestock, and the natural environment is being upset, leading to



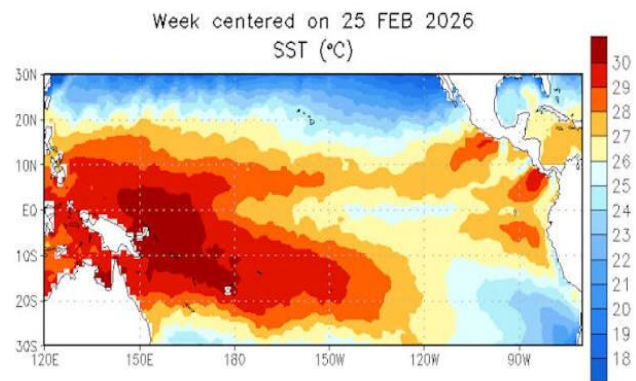
multiple problems like reduced crop yields, modified growing seasons, increased disease outbreaks, and lessened water resources. Thus, the stability and availability of food supply are under threat, posing significant risks to both rural livelihoods and global food security.

Due to climate change, extreme weather events such as droughts, floods, heatwaves, and hurricanes are becoming more frequent and common. Therefore, reducing plastic pollution through eco-friendly alternatives and improving water management while simultaneously supporting sustainable agricultural practices can improve resilience against climate-related challenges and issues.

B. Main Events:

1. The threat of El Niño:

El Niño is a natural climate phenomenon in which the waters of the central and eastern Pacific Ocean become unusually warm and cause weather changes around the world. Usually, it happens every 2 to 7 years, and it lasts about 9-12 months. El Niño-induced climate hazards pose high risks to food security, as they disrupt rainfall and temperature patterns; they may strongly impact agriculture and rural livelihoods. Farmers, fishers, and other small-scale producers witness the most direct and immediate impacts of climate shocks such as drought and floods. Effective anticipatory actions must concentrate on preventing damage and loss to crops, livestock, productive lands, waters, and infrastructure to protect food at its source. This not only protects food supply but also alleviates wider effects on communities, economies, and humanitarian aid requirements.



2. The evolution into modern AI in agriculture:

Agriculture is transcending a new stage with the integration of artificial intelligence. AI offers food and fiber producers an approach to managing ongoing challenges such as workforce shortages, climate variability, and resource degradation. AI-driven machinery, like robotic harvesters, can reduce one of the most significant costs to a farm business, which is labour. Precision farming tools also enable farmers to optimize water, fertilizer, and pesticide use; this reduces the waste and cost. For example, machine learning algorithms analyze soil health data to recommend nutrient applications, which ensures maximum crop yields while reducing input costs. AI is reshaping agriculture by enhancing productivity, improving sustainability, and addressing global food security challenges. As the technology continues to evolve, its role in

optimizing farming practices and supply chains will become even more crucial despite the challenges it might pose.

C. Link to SDGs:

SDG 2: Natural disaster-related crop loss leads to the agricultural industry's decline and jeopardizes the food security of countries that depend on that agricultural output. In order to achieve SDG 2: Zero Hunger, the agricultural sector must be maintained. Additionally, using eco-friendly plastics helps maintain soil health and ecosystem integrity necessary for farms to generate sustainable agricultural goods while lowering pollution on agricultural land.



SDG 13: The main cause of the rising frequency and severity of extreme weather occurrences is climate change. Climate-smart agricultural techniques, climate-resilient crops, and sustainable land management are the greatest ways to guarantee food security for the world's population. SDG 13: Climate Action focuses on taking action against climate change since eco-friendly plastics reduce greenhouse



gas emissions and plastic waste, which helps to combat climate change and encourage ecologically responsible lives.

D. Link to the Theme:

The topic relates to the concept of Yin and Yang in the sense that agriculture requires finding a balance between two opposing forces: weather extremes and agricultural innovations. The weather extremes threaten agriculture, but innovations and sustainable farming practices can counterbalance these threats. Similarly, replacing conventional plastics with eco-friendly

alternatives finds a balance between human convenience and environmental protection. These solutions show that the balance between human development and nature is needed for achieving progress.

E. Link to the Pillars of Good Governance:

Sustainability is at the heart of both the topic and subtopic. Sustainability involves protecting agriculture from extreme weather conditions to ensure long-term food security for the population, as well as reducing the impact of plastics on the environment and creating healthier ecosystems. Sustainability also allows the present generation to meet its needs without compromising the needs of the next generation of humans.

Cooperation: Reducing plastic pollution and increasing agricultural security requires the collaboration of governments, farmers, scientists, businesses, and international organizations. By sharing technologies, climate research, farming practices, and environmentally friendly innovations, countries can increase their resilience to climate change and maintain food security for all of humanity.



III- Subtopics:

A- Encouraging the Daily Use of Biodegradable Plastics:

Plastics have become an essential element of agriculture, enhancing productivity, improving water efficiency, and protecting crops due to their adaptability, durability, and cost-effectiveness. However, the growing reliance on plastics in agriculture has raised significant environmental concerns. Plastic waste can pollute the soil in agricultural areas, which prevents plants from properly absorbing nutrients and disrupting their growth. However, better

alternatives can be found, such as biodegradable plastics. These bioplastics help minimize carbon footprint, as bioplastics are able to decompose faster, providing a less harmful impact on the environment. This is why shifting to biodegradable plastics is a crucial step to achieve agricultural security since they offer renewable alternatives to regular plastics and promote sustainability in the industries that they're used in.

However, many challenges can be found when fulfilling this shift, such as high production costs and limited raw materials. Accordingly, solutions must be found to ensure the innovation of bioplastics without having to face such consequences as government



support through subsidies, tax incentives, and research funding, which can encourage innovation and stimulate market growth.

B- The Role of Technology in Agricultural Development:

Technology plays an important role in enhancing the efficiency of agricultural procedures and reducing waste. Modern equipment helps monitor crops, analyze soil, and determine plants' precise needs for water and fertilizers. Thanks to these technologies, farmers can achieve higher productivity with better quality while minimizing the use of natural resources such as water and energy.

Artificial intelligence has also become a fundamental part of modern agriculture. Machine learning techniques are used to analyze agricultural data, predict harvest times, and detect plant diseases early. These applications help improve the efficiency of agricultural operations and minimize losses, making agriculture more sustainable and profitable. Despite its many benefits, agricultural technology faces challenges such as the high cost of smart devices and the difficulty of using them in areas that don't have advanced digital infrastructure. The use of AI

can also have multiple effects on water due to its large consumption. Therefore, it is essential for governments and companies to work together, offering fund programs and providing training for farmers to help them adopt these technologies more easily, and finding new ways to benefit from artificial intelligence while reducing water scarcity and its consequences.



IV- Main Countries:

1. South Sudan

Due to 95 percent of the population depending on agriculture and fishing, agriculture plays an important role in providing food and earning livelihoods for people. Unfortunately, the country is vulnerable to extreme weather events; this issue has led to severe droughts and floods, which have had many effects on the efficiency of agricultural production and made it difficult for communities to handle food shortages. According to FAO, flooding has worsened food shortages, and floods along the Nile River and its tributaries have always affected agricultural sites. This is why the government of South Sudan and FAO agreed on the development of climate-resilient agriculture, which encompasses natural resource management, agriculture improvement, flood resilience, and agroforestry.



2. Somalia

Somalia is indirectly impacted by climate change through droughts and floods. These climatic changes are likely to increase in both frequency and severity. Due to this, Somalia suffers from environmental problems, including deforestation, soil erosion, and desertification. While

agriculture forms the major pillars of the economic development of the country and its culture, Somalia's arid and semi-arid environment leaves the country's agricultural yield vulnerable to any changes in rainfall. It is proven that droughts and floods are among the major threats to agricultural fields,



especially rain-fed crops such as sorghum and maize. For instance, FAO reported that Somalia's Deyr harvest in 2025 almost went bust owing to drought, with the yield being about 75% less than even the below-average five-year average. With pasture and water going out of stock, livestock, which is vital to Somali livelihoods, is also adversely impacted.

3. Haiti

The daily actions of the Haitian people play a significant role in exacerbating climate change, and the consequences are already visible. The country is repeatedly subjected to extreme weather events, and the population pays the highest price for these catastrophes. Over the past 30 years, Haiti has experienced 34 flooding events, 35 significant storms, and 31 hurricanes, including Hurricane Matthew in 2016. Haiti also experiences periodic droughts that have impacted its agricultural production



and exacerbated food insecurity. The destruction of fields and the loss of crops, temperatures soaring, water sources dwindling, and landslides have a considerable impact on the lives of Haitians. While the government of Haiti is committed to addressing climate change through multiple national plans, further efforts are required to strengthen the adaptive capacity of the country's health system to address its growing needs.

V- Suggested Solutions

1. Establish an international system, similar to CERES, that predicts crop failure ahead of time to ensure a successful harvest.
2. Improve technological tools that can handle high-quality data and guarantee data privacy through security measures.
3. Enhance global commerce to strengthen collaborations between countries, development partners, and private sectors and make tools accessible for all.
4. Create/improve international databases that will help farmers navigate lands that are safe to use for each crop.
5. Establish a fund for farmers whose land has been damaged by global warming and weather conditions in order to afford relocation and starting new harvests.
6. Create training programs through organizations such as FAO that teach local farmers on the severity of climate change and how to ensure food security during harvest seasons with extreme weather conditions.

VI. Questions to Consider, Tips, Suggested Sites

A- Questions to Consider:

1. In what conditions is food production in your country?
2. Has climate change affected food production in any way? If so, how?
3. What measures is the country taking to ensure food security?
4. What challenges is the country facing while trying to achieve agricultural security?
5. Does the country have technological tools that help in production?
6. How does the government support farmers that were affected by extreme weather events?

B- Tips:

- Remain diplomatic and refrain from screaming and misbehaving during the conference.
- Understand your country; in order to do good during MUN, you must know your allies, your stance, etc.
- Speak with confidence; this sets the tone and helps you gain points in the conference.
- Always participate and raise your placard. Even if you aren't picked, it is taken into consideration.
- Always take notes; successful are the people who take notes during conferences.
- Prepare questions that fuel debate.
- Do not feel shy to ask; if you're confused about anything, approach the chair to ask.
- Avoid plagiarism.
- Enjoy your experience and have fun!

C- Suggested Sites:

- FAO: <https://www.fao.org/home/en>
- UNEP: <https://www.unep.org/>
- IGAD: <https://igad.int/>
- IFPRI: <https://www.ifpri.org/>
- reNature: <https://www.renature.co/>
- Reliefweb: <https://reliefweb.int/>

VII- Represented Countries:

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Asia	India Indonesia Islamic Republic of Iran Iraq Japan Jordan Kuwait Lebanon Malaysia Nepal Oman Pakistan Philippines Qatar Russia Saudi Arabia Thailand Turkiye United Arab Emirates Vietnam Yemen
	Algeria Chad Democratic Republic of Congo

Africa	Egypt Ethiopia Ghana Kenya Libya Mali Morocco Nigeria Somalia South Africa South Sudan Tunisia Zimbabwe
Europe	France Germany Italy Netherlands Norway Portugal Spain Switzerland Ukraine United Kingdom
	Canada

Americas and Oceania	Dominican Republic Haiti Jamaica Mexico United States of America Argentina Brazil Colombia Australia New Zealand
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VIII- Contact Info:

President: Mohamad Khalife: mkhalife948@gmail.com

Deputy President: Celine Al Baba: albabaceline@gmail.com

Chair: Anwar Bekai: basicallyanwar@gmail.com

IX- President's Note:

Dear delegates, it's your president of the Food and Agriculture Organization, Mohammad. We are delighted to have you join us for this experience. For this year's FAO topic, we're going to tackle the issue of how extreme weather events are increasingly threatening agricultural security and food production around the world. Climate change is causing more and more droughts, floods, heatwaves, and storms, directly affecting farmers, crops, livestock, and the livelihoods of rural communities. As agriculture plays an ever-growing vital role in our day-

to-day lives, its challenges create serious risks to food security, economic stability, and the well-being of millions of people. Be the voice that nourishes change, be the step toward a more sustainable future, and most importantly, be you and make your presence felt throughout the conference, and be the change our world needs. I hope this committee gives you the space to show your pure passion for debating, negotiating, and most importantly, being diplomatic

Always remember, "There is no secret ingredient... it's just you." -Po

There is no perfect delegate, only one that shows up and puts in 101% when it matters.

X- SGs' Note:

Dear Delegates,

As your Secretary-Generals, we hope this background guide gives you a strong foundation for the discussions ahead and helps you approach your committee with confidence. Beyond preparation, this conference is an opportunity to challenge yourself, step into new perspectives, and take part in conversations that demand thought and initiative.

This year's theme, "Yin and Yang: The Harmony in Opposites", reflects the idea that opposing sides can exist in balance, whether between conflict and cooperation or speaking and listening. It reminds us that meaningful progress often begins when we learn to understand perspectives different from our own.

As Leo Buscaglia said, "Change is the end result of all true learning," and we hope this experience leaves you with a stronger sense of the value your voice can carry. We cannot wait to meet you and see what you bring to this conference.

Warm regards,

The 15th HHHSMUN Secretaries General,

Mia, Hani and Omar

XI-References:

BillionBricks. (2024, July 12). *Impacts of global warming on agriculture and food security*.

<https://billionbricks.org/blog/impacts-of-global-warming-on-agriculture-and-food-security/>

Food and Agriculture Organization of the United Nations. (n.d.). *FAO GIEWS country brief on*

Somalia. <https://www.fao.org/giews/countrybrief/country.jsp?code=SOM>

Food and Agriculture Organization of the United Nations. (2023, June 3). *FAO and Qatar Fund work together to protect drought affected rural communities in Somalia*.

<https://www.fao.org/somalia/news/details/FAO-and-Qatar-Fund-work-together-to-protect-drought-affected-rural-communities-in-Somalia/en>

Food and Agriculture Organization of the United Nations. (2025a, February 26). *South Sudan:*

The Government, World Bank and FAO scale up actions to build farmers' climate resilience in the face of flooding and other disaster risks. <https://www.fao.org/newsroom/detail/south-sudan---the-government--world-bank-and-fao-scale-up-actions-to-build-farmers--climate-resilience-in-the-face-of-flooding-and-other-disaster-risks/>

[resilience-in-the-face-of-flooding-and-other-disaster-risks/](https://www.fao.org/newsroom/detail/south-sudan---the-government--world-bank-and-fao-scale-up-actions-to-build-farmers--climate-resilience-in-the-face-of-flooding-and-other-disaster-risks/)

Food and Agriculture Organization of the United Nations. (2025b, September 3). *Overview*.

<https://www.fao.org/about/about-fao/en/>

Food and Agriculture Organization of the United Nations. (2026, May 20). *South Sudan*.

<https://www.fao.org/emergencies/where-we-work/ssd/en>

Nupi. (2025, March 31). *Climate, peace and security fact sheet: South Sudan*. NUPI.

<https://www.nupi.no/news/climate-peace-and-security-fact-sheet-south-sudan3>

Responsenet. (2024, December 27). *AI for agriculture and food security*.
<https://responsenet.org/blog/for-agriculture-and-food-security/>

United Nations Development Programme. (2026, June 2). *Somalia*. UNDP Climate Change Adaptation. <https://www.adaptation-undp.org/explore/arab-states/somalia>

Willmes, D., Krall, N., Tanis, J., Turner, Z., Tavares, F., Miller, C., Joe, H. I., Crichton, M., & Schlichting, A. (2024, November 7). *Anticipatory understanding of resilient agriculture to climate*. arXiv. <https://arxiv.org/abs/2411.05219>

World Bank Group. (2024). *Haiti—Climate and health vulnerability assessment (English)*.
<https://documents.worldbank.org/curated/en/099070324141550718>