

Forum: UN Enviromental Assembly

16 Oct 2024

duuna.org/mun



MUN Chair Report

Topic: The Question of the Threat of Climate Change on Food Supply

Prepared by
Anthony Law

Edited by
C. Supawattanapong

Celebrating
World Food Day 2024

CONTENTS

Section 1: Topic Overview

1. Preface
2. About the UNEP
3. Terminology
4. Topic Introduction
5. Discussion Points on Food Supplies
6. UN Involvement

Section 2: Delegate Positions and Tips

7. Suggested Bloc Positions
8. Points a Resolution Should Address
9. Bibliography

Section 1: Topic Overview

1. Preface

Hello delegates!

This is the study guide for DUUNA's upcoming Model United Nations (MUN) session on October 16th and 17th, focusing on the United Nations Environment Programme (UNEP) committee in celebration of World Food Day. Whether or not this is your first time doing MUN or not, I hope you will learn from each other, make new friends, and have meaningful discussions on the selected topic, "The Question of the Threat of Climate Change on Food Supply."

The UNEP focuses on a wide range of concerns about environmental matters, and this specific committee session will focus on tackling the increasing threat of global warming and climate change on global food supply chains. To this end, we have prepared this study guide, meant to help delegates and provide guidance on how to approach the topic.

This document begins with an introduction to the committee and its background and then an introduction to the topic of the debate. You will then be given some insight on the historical and current situation of the topic, as well as some guidance towards the different possible approaches you may choose to adopt going into debate and discussion.

Please note, however this guide should only provide the fundamental basis for your investigation. We strongly recommend you conduct substantial independent research; it is your responsibility to find as much information as necessary on the topic of debate and where your country stands in relation to it. The more information you acquire, the more you will be able to influence the Resolution writing process as well as the MUN session.

Finally, please be aware that while Model United Nations is just a simulation, the issues we discuss are not. We hope that you will carry the skills and knowledge you build in our sessions into the real world.

Please do not hesitate to contact us with any questions that may come up as you prepare for the session, and please remember to, above all else, have fun and enjoy yourself.

Best Regards,

Anthony Law

MUN Officer

Cholatic Supawattanapong

President

2. About UNEP

The United Nations Environment Programme (UNEP) is the leading global authority on all matters concerning the environment. It aims to inform, inspire and provide leadership for nations and people across the world to improve their quality of life without compromising that of future generations. As all 193 UN member states are a part of the UNEP, voting procedures require just a simple majority on both procedural and substantive voting.

In practice, the UNEP aims to use its expertise and authority to improve and strengthen global environmental standards and practices, primarily by delivering scientific information or developing solutions to a wide range of environmental issues.

These include but are not limited to their six main focuses – climate change, sustainable ecosystem management, green economic development, conflict and disaster management, harmful substances and sustainable consumption and production.

3. Terminology

Climate Change: A long-term change in the average weather patterns that have come to define Earth's local, regional, and global climates.

Food Security: The state where all people, always, have physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and preferences for an active and healthy life (Defined at the 1996 World Food Summit).

Global Warming: The **long-term** heating of Earth's surface due to human activities, primarily fossil fuel burning. Global warming has occurred at an **increasingly alarming rate** in the past century.

Intergovernmental Panel on Climate Change (IPCC): A UN body aimed at assessing scientific research and information etc. on the study of climate change.

Net Zero: A set target that aims to **completely negate** the total amount of greenhouse gases produced by human economic activity.

Sustainable Food Systems: A food system that delivers food security and nutrition for all, in a way that economic, social, and environmental bases to generate food security and nutrition for future generations **are not compromised**.

4. Topic Introduction

Climate change, a global phenomenon that has become increasingly alarming over the past century, is primarily driven by human activity. Since the industrial revolution, *global warming*, the long-term heating of the Earth's Surface due to human economic activities, has become the leading cause for this issue.

Global warming is a direct result of the enhanced greenhouse effect, a positive feedback cycle in which excess greenhouse gases in the atmosphere traps more greenhouse gases, creating a “global” warming effect. Humans have enhanced this process through industrial processes, emitting gases such as carbon, methane, nitrous oxide, and water vapour into the atmosphere.

Industrial activity has increased emissions of greenhouse gases from a negligible level to more than 50 billion tons a year. The accumulation of gases in our atmosphere has already increased the average annual temperature by 1 degree Celsius in the past century alone.

These temperature increases have led to widespread ecosystem death, a rise in the number of glaciers and ice caps melting and more frequent and extreme natural disasters, such as flooding and heatwaves. Scientists have repeatedly argued that if current-day levels of industrial activity carry on, humanity will soon reach the point of “no return,” no longer able to save itself from climate change.

5. Discussion Points on Food Supplies

Increase In Abnormal Meteorological Events

Existing climate change has already begun to affect food supplies, through increased temperatures, higher frequency of natural disasters and unpredictable precipitation patterns. According to the IPCC, for every 1 degree Celsius the world warms, the atmosphere holds 7% more moisture, leading to unpredictable and extremely destructive increases in rainfall. In areas where agricultural density is high, this leads to large-scale destruction of crops and other forms of food items through heavy rainfall and mass flooding.

Global warming is also a leading cause of concern for global food security. Studies conducted by the World Food Bank have shown that crop yields in lower-latitude regions have negatively affected by climate changes, while in higher-latitude regions the opposite effect has been observed. While it may seem that prolonged warmer periods could lead to longer growing seasons, the negatives outweigh the positives.

Global warming also causes reduced crop viability through heat stress, resulting in impaired product quality and increased food loss and waste. In addition to heat stress, some vegetables and fruits vital to the global food supply require periods of cold accumulation to produce a viable harvest, and warmer winters constitute a massive risk to this.

Agricultural Production

Agricultural production accounts for half of food-related greenhouse gas emissions in developed countries, and even more in developing regions. Farming directly contributes around 10-12% of global emissions, and its indirect effects include agriculturally induced deforestation, which accounts for a further 6-17%.

Crop production releases Methane (CH₄), Carbon Dioxide (CO₂) and Nitrous Oxide (N₂O) into the atmosphere, while deforestation involves the burning of forests to clear room for crop growth, releasing Carbon Dioxide en masse into the atmosphere. The Food and Agriculture Organization (FAO) reported that from 1990 to 2020, 420 million hectares of forest were destroyed globally, and that 90% was due to agricultural expansion.

Livestock Farming

Livestock farming plays a leading role in greenhouse gas emissions and biodiversity losses from deforestation. According to the IPCC, the livestock farming sector uses 70% of agricultural land, and a third of arable land. Activities such as cattle ranching as well as soyabean production (which is commonly used as animal feed) are key factors in deforestation around the world, which heavily reduces carbon dioxide uptake.

The IPCC also notes that about 12-18% of total greenhouse gas emissions are directly attributable to livestock activities. Cattle are the main source of global livestock emissions (65-77%), producing greenhouse gases such as methane and carbon dioxide from enteric fermentation, and non-CO₂ gases from excretion.

Furthermore, the effect itself negatively affects livestock production as well, resulting in a “vicious cycle” of sorts. IPCC studies found that in Mongolia, grassland productivity declined by 20-30% over the 20th century, causing substantial declines in cattle herds. Temperature affects critical factors of livestock production, such as water availability, reproduction, and animal health (heat stress and diseases).

6. UN Involvement

The UN Intergovernmental Panel on Climate Change (IPCC)

In 1988, the IPCC was established by The World Meteorological Organisation and the United Nations Environment Programme, with the goal of creating an international, inter-governmental body that aimed to produce research concerning climate change as well as advise member governments on climate policy.

The 1996 World Food Summit

This World Food Summit marked the adoption of the “Rome Declaration on World Food Security,” an international pledge in which member states declared their “commitment to achieving food security for all and to an ongoing effort to eradicate hunger in all countries.”

The Millennium Summit and Millenium Goals

Following the Millenium Summit of 2000, all 191 UN member-states adopted eight “international development goals” aimed for achievement by 2015, of which one was “To eradicate extreme poverty and hunger”. However, as of 2013 progress towards the goals was staggeringly uneven; some countries achieved many goals while others did not even achieve one.

The 2002 World Food Summit

Member nations adopted the “Declaration of the World Food Summit: five years later,” a document in which member nations called for the drafting of guidelines on the “Right to Food for all”. As a direct result of this summit, in 2002 The FAO adopted the “Right to Food Guidelines”, offering for the first time guidance to member states on how to implement their obligations on a “right to food”.

The Kyoto Protocol

The Kyoto Protocol, which came into force in 2005 and was ratified by 192 parties, marked the first international treaty to set targets to cut emissions. However, this treaty failed and was unsuccessful due to insufficient international support, following the withdrawal of the US.

The Food Assistance Convention

An international treaty adopted in 2012 after being proposed at the **Food Aid Convention**, aimed at “addressing the food and nutritional needs of the most vulnerable populations”. The treaty included mechanisms for information sharing and methods to achieve goals, specifies, and focuses on “nutritious food” in general, and was the first (and to this date still the only) legally binding international treat on food aid.

The Paris Agreement

The Paris Agreement (also called the Paris Climate Accords) replaced the failed Kyoto Protocol and entered into force in November 2016. The agreement recognised climate change as a “shared issue” requiring all countries to set their own emissions targets, but enforced a hard target of reducing global warming to no more than 1.5°C.

COP 28

The 28th Conference of the Parties (COP 28) is the most recent edition of the annual climate conference. The conference was groundbreaking in two ways: firstly, it affirmed in complete certainty that the world was failing to meet the Paris Agreement targets, and secondly, all present nations agreed for the first time to include specific wording on phasing out fossil fuels.

Section 2: Delegate Positions and Tips

7. Suggested Bloc Positions

Low Emissions Nations

Low Emissions Nations are usually smaller nations with smaller economies and are often those at most risk from the effects of climate change. One example of this is Brazil, where global warming has made it difficult to grow food. Delegates should note that Low Emissions nations will usually be the ones with the greatest sense of urgency in the debate to get something done and solve the crisis (as it affects them the most).

Since the crisis directly affects them, Low Emissions Nations tend to propose genuinely effective measures to the committee for debate and discussion and have already taken several of these to be more environmentally friendly. Low Emissions Nations will therefore approach the session with the goal of **convincing other nations to follow their lead**.

Delegates should note that Low Emissions Nations are held to the same targets as other nations with higher emissions, since international agreements are universally applicable by nature.

High Emissions Nations

High Emissions Nations are those with large, productive economies involving a massive amount of industry. It is realistic that these nations will have to make fundamental changes to their economies, way of life and society to decrease their carbon footprint and meet global warming targets. Because of this, delegates should consider that during the session these nations will face the strongest calls to action as well as the fiercest opposition and debate about their policies on environmentally friendly economic activity.

However, delegates should also consider that High Emissions Nations obtained their positions at the top of the global economic order through activities that cause global warming. These nations will be putting their economic standing at risk if they scale back industrial activity, a massive roadblock against future progress.

Because of this, High Emissions Nations will scrutinise, act harshly against or outright reject any resolution they perceive to be a threat to their economic performance, and by extension their place in the global order. Thus, delegates of nations looking to push a more environmentally friendly agenda will likely need to create sufficient methods to reduce the economic impact of going green to convince High Emissions Nations make the switch.

Developing Nations

Developing nations are those which have rapidly developing economies but have done so through emissions-based activities. These nations have become too dependent on non-environmentally friendly fuels to achieve economic growth, and therefore do not have the economic strength to survive a green transition. Delegates should thus note that while developing nations genuinely want to transition towards more environmentally friendly activities, this overdependence is a significant barrier to entry.

Since these nations view fossil fuels and other non-environmentally friendly fuels as a way to increase the standard of living and wealth in their respective nations, they must be shown there is a viable alternative. Developing nations will consequently be looking to back any resolution that incentivises a green transition while *also* providing economic and technological assistance in doing so.

8. What Points Should a Resolution Address?

Delegates should understand that climate change affects every nation in the world and has the potential to devastate global food chains. Delegates should therefore consider that while different countries emit different amounts of greenhouse gases, people everywhere in the world will feel the effects of food shortages.

On the other hand, Delegates should also realise that many countries rely on fossil fuels (oil, coal etc.) or other greenhouse gas emitting economic activities for day-to-day life. Delegates should thus bear in mind that a resolution outright banning the use of these will be impossible.

Instead, Delegates may consider the following:

1. What successes have already been achieved? What have the failures/shortcomings been so far, and why? What worked and what did not?
2. What incentives should be offered to nations who have achieved their climate goals, or want to transition to greener economies? How much of an incentive should this be?
3. How should we combat the issue of unsustainable food systems? How can we minimise any problems arising from the transition?
4. What consequences should be enacted on larger emitters? How can we hold them accountable for their actions?
5. To what extent should an individual nation's context and emissions be considered in the requirements imposed upon it?

9. Bibliography

<https://climate.nasa.gov/what-is-climate-change.amp>

<https://unfccc.int/news/most-vulnerable-countries-leading-climate-response>

<https://www.bbc.co.uk/news/science-environment-58073295>

<https://www.ipcc.ch/srccl/chapter/chapter-5/>

<https://www.statista.com/statistics/271748/the-largest-emitters-of-co2-in-the-world/>

<https://www.worldometers.info/co2-emissions/co2-emissions-by-country/>

<https://www.worldbank.org/en/topic/agriculture/brief/food-security-update/what-is-food-security>

https://www.cambridge.org/core/journals/proceedings-of-the-nutrition-society/article/food-sustainability-problems-perspectives-and-solutions/B75C1F93146221F8EDD98A90CF9A67A2?utm_campaign=shareaholic&utm_medium=copy_link&utm_source=bookmark

<https://www.weforum.org/agenda/2021/12/climate-change-extreme-weather-food-shortages-rise-prices/>

<https://www.weforum.org/agenda/2024/01/food-system-impact-of-climate-change/>

<https://unfccc.int/cop28/5-key-takeaways#:~:text=COP%2028%20closed%20with%20an,As%20COP%2028%20President%20Dr>



DURHAM UNIVERSITY
UNITED NATIONS ASSOCIATION
MODEL UNITED NATIONS

