FAO: Solving Global Food Waste

JACKRABBITMUN III

L.B. Poly - May 22nd

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Head Chair Letter

Hello, Delegates!

I am extremely honored to welcome you to the third annual Jackrabbit MUN conference and the FAO committee. My name is Dina Miranda and I will be your head chair for this ever-relevant committee. I'm only a sophomore at Long Beach Poly, but my two years of experience in Model UN have greatly strengthened my communication skills as well as my overall confidence, which I am so thankful for. I am lucky to be involved in Model UN as both a delegate and as Poly MUN's Director of Publicity, which involves running the program's social media. Visit @jackrabbitmun on Instagram to see more!

Outside of Model UN, I am the co-captain of the girls' Frosh-Soph swim team at Poly, where I swim primarily backstroke. I also play the trumpet in Poly's Marching Band and jazz program and compete in Speech and Debate tournaments. I regularly volunteer with the Long Beach Rescue Mission, where I assemble food packages to assist the homeless in my community. For fun, I enjoy listening to all genres of music, including different artists such as The Microphones, Bladee, Fiona Apple, Arca, and Machine Girl, to name a few. Check out my last.fm to see what else I listen to--maybe you'll find something you enjoy! I've also discovered some really fun obligatory quarantine hobbies, especially knitting. I'm not that great yet, and my stitches are sometimes lumpy and uneven, but it's a process.

Right now, I'm currently spending my free time studying for AP season and waiting for Frank Ocean to drop an album. Waiting is hard. Speaking of waiting, I absolutely cannot wait for this committee to finally take place. I, along with the other dais members, have put quite a lot of effort and brainstorming into this committee and this very relevant topic of food waste, and we all can't wait to see what innovative solutions you delegates bring to the table. (Pun intended.)

Sincerely,

Dina Miranda

Director of Publicity

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Dais Introductions

VICE CHAIR: PAIGE ZWERNER

RAPPORTEUR: SOLENE MILLSAP

Welcome delegates! My name is Solene Millsap and I will be the Rapporteur for this committee. I am a Poly sophomore and this is my second year in Model UN, as well as the first time I have participated in hosting a Jackrabbit MUN conference! MUN has allowed me to discover and gain exposure to many cultures, countries, and global issues I may not have been aware of. Outside of MUN, I sing in Poly's choir, as well as play violin for fun. I work outside of school as a Social Media Content Coordinator for the Long Beach Rescue Mission, where I photograph and market clothing for their thrift store. I also volunteer at another local thrift store, as well as participate in Poly's Yarn Club, where I am learning to knit and crochet. Some of my hobbies include film photography, video editing, reading, listening to music & discovering new artists, and anything else that allows me to learn and grow artistically and intellectually. Food waste is a prevalent issue across the world and I am looking forward to hearing how delegates will work towards solving it.

LEGAL: CARLOS WADE

Hi, delegates! My name is Carlos Wade and I will be your legal for this committee. I am a senior here at Poly and this is my first year in Model UN. I am the founder of an out-of-school club called Operation Liberate Voices, where we meet to discuss and spread awareness of issues such as Police Brutality, Anti Asian Hate Crime, etc. Additionally, I occassioanllay participate in my school's Muslim Student Association Club. Although I am not a Muslim myself, I enjoy learning about different cultures and religions in the world. Some of my hobbies include; writing, reading, painting, and video editing. In MUN, I enjoy learning about different global issues as well as improving my public speaking skills. The topic of tackling food waste piques my interest because combatting this issue will help to decrease food insecurity as well as improve the environment as a whole.

Position Paper Guidelines

JACKRABBITMUN POSITION PAPER GUIDELINES

- Position Papers are due at 11:59 PM on **Sunday, May 16th, 2021** in order to be eligible for **research AND committee awards**.
- Position Papers are due at 11:59 PM on **Friday, May 21st, 2021** in order to be eligible for **committee awards ONLY**.
- Position Papers can be submitted through the committee email:
  - Email to: foodwaste.jackrabbit@gmail.com
- At the top of each paper, include your country's name, first and last name, and committee.

  United States of America
  First Last
  FAO: Solving Global Food Waste

- Papers should be emailed as a PDF file.
  - Paper content should also be copied and pasted into the body of the email so it can still be graded in the event of any technical difficulties
  - Please name file and subject line of email [Committee_Country Name]
    - Ex. FAO_United States of America.pdf
- Papers should be 1-2 pages in length with any additional pages for citations.
- Papers should be single-spaced in Times New Roman 12 pt. font and include no pictures or graphics.
- Please include the following sections for each committee topic:
  - Background
  - Past Actions by the Committee
  - Position of your Country
  - Possible Solutions

If you have any questions or concerns, please email your chair (medinapmiranda@gmail.com)

About the Committee

The Food and Agriculture Organization (FAO) was established on October 16, 1945 as the oldest permanent specialized body of the United Nations. Then, the FAO's main objectives were "eliminating hunger and improving nutrition and standards of living by increasing agricultural productivity" (Britannica), which were important to work toward in the clarity of the months following the aftermath of World War II.

Today, the FAO carries out an expanse of operations worldwide, including coordinating government efforts for developing raw material resources and spearheading educational efforts with the use of "seminars and training centres" (Britannica). Its motto, "*Fiat Panis*", means "let there be bread" in Latin, which reflects how the FAO has continually striven to promote food security, rural development, and sustainable agriculture, to name a few essential ideals. Therefore, the FAO and the work that it does truly spans many aspects of life, since cooperation between all people involved with the FAO is necessary for the prosperity of any UN member nation that relies on a continually steady food supply (hint: all of them do).

Topic Synopsis

Wherever there is food, waste follows. Food waste is not only corporations' problem; common people are also affected both by hunger and by climate change caused by food waste. Industrialized and developing nations alike suffer from an astonishingly prevalent food waste problem due to inadequate logistical systems, inappropriate storage procedures, and ignorant consumer behaviors. The combination of these three factors results in a staggering 33% of all food produced being wasted, including waste at both the post-harvest and the retail stage.

The reduction and elimination of food waste, especially in a world ravaged by COVID-19, would ensure global food security and an alleviation of climate change for generations to come. In this committee, delegates will work with one another to consider long-term solutions and to bring well-formed global goals to the table.

Background

Causes of Food Waste

Food waste has become an extremely common global issue. The presence of food waste, regardless of location, is heavily dependent on two factors: logistics and consumer behaviors. Logistical fallacies account for two factors: consumer behaviors toward producers and improper storage; the latter results in the faster spoiling of foods, especially perishables such as fruits, vegetables, and animal products.

In industrialized countries, the vast majority of food waste mainly occurs on the consumer's end. With many aesthetically pleasing advertisements that display larger portions for a low price, consumers tend to (quite literally) bite off more than they can chew. Additionally, many consumers in these industrialized nations use improper household storage techniques, whether it be for dry, refrigerated, or frozen foods, that lead to more food being wasted among these consumers. For example, freezer burn affects meat stored at excessively low temperatures, resulting in a tough protein that is both visually unappealing and difficult to eat. Consumers may be misled into thinking that lower temperatures preserve frozen food for longer, but

that is simply not the case, as different foods require different storage temperatures. Dry goods can also be unknowingly kept in humid environments, causing mold, pests, and bacteria to grow in and ruin these perfectly good food products.

On the other hand, in developing countries, food waste mainly occurs at the beginning of the food production chain. The waste starts with financial and logistical constraints of harvesting and storage. Harvesting constraints involve lack of efficient collection methods and the storage constraints involve both dry storage and adequate refrigeration systems. As the food makes its way down the production chain, one will find that many farmers lack adequate transportation to safely carry their goods to market, whether their vehicles require much-needed maintenance or whether they have any transportation at all. These farmers will simply leave the surplus food to rot without effective storage. This explains why even though these countries do produce a significant amount of food initially, their civilians suffer from malnutrition and overall poor health.

At the retail level in both types of countries, quality standards are based largely on fruits' and vegetables' appearance, and unappealing produce is simply thrown away. Also, many consumers do not understand the meaning of expiration dates, which results in food being thrown away that could have been eaten.

Food Waste and Hunger

Food waste is a leading cause of hunger and poverty around the world. However, the real issue surrounding poverty is not the lack of food, as more than enough food is produced to feed the global population multiple times over. Rather, the issue is an increase in the

amount of food globally wasted every day. Approximately ⅓ of all food produced and approximately $1 trillion of food is wasted annually.

An image that comes to mind when one thinks of food waste is a garbage bin overflowing with rotten produce, which, to an extent, is true for industrialized nations,

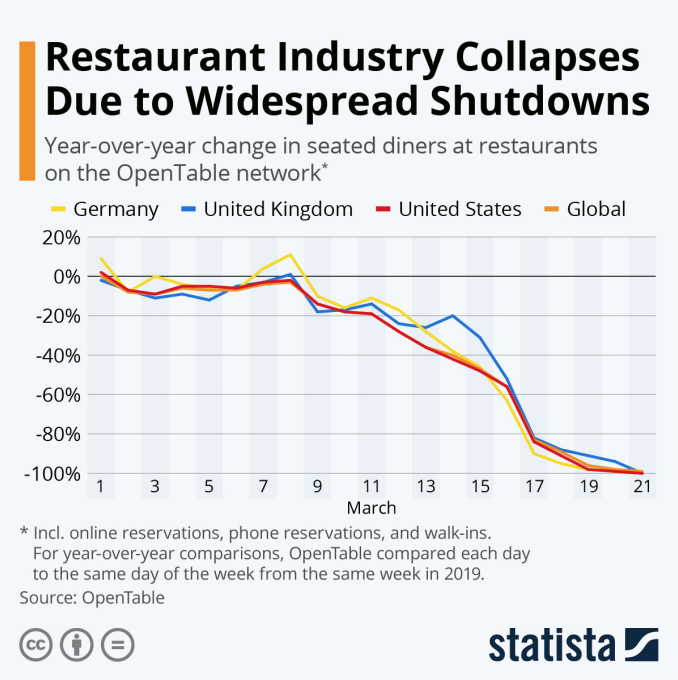
where consumers are responsible for much of the food waste. In developing countries, however, food waste takes different forms than in developed countries. During busy harvest times in these countries, food producers and farmers utilize poor storage methods of crops and plants on farms before these crops are packaged and sent to stores for consumers. This inadequate storage leads to moldy crops and pest infestations, which tremendously hurts profits, reduces the amount of food available for consumers, and adds to the growing poverty in the world. Reversing the trend of growing amounts of food waste would make it possible to feed most, if not all, people who are currently malnourished.

COVID-19's Impact on Food Waste

Since the onset of the COVID-19 pandemic in early 2020, global food waste has greatly increased. With food production grinding to a sudden halt in early 2020, farmers and producers were given no choice but to dispose of quickly decomposing food. According to the New York Times, in early 2020, "a chicken processor was forced to destroy 750,000

unhatched eggs a week, and farmers were dumping 14 million litres of milk each day because of disrupted supply routes, [estimated] dairy Farmers of America".

Other factors during the pandemic, such as price volatility, high labor costs, and competitive food service buyers have affected and increased the amount of food waste. According to the International Food Policy Research Institute, it is believed that an additional 140 million people will be forced to live in extreme poverty. During the pandemic, many restaurants labeled as "non-essential" were temporarily closed; many still remain closed. These restaurant closures increased food waste since most of the restaurants were unable to use their existing food stocks when they were not welcoming any customers.

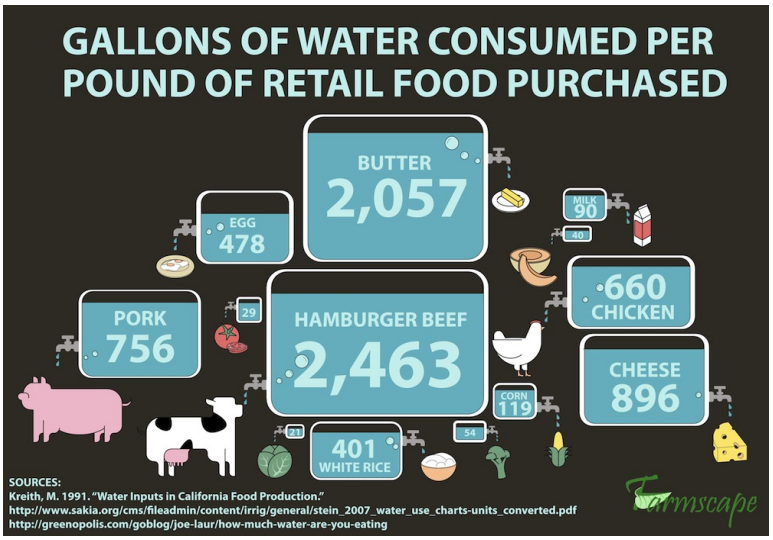


Additionally, many supermarkets in the Western bloc donate food to local food banks, but due to COVID-19 restrictions and local lockdowns, they were unable to do so. At the start of the pandemic, when consumers were panic buying and stockpiling, supermarkets also struggled to keep their shelves stocked, thus making it harder for them to donate food to food pantries. This overall stalling of the global food supply chain has had tremendous impacts on the global economy and on the issue of food waste.

Environmental Impacts of Food Waste

Food Waste and Water

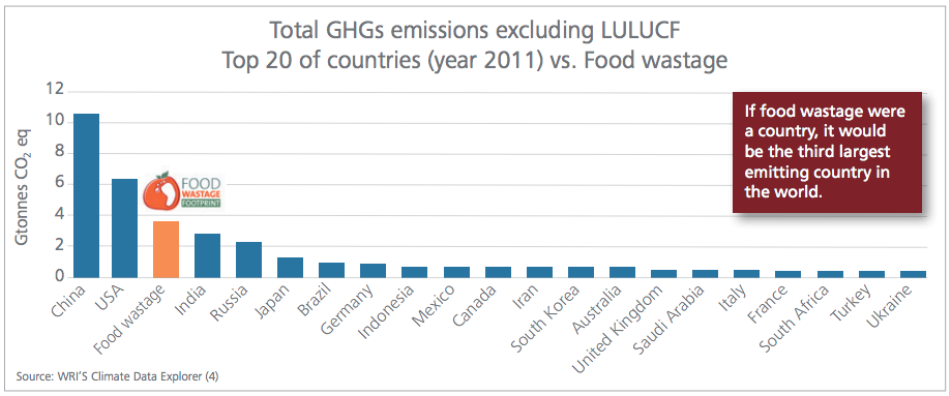
All crops and animal products marketed for human consumption require water. Therefore, food waste and water waste are connected as all crops and animal products use water to grow and prosper. According to the World Resources Institute, "inside the 1.3 billion tons of food wasted every year worldwide is 45 trillion gallons of water. This represents a staggering 24 percent of all water used for agriculture." Also, according to the World Water Assessment Program, "...agriculture is already the world's biggest user of freshwater: The sector accounts for 70 percent of all users around the world." This usage of water has already taken a toll on irrigation systems worldwide, especially in drought-prone regions. Water evaporated from this wasted food does not enter the atmosphere at the same place where the food was grown; this is due to transportation which carries the food hundreds and thousands of miles away. The lack of water being returned to these farming communities only exacerbates drought conditions and increases water scarcity.



Food Waste and Air

Food waste has an insidious effect on air quality and air pollution primarily through inadequate disposal of waste by incineration and storage of waste in landfills. Urban and population-dense regions rely on the incineration of food waste, since these countries simply lack the land area needed to establish landfills.

Additionally, methane given off by spoiled food disposed of in landfills greatly exacerbates global warming: "Global food loss and waste generate annually 4.4 GtCO2 eq, or about 8% of total anthropogenic GHG emissions… the contribution of food wastage emissions to global warming is almost equivalent (87%) to global road transport emissions" (FAO). The methane expelled from rotting food only aggravates global warming. These methane sources mainly come from landfills, where most wasted food is tossed out and discarded. According to an FAO infographic on climate change, "Global food loss and waste generate annually 4.4 GtCO2 eq, or about 8% of total anthropogenic GHG emissions… This means that the contribution of food wastage emissions to global warming is almost equivalent (87%) to global road transport emissions." This is incredibly worrying, as "problems in the future resulting from climate change—such as lower yields, higher prices, a loss of nutritional value and supply chain disruptions—will increasingly affect food security. The effects will differ by country, but the consequences will be most dramatic in the low-income countries of Africa, Asia, Latin



America and the Caribbean," according to the United Nations Framework Convention on Climate Change (UNFCCC).

Food waste also contributes to the waste of energy used to transport the food, since many shipping trucks and planes use fossil fuels to function. More food waste leads to more being needed to replace the wasted food which results in more fossil fuels being used to transport the food which finally results in more CO_2 in the atmosphere. Therefore, food waste doesn't just increase methane levels, but also indirectly increases CO_2 levels as well.

Food Waste and Land

The triple-pronged environmental problem that is food waste would be incomplete without accounting for the damage that food waste causes to land. Due to dysfunctional transportation and storage systems, or inefficient harvesting systems, increasing levels of food waste force farmers to grow more crops and raise more livestock to account for their losses, which requires more land. This land could have been utilized for housing, buildings, or could have simply been left alone to maintain biodiversity levels.

Instead, by developing this land using methods such as slash-and-burn agriculture as is used in Latin America, carbon dioxide and air pollution levels increase while future opportunities for development and biodiversity both decrease. Attempting to solve the food waste issue by producing more food only aggravates levels of waste. More importantly, increasing food production rates places undue stress on farmers and food producers, who should be supported the most, as they form the very beginning of the food supply chain.

UN Involvement

The United Nations' Sustainable Development Goals (SDGs) aim to help decrease the amount of food wasted; SDG 12.3, for example, aims to halve food waste and food loss by 2030. SDG 13 ties issues brought about by food waste into the looming problem of climate change, and SDG 2 as a whole supplements the reallocation of wasted food to achieve the 2nd Sustainable Development Goal of eradicating hunger.

The World Food Programme (WFP) is important to solving global food waste since its projects and its workers cooperate directly with farmers to ensure a stable system of trade, transportation, and storage. For example, the WFP's Zero Post-Harvest Losses project provides farmers with silos and training to properly store/preserve crops to prevent, you guessed it, post-harvest losses of crops, especially grain. The project also "provides them with training on post-harvest crop management in five key areas: Harvesting, drying, threshing, solarization and storage." (WFP USA). Also, in countries such as the Democratic Republic of Congo, the WFP provides cargo bikes to female farmers to ensure permanent and affordable access to farms. Female farmers are often overlooked, especially in areas with more traditional gender roles, so these cargo bikes are

truly blessings for these farmers. This new access prevents the spoilage of crops and increases the chance of these farmers' crops being sold. In turn, the sales provide major benefits for the farmers as they can both gain profit and prevent the waste of important crops. In September 2020, the International Day of Awareness of Food Loss and Waste was also established to promote awareness of the often-overlooked problem of food waste.

Secretary-General António Guterres called for "new approaches and solutions" to solve the challenges. "'Food loss and waste is an ethical outrage. In a world with enough food to feed all people, everywhere, 690 million people continue to go hungry and 3 billion cannot afford a healthy diet,' he said." The International Fund for Agricultural Development (IFAD) was also founded in 1977 after the 1974 World Food Conference in Rome; IFAD mainly works in rural areas to help farmers and food producers. On the other hand, the Global Initiative on Food Loss and Waste Reduction, led by the FAO, focuses more on the food supply chain.

Bloc Positions

Western Bloc: United States of America, United Kingdom, France, Belgium, Spain, Norway, Greece, (Italy)

Asia-Pacific Bloc: People's Republic of China, Japan, South Korea, India, Philippines, Singapore, (UAE)

Eastern European Bloc: Russia, Estonia, Poland, Czech Republic, Hungary

African Bloc: Ghana, Democratic Republic of Congo, Kenya, Nigeria, South Africa, (Ethiopia)

Latin America and the Caribbean Bloc: Brazil, Colombia, Cuba, Argentina, Chile, Mexico, Venezuela

Western Bloc

The industrialized nations of the Western bloc have historically produced the most food waste at the consumer level, because consumers in these nations can typically afford to purchase more. Consumers often discover they cannot possibly use all of what they purchase, due to overestimation or poor calculations, which results in them discarding this food.

Additionally, advertisements and low prices of larger portion sizes, especially within fast-food chains and supermarkets, encourage customers to purchase a meal or a food item only for the sake of scoring a good deal. Many consumers are unaware of proper food storage methods; however, action is being taken to reduce the impact of food waste in local communities and in larger corporations. In 2016, France passed legislation to require

supermarkets to “redistribute edible food to food banks and charities. Management that breaks the law risks a two-year prison sentence and substantial fines”.

The EU developed the Farm to Fork strategy in 2020, which focuses on both “regulatory and non-regulatory initiatives” to support a steady transition into a more sustainable food chain in the European Union. The United States EPA (Environmental Protection Agency) also created the EPA Food Recovery Challenge, which is a “voluntary incentive program in which organizations and businesses set data-driven goals, implement targeted strategies to reduce wasted food in their operations, and report results to compete for annual recognition from [the] EPA.” Both the Farm to Fork program and the Food Recovery Challenge are directed toward businesses and corporations’ policies and processes in order to decrease food waste; to balance this out, education toward consumers is necessary to develop sustainable habits among families and communities.

Asia-Pacific Bloc

Some of the world’s worst food waste is occurring in the Asia-Pacific bloc. Population-dense countries such as the People’s Republic of China, South Korea, and Japan are the main contributors to this food waste problem; the trend of industrialization and rapid population growth in the past five decades in East Asia has created a grave food waste issue today. For example, the food waste created annually by the People's Republic of China can feed 300 million people; it is wasted by consumers mainly in urban regions.

However, developing nations in South and Southeast Asia are more scrupulous and frugal with their consumption. This does not mean that food waste is not an issue in these nations; simply, the food waste occurs at the post-harvest stage on producers’ ends, even

though more than enough food is being produced to feed this bloc's steadily growing population. The end result of the presence of food waste is prices skyrocketing, which adds to less purchasing power and exacerbated malnutrition. To help combat this chain of events, the Save Food Asia-Pacific Program works to target food losses mainly in fishing communities and in fields, both during and after busy harvest seasons.

Eastern European Bloc

Food waste in Eastern European countries stems from a multitude of causes, mainly lack of knowledge about labeling of processed food in consumer households and poor logistical systems in farming communities. According to Eurobarometer 2015, only 24% of people in Poland understand the meaning of the "best before date" stamped on foods. This bloc and its farmers were also greatly impacted by the COVID-19 crisis, as FAO officer Robert van Otterdijk noticed. Otterdijk is also the leader of the Save Food initiative of the Eastern European bloc, and he emphasized that "...in industrialized countries, solutions at the producer and industrial levels would only be marginal if consumer education and appropriate stock management at retail level is not in place."

To alleviate the problem of food waste in public facilities, Russia's State Department proposed to "ban food waste disposal in municipal solid waste landfills", according to the FAO's Save Food blog. This proposed ban would take effect no later than 2022, which would theoretically decrease food waste by a significant amount in the course of 3 to 5 years. The educational aspect of food waste is also being prioritized in this bloc, as Hungary held a seminar educating and "promoting new practices for facilitating vulnerable groups' access to

food and tackling food waste through the...adoption of innovative solutions" in November 2020.

African Bloc

The African bloc is characterized by severe droughts and an unstable financial system, which, as illustrated previously, exacerbates farmers' situations and increases food waste. For example, the Near East and North Africa region (NENA) possesses inadequate storage and harvesting systems: "Roughly 68% of losses in NENA occur during the production, handling, processing and distribution of food (before it even reaches consumers) due to poor harvesting techniques; a lack of cold storage and proper transport; poor handling practices; exposure to heat and sunlight; inefficient marketing systems; and, weaknesses in policy and regulatory frameworks." Countries in the African bloc are also most affected by a lack of land and water, as arable land and water are scarce. The FAO seeks to work to privatize aspects of the food production process and to work with NENA farmers.

Additionally, Sub-Saharan African countries suffer from the same problems but also have to deal with pests, which are not as prevalent in the NENA region. Pests cause a great deal of damage to crops and render many goods simply unusable. For example, "In Kenya, pests destroy up to 30 percent of all maize harvested--a total loss of about 162 million tons, according to the government-run Kenya Agricultural Research Institute (KARI). Ghana, meanwhile, loses up to 50 percent of its main crops of vegetables, fruits, cereals, roots, and tubers" (KARI). There is hope, though. According to the World Research Institute, "A World Bank report, also issued in 2011, stated that even a 1 percent reduction in post-harvest losses could lead to annual economic gains of $40 million, much of it going directly to farmers."

This concept of even the smallest change creating a large impact can be directly applied to other low-income communities suffering from food waste worldwide.

Latin America and the Caribbean Bloc

The Latin American-Caribbean bloc, with its arable terrain and fertile landscape, is one of the largest global producers of food. The FAO Agricultural Outlook for 2019-2028 predicts "the region will…see 22% growth for crops and 16% growth for livestock in the next ten years, seven and two percentage points faster than the global average, respectively". As with the more agriculturally-oriented nations, this bloc suffers from food waste mainly at the post-production and post-harvest level, and not so much from the retail stage.

Governments in the Latin American-Caribbean bloc have acknowledged the severity of food waste and made progress toward eradicating it. Raul O. Benitez, the FAO Regional Representative for Latin America and the Caribbean, states, "It is necessary to improve the efficiency of food systems and good governance… by regulatory [sic] frameworks, investment, incentives and partnerships between the public and private sector. One example is the food banks, which put together food that… would be discarded for redistribution, and that already exist in Costa Rica, Chile, Guatemala, Argentina, Dominican Republic, Brazil, and Mexico. The Food Banks Association of Mexico, for example, is a non-profit organization that only in 2013 rescued 56 thousand tons of food."

Questions to Consider

1. What actions have your country taken to reduce food waste?
2. How can your country shift consumers' views to redefine what constitutes "attractive" produce and food?
    a. How can your country educate consumers on methods of sustainable and practical consumption?
3. What are your country's current relationships with the FAO, the World Food Programme (WFP), etc.?
    a. Has there been past negotiation and cooperation with these NGOs?
4. What aid does your country require in terms of financial, logistical, and infrastructural support from the UN, FAO, and other NGOs?
5. How can your country work with farmers and producers of food to ensure appropriate communication and proper funding for transportation and storage systems?

References and Resources

Below is a link to a PDF of references used for this background guide. Delegates, feel free to utilize these sources for your research--they will serve you well both for writing position papers and for committee.

FAO: Solving Global Food Waste References