Dear Delegates,

It is my absolute pleasure to welcome you all to the UGAMUNC XXVII Food and Agriculture Organization (FAO) committee! My name is Reid Cogswell, and I will have the pleasure of serving as your chair at this year's conference. I am from Alpharetta, Georgia, and I am a junior here at the University of Georgia majoring in Management Information Systems with a minor in Computer Science. Model United Nations has become a huge part of my life since coming to college and has really helped me come out of my shell and shaped me into the person I am today! In addition to MUN, I am an active participant in UGA's UGArden club. When I have free time I enjoy watching new shows, hanging out with friends, and learning about new things.

I also have the immense pleasure of getting to introduce you all to my co-chair, George Moore. George is from Toccoa, Georgia, and he is a freshman studying Economics and International Affairs with a minor in Spanish and certificate in International Agriculture. This is George's first year participating in Model UN. He serves as a First-Year Senator with SGA and as President of Russell Hall Community Council. He also enjoys being a part of the Baptist Collegiate Ministry here at UGA and attending Prince Avenue Baptist Church in Athens. George's favorite things include politics, talk radio, Diet Coke, traveling, expanding his comfort zone, and meeting new people. George also enjoys reading books about Christianity, theology, and United States history. He is excited to be co-chairing the Food and Agriculture Organization committee at his first UGAMUNC this year!

As a delegate of our committee, it is expected that you compete to the best of your ability and prepare adequately. Although we are excited to see hard fought debate among you all on the weekend of the conference, we would like to make it clear that we expect the highest level of diplomacy and professionalism between delegates at all times. We invite you to use this background guide as the foundation of your research of the topics that shall be presented to you for the committee, and to use it as a stepping stone in order to analyze and research each topic to its fullest extent. When writing your position paper, we ask that you focus on the scope in which your member states are affected by these topics and that you are accurate with the strategies that you present while representing them in the FAO committee. Ask yourself questions while writing such as, what they are doing now in relation to the topic, and what are they/could they do in the future to address these issues? This remains true with your contributions through speeches and resolution writing as well, but to reiterate, your contributions should align with your member state's views and leanings to the issues at hand. We expect final resolutions to reflect the cooperation of member states and that they align with the goals and aspirations of the FAO committee as a whole.

Should you have any questions prior to the committee, feel free to reach out to me about anything! My email is arc73290@uga.edu. Please submit your completed position papers to my co-chair, George (ghm23035@uga.edu), and I by February 1st 11:59 PM. We urge you to come to our first session well rested and prepared for a great weekend.

Reid Cogswell & George Moore

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1 Background

The Food and Agriculture Organization (FAO) is a specialized agency in the United Nations whose goals have been the elimination of hunger, the improvement of nutrition, and the improvement of the standard of living by increasing agricultural productivity. The FAO has held these objectives since October 1945 when the agency was founded and headquartered in Washington, D.C, but was later moved to Rome, Italy in 1951. Throughout its history, the FAO has coordinated its efforts with that of governments and technical agencies around the world in the development of programs in agriculture, forestry, fisheries, and land and water resources. According to Britannica, the FAO "carries out research; provides technical assistance on projects in individual countries; operates educational programs through seminars and training centres; maintains information and support services, including keeping statistics on world production, trade, and consumption of agricultural commodities; and publishes a number of periodicals, yearbooks, and research bulletins".

Throughout the FAO's history as the oldest specialized agency in the United Nations, it has contributed to much of the progress and accomplishments made in agricultural development and food security. One example of such achievements is the codex alimentarius, which was created by the FAO to set international food standards and help ensure food safety in international trade. Another is the eradication of Rinderpest, which was a viral disease that killed millions of livestock and caused famine among global citizens. These are just a few of the multiple notable achievements that the FAO has made in its long history under the United Nations.

Today, the FAO has over 194 member states within its body and operates in 130 countries across the globe in an effort to achieve their goals.⁵ Currently, the FAO uses its five Strategic Objectives, which are laid out in their 2030 Agenda for Sustainable Development, to address the ever increasing demands of agricultural development.⁶ These five Strategic Objectives include helping in the elimination of hunger, food insecurity, and malnutrition; making agriculture, forestry, and fisheries more productive and sustainable; reducing rural poverty; enabling inclusive and efficient agricultural and food systems; and increasing the resilience of livelihoods to threats and crises.⁷

 $^{^1{\}rm Karen}$ Mingst, "Food and Agriculture Organization," Encyclopædia Britannica (Encyclopædia Britannica, inc., July 31, 2006), https://www.britannica.com/topic/Food-and-Agriculture-Organization.

²Ibid. ³Ibid.

 $^{^410 \ \} A chievements \ \ of \ \ the \ \ Food \ \ and \ \ \ \ Agriculture \ \ \ Organization \ \ of \ \ the \ \ \ United \ \ \ Nations, \ \ \ Youtube, \ \ 2017, \\ https://www.youtube.com/watch?v=wYxMwaTB_AQ&ab_channel=FoodandAgricultureOrganizationoftheUnitedNations.$

^{5 &}quot;About FAO," Food and Agriculture Organization of the United Nations, 2020, http://www.fao.org/about/en/.
6 "What We Do: FAO: Food and Agriculture Organization of the United Nations," FAO, 2020 http://www.fao.org/about/what-we-do/en/.

2 Topic A. Exploring the use of Biotechnology to Eliminate Food Insecurity

2.1 Introduction

Food insecurity is a battle that the Food and Agriculture Organization (FAO) has been fighting since its creation back in 1945. According to the United Nations, "it is estimated that over 2 billion people do not have regular access to safe, nutritious and sufficient food, including 8 percent of the population in North America and Europe," not to mention that in 2018, the UN estimated that around 821 million people across the world were undernourished. With such a large portion of the human population struggling with food insecurity, scientists have turned to biotechnology as a way to create a sustainable way to produce for these 2 billion people affected by food insecurity by 2050. 10

Biotechnology, when referring to plant agriculture, is used to improve crop insect resistance, enhance crop herbicide tolerance, and to help facilitate the use of more environmentally sustainable farming practices, whereas biotechnology in animal agriculture is referred to as genetically engineering animals to improve their suitability for pharmaceutical, agricultural, or industrial applications. ¹¹ That being said, there is debate among world consumers as to the risk and safety in using biotechnology to genetically modify plants and livestock. Therefore, the FAO has been working hand in hand with international organizations and Member States alike when outlining how to implement science-based safety evaluations and risk assessment systems, giving recommendations on how to properly label and distribute genetically modified organisms (GMOs). ¹²

2.2 History

The use of biotechnologies is not a new concept for mankind, as we can see the first glimpses of the application and discovery of the crossbreeding of livestock and plants hundreds of years into our past.¹³ However it was not until the 1900s, with multiple developments in the scientific world, that the international community began to see the true potential of biotechnologies. Since the early 1980s, biotechnologies have been put into practice specifically in livestock in order to accomplish increased growth rates, enhanced lean muscle mass, enhanced resistance to disease or improved use of dietary phosphorus to lessen the environmental impacts of animal manure, etc.¹⁴ It is worth noting though that, as of right now, there is only one genetically modified livestock up for commercial sale and consumption: the AquAdvantage salmon.¹⁵

As far as genetically modified crops are concerned, in 1994, the world saw the first genetically modified crop being sold commercially to consumers for consumption.¹⁶ Following the first GM crop hitting the market, there were many more significant applications of genetically modified foods being approved for commercial use and sale across the globe. By 2010, 60 different countries across the world had granted approvals to import crops made from biotechnologies, with 29 of those countries growing commercialized biotech crops. ¹⁷

17 "ISAAA Summary," Brief 43-2011: Executive Executive Summary: Global Status of Biotech/GM ISAAA Commercialized Crops: 2011 Brief 43-2011 2011. ISAAA.org,

^{8 &}quot;Food," United Nations (United Nations, 2019), https://www.un.org/en/sections/issues-depth/food/index.html.
9 Ibid.

 $^{^{10}\,\}mathrm{"Biotechnology,"}$ Food and Agriculture Organization of the United Nations, 2020, http://www.fao.org/biotechnology/en/. $^{11}\,\mathrm{"Food}$ & Agricultural Biotechnology," BIO, accessed October 31, 2020, https://archive.bio.org/food-agricultural-biotechnology.

 $^{^{12}\,\}mathrm{``FAO.org,''}$ Biotechnology | Food safety and quality | Food and Agriculture Organization of the United Nations, 2020, $\mathrm{http://www.fao.org/food\text{-}safety/scientific-advice/crosscutting-and\text{-}emerging\text{-}issues/biotechnology/en/.}$

¹³Ashish Swarup Verma et al., "Biotechnology in the Realm of History," Journal of pharmacy & bioallied sciences (Medknow Publications Pvt Ltd, July 2011), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3178936/.

¹⁴ "Information about Topics and Careers in Bioscience for Teachers, Students and Everyone Else," About Bioscience, November 27, 2017, https://www.aboutbioscience.org/topics/animal-biotechnology/.

¹⁵Center for Veterinary Medicine, "AquAdvantage Salmon," U.S. Food and Drug Administration (FDA, April 15, 2020), https://www.fda.gov/animal-veterinary/animals-intentional-genomic-alterations/aquadvantage-salmon.

¹⁶Clive James and Anatole F. Krattiger, "Global Review of the Field Testing and Commercialization of Transgenic Plants: 1986 to 1995," ISAAA (The International Service for the Acquisition of Agri-biotech Applications (ISAAA), 1996), http://www.isaaa.org/kc/Publications/pdfs/isaaabriefs/Briefs%201.pdf.

2.3 Current Situation

In current times, the FAO recognizes the need of biotechnology across the world; itstates: "when appropriately integrated with other technologies for the production of food, agricultural products and services, biotechnology can be of significant assistance in meeting the needs of an expanding and increasingly urbanized population". ¹⁸ In order to assist Member States of the body, the FAO says that it has been "providing them with legal and technical advice, assisting them to develop their capacities in agricultural biotechnologies and related issues through technical co-operation and training, and providing them with access to high-quality, updated, balanced, science-based information". ¹⁹

Currently, 191.7 million hectares of biotech crops have been planted by up to 17 million farmers in 26 countries in 2018 alone. This is a staggering change from the initial planting of 1.7 million hectares when the first biotech crop was commercialized in 1996.²⁰ Regardless of the growth in the industry throughout the years, the UN claims that an estimated 821 million people suffered from hunger in 2018, and that, without significant change, the Zero Hunger Target will not be achieved by 2030. Meanwhile, the number of overweight and obese people continues to increase worldwide..²¹ That being said, some feel biotechnology can only truly be effective in agriculture if small farmers in all member states of the world can gain access to the benefits of biotechnology, due to the tendency of uneven adoption of technologies across countries and across sectors, leaving out those who need them most.²²

Some glaring issues that come to mind when discussing the implementation of biotechnology across the world, according to the FAO, are that "many of the smaller countries in the region do not have the resources to pursue such approaches on their own, and existing regional mechanisms for collaboration and technology transfer will need to be strengthened. International organizations like FAO and the International Fund for Agricultural Development will be important partners in these efforts". These are important to keep in mind as many Low-to-Middle Income Countries (LMIC) will not be able to afford these technologies on their own, and they are the ones who need it the most as well.

2.4 Conclusion

Around the world, biotechnology is a very new concept which has been developing for the last 24 years at a staggering rate. In theory, it is the only way that scientists believe we will be able to hit the UN's goal of Zero Hunger Target by 2030. However, there have been many concerns about how effective a method biotechnologies can be, due to LMIC's being unable to afford to implement it into their budgets. This is why the committee must explore different ways in order to effectively approach how the FAO can help these Member States, as well as any outside help through various different international, private, and public institutions.

2.5 Committee Directive

The goal of the Food and Agriculture Organization for this topic is to explore how biotechnology is being used today to determine whether or not it will be useful in the eradication of food insecurity. It is expected that you are to formulate solutions that are sustainable in the long term in the pursuit of this objective, and discuss which is the best approach for all Member States of the body. While some Member States of

http://www.isaaa.org/resources/publications/briefs/43/executivesummary/default.asp.

 $^{^{18}}$ "Biotechnology," Food and Agriculture Organization of the United Nations, 2020, http://www.fao.org/biotechnology/en/. $^{19} \rm{Ibid.}$

²⁰ "Pocket K No. 16: Biotech Crop Highlights in 2018," Biotech Crop Highlights in 2018 ISAAA.org, 2018, http://www.isaaa.org/resources/publications/pocketk/16/.

 $^{^{22}}$ "Realizing the Potential of Agricultural Biotechnology in the Asia-Pacific Region," Food and Agriculture Organization of the United Nations (FAO, 2019), http://www.fao.org/3/ca5106en/ca5106en.pdf. $^{23}\mathrm{Ibid}$

the body may not be affected by food insecurity as much as others, it is important that the committee properly address solutions for the Member States that are achievable. Use your knowledge of biotechnology in the food and agriculture sector to think of creative ways to address the situation. Keep in mind that biotechnology and the FAO oversee crops, livestock, forestry, fisheries and aquaculture and agro-industries so do not limit your solutions to just one of these topics.

2.6 Questions to Consider

- How should the FAO approach the implementation of biotechnology in Member States who have not explored the use of biotech?
- Are there new regulations that we should implement in order to ensure the safety in the use of products of biotechnology?
- How does food insecurity affect the country you are representing? How does it affect others?
- How can we further the research into biotechnology in order to achieve our goals?
- How can biotechnology help the country you are representing?

3 Topic B. Promoting Agro-Industries in the Low and Middle-Income Countries (LMIC) to Help Eradicate Poverty

3.1 History

Agro-industry is an idea that has not always been widely accepted, and the positive and negative effects are evident throughout history. "The double revolution in agriculture and industry, which occurred in England in the 18th century, laid the foundation for the development of the agro-food industry, and completely changed the conditions for agriculture and food-production." ²⁴ The concept of converting raw materials into commodities has existed for thousands of years, but as technology advances, agro-industry also increasingly changes in both production and methods. Agro-industry provides an escape from the economically crippling cycle that many LMIC remain stuck in. When LMIC do not have to import the commodities that they have the raw resources to produce, they can escape this cycle of economic strife. Poverty plagues these nations, and if they could export processed commodities then they could gain economic success. Agro-industries have been used throughout history to help countries transform their raw materials into processed commodities that they can export to other countries for a profit. Agro-industry has been the way that many countries have bounced back and gained control of their economy.

Historically, agro-industry has lifted nations out of the grip of poverty and allowed countries to become more self-reliant. Developed countries have historically taken control over agro industry because they have the financial resources that can change these raw materials to commodities. Over history, agro-industry has been used to transform raw materials into something that can be used, but as technology advanced agro-industry began to change rapidly. Agro-industries have been around for years and this idea of an agro-industrial complex took off in Bulgaria in the 1970s. The agro-industries movement was started before the second World War, and, in Bulgaria specifically, it was able to help boost the country's power and financial resources, which often go hand in hand. "A cooperative movement in agriculture developed before World War II. After the war, cooperative farms were established in the fashion of Soviet kolkhoz on most arable land. The cooperative and state farms later merged into large state and collective units. These were further consolidated in 1970–71 into even larger groupings, called agro-industrial complexes, that took advantage of integrated systems of automation, supply, and marketing." Agro-industry is changing constantly, and agro-industry looks completely different today than it has before. While agro-industry changes rapidly, the concept of transforming these raw materials into something that people can use and export remains the same.

3.2 Current Situation

Developments in agro-industry have the potential to eradicate poverty if done sustainably. This is the main component that is lacking with traditional agro-industry. Current efforts include the African Union Commission and the Zero Hunger vision by 2030. Agricultural mechanization in Africa is an integral part of the Zero Hunger vision.²⁶ There is a historical struggle at making the agro-industry sustainable. Current initiatives involve combating this sustainability struggle.

Also, agro-industry poses problems with equity, sustainability, and inclusivity. Agro-industries must be sustainable, and in order for this to occur they must be competitive in terms of costs, prices, operational efficiencies, product offers, and other associated parameters.²⁷ The overall Bank Group Vision for Agriculture and Rural Development's central goal is poverty reduction and, agriculture and rural development are prime building blocks.²⁸ For agro-industry to be as effective as possible, efforts need to be made to ensure that equity and sustainability are a priority. Agriculture is the means of survival for many people in extremely poor nations. Agro-industry can eradicate poverty if implemented effectively. The World De-

 $^{^{24} \}rm http://www.museum.agropolis.fr/english/pages/expos/fresque/module_15.htm$

²⁵https://www.britannica.com/place/Bulgaria/Economy#ref476393

²⁶http://www.fao.org/3/CA1136EN/ca1136en.pdf

 $^{^{27} \}rm http://www.fao.org/3/i3125e/i3125e00.pdf$

²⁸https://www.afdb.org/en/topics-and-sectors/sectors/agriculture-agro-industries

velopment Report 2008 (World Bank, 2007) called attention to the fact that some 800 million people are considered poor, subsisting with incomes of less than the US \$1 per day. Among the world's poor, 75% live in rural areas, having agriculture as a major source of livelihood. Fighting poverty will require that economic growth and development are brought to rural areas. Agro-industries are part of the answer to this challenge." With the implementation of sustainable agro-industries Low and Middle-Income Countries have numerous raw agricultural materials, and they survive off agriculture. Promoting agro-industries at an unprecedented level can help eradicate poverty if done with regards to the small farmer and sustainability.

3.3 Conclusion

The Food and Agricultural Organization is meeting in order to create methods that can produce sustainable agroindustry with regards to the small farmer. It is the committee's job to plan the implementation of this to ensure that change takes place. The establishment and promotion of agro-industry in LMIC will eradicate poverty by creating jobs and giving LMIC the ability to take control over their resources and what they import and export. Without agro-industry, nations are stuck in the cycle of having to export their raw resources and import these same resources after they have been processed and converted to commodities. These LMIC become trapped in this cycle, which hinders economic growth when they do not create an agro-industry.

3.4 Committee Directive

The Food and Agriculture Organization of the United Nations states that "Agro-industries provide a means of converting raw agricultural materials into value-added products while generating income and employment and contributing to overall economic development in both developed and developing countries." While agro-industries have the potential to turn economies of nations around, there are many elements of agroindustry that can be harmful to individual farmers. Agroindustry is consistently not sustainable, and there are numerous struggles that small farmers face. "Establishing and maintaining competitiveness constitute a particular challenge for small- and medium-scale agro-industrial enterprises and smaller-scale farmers. Although agro-industries have the potential to provide a reliable and stable outlet for farm products, the need to ensure competitiveness favours farmers who are better able to deliver larger quantities and better quality of products. To the extent that smaller, resource-poor farmers are left out of supply chains, the socio-economic benefits of agro-industries are potentially reduced. A need thus exists for policies and strategies that, while promoting agro-industries, take into account issues of competitiveness, equity and inclusiveness." If done right the promotion of agroindustry can create jobs, grow the economy, and bolster industry in LMIC. It will be your job to do just that and create the way to promote sustainability in order to eradicate poverty.

Delegates, given these issues you are tasked with creating ways to combat these negative effects and creating a sustainable means of agroindustry that can effectively eradicate poverty in LMIC. You are also tasked with the implementation of these sustainability methods to ensure that real change is creating from this assembly. With the shift to agro-industries then farmers will be able to move from subsistence farming to market-oriented farming while creating a business and greater profit out of their agricultural yield. Sustainable agricultural mechanization is key to ensuring that agro-industries are effective and helping the maximum number of people possible. Over the course of this committee you will work together to eradicate poverty through the creation and implementation of agro-industries in LMIC.

²⁹Ibid

 $^{^{30} \}rm http://www.fao.org/biotech/sectoral-overviews/agro-industry/en/$

 $^{^{31} \}rm http://www.fao.org/fileadmin/user_upload/ags/publications/EEA_light.pdf$

4 Topic C. Facilitating the mitigation of Climate Change in the Agricultural Sector

4.1 Introduction

The agricultural sector of the world has been a major contributor to climate change for years. The destructive nature of climate change has affected farming practices around the globe with rising temperatures, increased temperature variability, changes in levels and frequency of precipitation, a greater frequency of dry spells and droughts, the increasing intensity of extreme weather events, rising sea levels, and the salinization of arable land and freshwater.³² Climate change's effects on agriculture will only continue to worsen if left ignored by the Food and Agriculture Organization (FAO). The effects of climate change will vastly reduce the amount of of crops we will yield annually, create harsher conditions for our livestock to live, affect the productivity of fisheries that produce nearly 50 percent of animal proteins for Low-to-Middle Income Countries (LMIC) across the globe, and put our forests at risk.³³

While climate change is a troubling issue for the agriculture sector across the globe, it is also a major contributor. In fact, agriculture is the second biggest contributor to climate change, globally making up roughly 21 percent of greenhouse gas emissions.³⁴ Despite this, the issue of mitigating the effects of climate change is not easily answered. This is because with the introduction of new policy, it could potentially jeopardize food security and poverty reduction in nations across the world, so it is important to keep the social and economic impact on LMIC's in mind while creating solutions.

4.2 History

Throughout the times from the pre-industrial era to now, the world has shown evidence of the disastrous effects of climate change. Since the 1750's we have seen a tremendous increase in the global atmospheric concentrations of carbon dioxide, methane, and nitrous oxide. In the time period between the late 1800's to the early 2000's we have seen an increase in average temperature of 0.76 degrees.³⁵ According to the World Meteorological Organization, "at continental, regional, and ocean basin scales, numerous long-term changes in climate have been observed. These include changes in Arctic temperatures and ice, widespread changes in precipitation amounts, ocean salinity, wind patterns and aspects of extreme weather including droughts, heavy precipitation, heat waves and the intensity of tropical cyclones. More intense and longer droughts have been observed over wider areas since the 1970s, particularly in the tropics and subtropics".³⁶ We were able to more accurately identify this in the 1990s when scientific research on climate change had expanded and research had expanded our understanding between links with historic data and the ability to model climate change numerically. Research during this was directed and summarized by the United Nations Intergovernmental Panel on Climate Change (IPCC).³⁷

Another UN body, the United Nations Framework Convention on Climate Change UNFCCC), historically stated, "responses to climate change should be coordinated with social and economic development in an integrated manner with a view to avoiding adverse impacts on the latter, taking into full account the legitimate priority needs of developing countries for the achievement of sustained economic growth and the eradication of poverty, "38" which remains true, and has been a talking point of the agricultural sector still to this day.

 $^{^{32}\,\}mathrm{``THE}$ STATE OF FOOD AND AGRICULTURE: CLIMATE CHANGE, AGRICULTURE AND FOOD SECURITY," FAO (Food and Agriculture Organization of the United Nations, 2016), http://www.fao.org/3/a-i6030e.pdf.

³³Ibid.

³⁴Ibid. ³⁵Ibid.

 $^{^{36}}$ "Climate Change and Desertification," World Meteorological Organization (World Meteorological Organization), accessed October 31, 2020, https://library.wmo.int/doc_num.php?explnum_id=5047.

³⁷ "History of the IPCC," IPCC, 2020, https://www.ipcc.ch/about/history/.

³⁸ "THE STATE OF FOOD AND AGRICULTURE: CLIMATE CHANGE, AGRICULTURE AND FOOD SECURITY," FAO (Food and Agriculture Organization of the United Nations, 2016), http://www.fao.org/3/a-i6030e.pdf.

4.3 Current Situation

Current moves by the FAO in order to tackle this issue is a policy they created called Climate-Smart Agriculture (CSA). According to the FAO, "the CSA approach has three objectives: sustainably increasing agricultural productivity to support equitable increases in incomes, food security and development; increasing adaptive capacity and resilience to shocks at multiple levels, from farm to national; and reducing greenhouse gas emissions and increasing carbon sequestration where possible".³⁹ The introduction of CSA presents multiple ideas on how to become more climate smart in farming practices, such as the improvement of water harvesting and retention and water-use efficiency. These are fundamental for the future of agriculture as increasing production when addressing increasing irregularity of rainfall patterns is key. These irrigation practices are important as the CSA states, "Today, irrigation is practiced on 20 percent of the agricultural land in developing countries but can generate 130 percent more yields than rain-fed systems. The expansion of efficient management technologies and methods, especially those relevant to smallholders is fundamental".⁴⁰ Other notable climate-smart improvements that the FAO endorses are soil management, pest control, and better management of harvest supply chains.⁴¹

In recent years, a component that has been severely overlooked by policy makers is the impact climate change has on fisheries. It is extremely important to address fisheries as they make up the essential protein source for 3.2 billion people across the world, especially in developing tropical countries. Scientists say that as of right now, even if we do not overfish or decimate our fish populations in any way, the world's fish population could drop by as much as a quarter by the end of the century if greenhouse gas emissions continue growing at their current rate.⁴² Not to mention as sea temperatures rise, they will also have much lower oxygen levels and increase in acidification across the globe. Not only does science suggest this will lead to fish becoming smaller in size, it will also affect the amount of plankton in the water, meaning many fish food sources will be at risk. Other possibilities due to climate change include, shellfish being unable to develop shells properly, harmful algae blooms, and populations of fish will move to cooler waters, leaving behind the fishing communities and economies that rely on them.⁴³

4.4 Conclusion

Throughout the history of the FAO as a committee, the mitigation of climate change has always been a balancing act. There are effective ways in which Member States can act on dealing with the issues that come with climate change such as soil erosion, run off, etc., but when it comes down to dealing how we can mitigate the effects the agriculture industry has on climate change, it's a different story. As stated above, the agricultural industry is the second largest contributor to climate change in the world, but it is important to keep in mind that it is one of the biggest economic sectors for LMIC across the globe. Looking for solutions on both sides is extremely important in order to create a balanced plan that helps tackle the threats climate change poses as well as being able to lower the agricultural sectors impact on the climate that causes these threats.

4.5 Committee Directive

The directive of the Food and Agriculture Organization is to address the issue of climate change in the agriculture sector. It is expected that you formulate solutions by addressing the effects of climate change on the agriculture sectors across the world that are feasible for all members of the body. It is important to also take into account the effects that the agricultural sector has on climate change as well and to look for proactive

³⁹Ibid.

 $^{^{40}\,\}mbox{``Climate-Smart'}$ Agriculture Policies, Practices and Financing for Food Security, Adaptation and Mitigation," FAO (Food and Agriculture Organization of the United Nations, 2010), http://www.fao.org/3/i1881e/i1881e00.pdf.

⁴²Georgina Gustin et al., "Climate Change Threatens the World's Fisheries, Food Billions of People Rely On," Inside-Climate News, September 29, 2019, https://insideclimatenews.org/news/27092019/ocean-fish-diet-climate-change-impact-food-ipcc-report-cryosphere.

⁴³Ibid.

solutions to help mitigate these issues. Your solutions can build off of pre-existing policies of the FAO, in an effort to reaffirm or push for more global involvement in the policy, or you can design new creative ways in which to deal with these issues. Though it is important to remember that not all members of the body will have the same economic capabilities as others, so it is important to create solutions with these limited financial capabilities in mind. You can address these issues in financing policy with the implementation of creative funding mechanisms or traditionally.

4.6 Questions to Consider

- How does climate change affect agriculture in the Member State that I am representing?
- Does my solution create issues for Member States that are susceptible to food insecurity?
- What are some innovative practices or systems that can be expanded upon in order to help create a solution?