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A LETTER FROM YOUR DIRECTOR

Dear Delegates,

Welcome to the World Health Organization (WHO)! My name is Zeel Patel and I am excited to be your director for this year's UTMUN conference. I am currently a second-year student at the University of Toronto studying Biochemistry and Neuroscience and have over 5 years of MUN experience. This will also be my second year acting as director for WHO at UTMUN.

This year we will be discussing two of the most pertinent issues in global health: Genetically Modified Organisms (GMOs) and Global Mental Health. The dias has prepared this background guide with the purpose of providing a general idea of these issues and their significance. Although we did try to include a variety of perspectives, at the end of the day, each country will have its own unique stance on a given topic. As delegates, this is where you come in and represent your country's policies. My recommendation would be to use this background guide as starting point for your research. Each topic also has a "Questions to Consider" section near the end. After reading the background guide in whole to get the general direction we are hoping to go with these issues, use these questions to direct your own research.

The background guide alone will not provide sufficient research to represent your country. As such, extensive research on individual country policy will be expected. The two topics on the agenda will require the synthesis of various moral, practical, and above all diplomatic approaches. I am pleased to see that you have taken initiative to lead discussions on these complex issues and look forward to hearing your innovative solutions.

Should you have any questions, please do not hesitate to contact me via email before the conference. I cannot wait to meet you all in February!

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TOPIC A: GENETICALLY MODIFIED ORGANISMS

INTRODUCTION

Genetically modified organisms (GMOs) are organisms with genetic information (DNA) that has been altered. These changes are introduced into the organisms by means other than natural mating or recombination. With the advent of novel technology that can manipulate and transfer DNA from one organism to another over the past decade, there have been significant global impacts.[1]

In particular, the agriculture industry is one in which GMOs have the potential to have an even greater influence. Genetically modified (GM) foods have been made to tackle various food safety issues such as crop resistance, nutrient content, taste, and cost. However, the safety regarding the use of some of these crops is an ongoing concern and health standards pertaining to GMOs vary from country to country. Questions about who controls the production and means of access to GM foods are also an ongoing topic in political discussions.[1]

Chemical companies have gained considerable power by being directly responsible for producing GM foods and are being criticized by both political and environmental activists.[1] For many countries, the agriculture industry is the foundation of their economy and millions of people rely on farming to sustain themselves. With corporations flooding in, many farmers in South America and Asia are being displaced from their land.[2] Another concern is loss of diversity. With large-scale agriculture, a single crop of interest is often produced at the expense of others. This had led to a decrease in available variety of foods and therefore, a less healthy food intake in Africa for example.[3] The environment itself also takes a toll when crop diversity is reduced. Reduced biodiversity may significantly reduce an environment's ability to adapt and thus lead to its destruction, causing disasters such as the potato famine in Ireland during the 1800s.[4]

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[1] "WHO | Frequently Asked Questions on Genetically Modified Foods." WHO. Accessed November 6, 2018. http://www.who.int/foodsafety/areas_work/food-technology/faq-genetically-modified-food/en/.

[2] Todhunter, Colin. "Genetically Modified Organisms (GMO): Profit, Power and Geopolitics." Global Research, March 28, 2018. https://www.globalresearch.ca/genetically-modified-organisms-gmo-profit-power-and-geopolitics/5419873.

[3] "Behind the Mask of Altruism: Imperialism, Monsanto and the Gates Foundation in Africa." Global Research, October 16, 2014. https://www.globalresearch.ca/behind-the-mask-of-altruism-imperialism-monsanto-and-the-gates-foundation-in-africa/5408242.

[4] Landry, Heather. "Challenging Evolution: How GMOs Can Influence Genetic Diversity." *Science in the News* (blog), August 10, 2015. http://sitn.hms.harvard.edu/flash/2015/challenging-evolution-how-gmos-can-influence-genetic-diversity/.

GMOs are a powerful tool that can aid in solving problems such as world hunger and malnutrition. Despite their immense utility, many barriers still impede the universal spread of GMOs. From corporations that have a stranglehold on supply and concerns regarding safety of such crops, there still remain many issues that the World Health Organization still needs to solve to facilitate safe and sustainable use of GMOs in accord with international standards.

CASE STUDY: GOLDEN RICE

Over 250 million children are Vitamin A deficient. Every year, 250 000 to 500 000 children become blind due to Vitamin A deficiency (VAD). VAD is a public health problem in more than half of all countries. [5] A potential solution to this global problem is golden rice: a genetically modified strain of rice that synthesizes beta-carotene, a precursor for Vitamin A.[6] The International Rice Research Institute (IRRI) licensed professors Ingo Potrykus and Peter Beyer to develop golden rice in 2001. However, currently only New Zealand, Australia, Canada, and USA have government approval of golden rice, with the Philippines and Bangladesh recently applying for commercialization.[6]

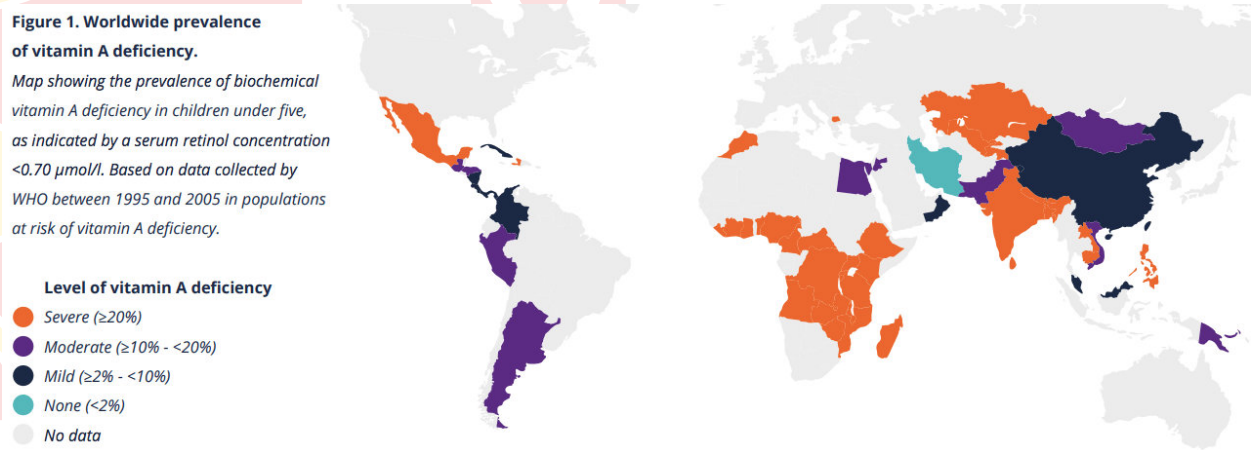

Figure source: "Golden Rice Fact Series."

What is stopping the international acceptance of golden rice?

The scientists originally researching golden rice did so with technology and services that were patented. In other words, golden rice was invented with the help of other products that were

[5] "WHO | Micronutrient Deficiencies." WHO. Accessed November 6, 2018. http://www.who.int/nutrition/topics/vad/en/.

[6] "The Golden Rice Project." Accessed November 6, 2018. http://www.goldenrice.org/.

protected by intellectual property rights.[7] Although this was not a hindrance during the researching stage of golden rice, when it was eventually ready for commercialization, there were up to 70 different patents depending on the country.[8] With each patent, the price to sell golden rice would become even greater. Since the original purpose of golden rice was to sell it to impoverished regions, patents posed a significant barrier in terms of affordability. The merging of the public and private sector has shown to be effective in gaining permission from many indirect patent holders, as demonstrated by the partnership with a Swiss company named Syngenta.[9]

Another criticism about golden rice is one that it shares with all GM foods: its effect on the environment. In some cases, the alteration of natural traits may provide a crop with selective advantage, essentially outcompeting nearby crops or possibly contaminating other crops via cross-pollination or seed mixing. Anti-GMO organizations such as Greenpeace have been advocating for the termination of GMO usage in agriculture due to its potential detrimental effects on the environment.[10] Research institutes such as VIB have refuted against such claims, stating that the addition of genes that allow for production of beta-carotene do not actually provide any advantage in survivability of the plant in natural settings and potential for cross-pollination is very low. [11] The debate is is still ongoing and more discussion as well as research still needs to take place for there to be a conclusive solution or compromise.

An additional barrier that opposes golden rice commercialization is rejection of the increase influence of western industries in developing countries. Those wishing for a self-sustaining economy are hesitant to support the overwhelming power produces of golden rice could have if citizens of developing countries become dependent on it.[11] Governments are also hesitant to adopt GM practices, and have strict regulations regarding GMO use and testing, making it

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[7] "Golden Rice Fact Series." VIB, 2016. http://www.vib.be/en/news/Documents/vib_fact_GoldenRice_EN.pdf.

[8] Kryder, R. David, Stanley F Kowalski, and Anatole F Krattiger. *The Intellectual and Technical Property Components of Pro-Vitamin A Rice (Golden Rice): A Preliminary Freedom-to-Operate Review*. Ithaca (N.Y.): ISAAA, 2000.

[9] Potrykus, Ingo. "The Private Sector's Role in Public Sector Genetically Engineered Crop Projects." *New Biotechnology*, TRANSGENIC PLANTS FOR FOOD SECURITY IN THE CONTEXT OF DEVELOPMENT, 27, no. 5 (November 30, 2010): 578–81. https://doi.org/10.1016/j.nbt.2010.07.006.

[10] "Special Report: Golden Rice." Greenpeace International. Accessed November 6, 2018. http://www.greenpeace.org/international/en/campaigns/agriculture/problem/Greenpeace-and-Golden-Rice/.

[11] "Golden Rice Fact Series." VIB, 2016. http://www.vib.be/en/news/Documents/vib_fact_GoldenRice_EN.pdf.

difficult to implement novel practices.[12] The developers of golden rice however want to ensure that the addition of golden rice will not drastically disrupt systems already in place. For example, farmers are allowed to use crops from one season as seeds for the next. The cost of golden rice seeds will be equivalent to white rice and thus should not harm small farmers economically. Additionally, out of the 28 countries currently farming GM crops, 20 of them are developing, indicating that developing countries can effectively integrate GM crops in agricultural practices.[11,13]

While we know a lot more about GM foods than we did a decade ago, research still needs to be conducted to raise awareness about both their benefits and harms. Additionally, international discourse regarding GM foods also needs to occur so that an effective framework can be established for all countries involved.

WHAT HAS BEEN DONE?

The General Opinion: Advantages and Disadvantages

Genetically Modified Organisms (GMOs) are "foods are foods derived from organisms whose genetic material (DNA) has been modified in a way that does not occur naturally" according to the WHO. They are often made by inserting genes of other species into the DNA of the organism, usually plants.

When used in crops it allows the food to grow faster, and this increase in productivity and efficiency could lead to great benefits in terms of public health, most specifically malnutrition and vitamin and mineral deficiencies. It would allow food to be grown in places experiencing drought, extreme climates, and regions with inadequate soil for traditional agriculture[14]. This technology could help with the widespread issue of allergies by modifying the DNA of certain foods and eliminating the property that causes common allergic reactions to occur.[15] They could also be built with resistance towards pests, therefore compensating for a potentially high seed cost and actually lower the overall production cost below that of traditional agriculture. This lack of a need for herbicides and pesticides would make the products free of chemicals which could have potential effects on human health as well as making the agriculture industry more environmentally friendly.[14] One advantage that will be of

[12] "Golden Rice: The GMO Crop Greenpeace Hates and Humanitarians Love." Genetic Literacy Project, February 13, 2018. https://geneticliteracyproject.org/2018/02/13/golden-rice-gmo-crop-greenpeace-hates-and-humanitarians-love/.

[13] "The Golden Rice Project." Accessed November 6, 2018. http://www.goldenrice.org/.

[14] Bawa, A. S., and K. R. Anilakumar. "Genetically Modified Foods: Safety, Risks and Public Concerns-a Review." *Journal of Food Science and Technology* 50, no. 6 (December 2013): 1035–46. https://doi.org/10.1007/s13197-012-0899-1.

[15] Lack, Gideon. "Clinical Risk Assessment of GM Foods." *Toxicology Letters* 127, no. 1–3 (February 28, 2002): 337–40.

particular significance is the potential for increasing the nutritional value of foods as well as their vitamin and mineral concentrations compared to their traditionally grown counterparts. This specific point will be further discussed in the context of the increased vitamin A levels of a certain crop of rice called 'Golden Rice'.

Despite all of these clear benefits, there is still some concern regarding GMOs, and unfortunately there is a lack of definitive evidence on the long term effects this technology could have since it is a relatively new area of research. There are currently some speculations that continued ingestion of such foods can cause different diseases to develop antibiotic resistance, which is already a significant issue faced across the globe for many illnesses.[14] There is also the potential that the cross-pollination methods sometimes used to genetically modify plants could be harmful to other organisms in the environment in the area these crops are introduced. Aside from issues regarding health and the environment, furthering GMO technology and its uses could have potential impacts on economies across the globe. For example, if developing countries start relying on GMOs to battle public health crises, they would have to increase their dependence on industrial countries, as they are the ones leading research in this field and use of this technology.

Current Policies from the Law Library of Congress:

Canada:

Canada is the third largest producers of GMOs, so they are generally less cautious and much more lenient in their regulations. As public awareness increased on this topic towards the end of the 20th century, Canada met concerns by establishing the Federal Regulatory Framework for Biotechnology in 1993.[16] Instead of coming up with an entirely new set of regulations, the Framework announced that new organisms created using biotechnology would just follow the current rules, meaning that it would be monitored the same way as traditional products. This means that before entering the market, new products must be approved by Health Canada for foods, the Canadian Food Inspection Agency (CFIA) for seeds and livestock feed, and Environment Canada for both products grown in the country as well as imported products.[17] By inspecting specific products, this takes the focus off of generalizing a method for creating a product and puts it back on the product itself.

China:

China's significance in this field lies in its great interest and support of the agriculture biotech industry. This means they have incorporated a great deal of planning in their contributions of research involving genetic engineering and its applications in agriculture as well as the safety of such practices. As their research continues, they still take significant

[16] Ahmad, Tariq. "Restrictions on Genetically Modified Organisms: Canada | Law Library of Congress." Web page, March 2014. https://www.loc.gov/law/help/restrictions-on-gmos/canada.php.

[17] Ahmad, Tariq. "Restrictions on Genetically Modified Organisms: Canada | Law Library of Congress." Web page, March 2014. https://www.loc.gov/law/help/restrictions-on-gmos/canada.php.

precautions and from the Law Library of Congress we know "According to the data published by the MOA on April 27, 2013, China has issued GMO Safety Certificates to seven domestically developed, genetically modified (GM) crops, including a varieties of tomato (1997), cotton (1997), petunia (1999), sweet pepper and chili pepper (1999), papaya (2006), rice (2009), and corn (2009)".[18]

US:

The United States has taken a less cautious approach to this technology and associated practices, much like that of Canada's. There is no specific federal legislation, meaning that health, safety, and environmental consciousness measures follow that of traditional products (Acosta, 2014). This also allows products to be looked at individually, focusing on their nature versus the method used to produce them. Economically, GMOs play a significant role in the US since they are the world's leading producer of GMO crops.[19]

EU:

The EU has taken a very defensive stance on this topic, since they must follow their precautionary principles, they must "prevent adverse effects on human health and the environment that may occur owing to the intentional release of GMOs into the environment or the marketing of and import into the EU of GMOs or products made from GMOs." (Papademetriou, 2014). EU members are allowed to take extra precautions, and may completely prohibit cultivation of GMOs within their territories, even if they have been generally approved by the EU. The list of approved GMOs is limited due to concerns about the possible disadvantages and potential damage to the environment and farmlands.[20]

AU:

Though the African Union members have polarizing views on the topic of biotechnology, in 2006 they resolved to take a common position on the topic due to the benefit of the prospective increase in crop yields for farmers. Different members of the union continued to hold conferences to best understand how this would affect their regions, for example, in 2002, the Common Market for Eastern and Southern Africa's ministers of Agriculture began the journey of drafting their ow regional policies on GMOs, emphasizing commercial planting of GM crops, commercial trade, and food aid.[21] Through discussions of

[18] Zhang, Laney. "Restrictions on Genetically Modified Organisms: China | Law Library of Congress." Web page, March 2014. https://www.loc.gov/law/help/restrictions-on-gmos/china.php.

[19] Acosta, Luis. "Restrictions on Genetically Modified Organisms: United States | Law Library of Congress." Web page, March 2014. https://www.loc.gov/law/help/restrictions-on-gmos/usa.php.

[20] Papademetriou, Theresa. "Restrictions on Genetically Modified Organisms: European Union | Law Library of Congress." Web page, March 2014. https://www.loc.gov/law/help/restrictions-on-gmos/eu.php.

[21] "FANRPAN - African Position on Genetically Modified Organisms (GMOs) in Agriculture." Accessed November 12, 2018. https://www.fanrpan.org/archive/documents/d00616/.

various associations they still kept the group's general mission in mind, "the AU policy guidelines attempt to guide member states in establishing public awareness, biosafety strategy, harmonization, participation in international negotiations, and stakeholder collaboration."[21]

WHAT CAN BE DONE?

Expanding the Scope of GMOs

Despite the slow acceptance of GMOs, there remains many opportunities to expand their potential. The various downsides of agriculture, such as its environmental impact, can be curbed through genetic modification. For example, fertilizers have an adverse impact on the water supply when the nitrogen enters the groundwater or leaches into bodies of water, leading to algal blooms.[22] Further research into crops, including rice and grains, that require less nitrogen could reduce the amount of fertilizer used in agriculture.[23]

GMOs can also become more abundant as patents expire and generic versions become available. Monsanto's earliest seeds' patents have expired, which have led to replantable GMO seeds for half the cost.[24] However, most GMO crops are still patented, meaning that the newest innovations have trouble reaching impoverished regions. Increasing the number of publicly available GMO crops through not-for-profit research centers can provide lower cost seeds to farmers in developing nations.

Changing Public Opinion and Awareness of GMOs

The opinions of GMOs in the public are also important to the fate of GMOs. Protests against GMOs such as the March Against Monsanto and the destruction of golden rice crop in the Philippines highlight the antagonistic views that many people have towards GMOs.[25, 26] Until

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[22] "Fertilisers and the Environment." Accessed November 11, 2018. https://www.dpi.nsw.gov.au/agriculture/soils/improvement/environment.

[23] "Rice Genes Could Be Key to Stemming Nitrogen Pollution - Scientific American." Accessed November 11, 2018. https://www.scientificamerican.com/article/rice-genes-could-be-key-to-stemming-nitrogen-pollution/.

[24] "As Patents Expire, Farmers Plant Generic GMOs - MIT Technology Review." Accessed November 11, 2018. https://www.technologyreview.com/s/539746/as-patents-expire-farmers-plant-generic-gmos/.

[25] "GMOs and The March Against Monsanto | HuffPost." Accessed November 11, 2018. https://www.huffingtonpost.com/harold-stark/gmos-and-the-march-agains_b_10137492.html.

[26] Slezak, Michael. "Militant Filipino Farmers Destroy Golden Rice GM Crop." New Scientist. Accessed November 11, 2018. https://www.newscientist.com/article/dn24021-militant-filipino-farmers-destroy-golden-rice-gm-crop/.

the protestors' fears are either proved or disproved, the progress of GMOs will be slowed. More testing of GMO safety can convince people whether GMOs are viable. For example, further investigation into cross-contamination between GMO and non-GMO crops can inform policies about how GMO plants are cultivated, such as distance between GMO and non-GMO plants. [27]

In the marketplace, GMOs face an uphill struggle against consumer perceptions and misinformation. In surveys of consumers in the U.S.A, Latvia, Turkey, and Poland found that many people had little to no knowledge of GMOs in addition to misconceptions of effects of GMOs.[28] Educating consumers about the certainties around GMOs such as the fact that consuming GMOs cannot modify a person's genes could lead to more informed choices from the public.

Alternatives to GMOs

While GMOs have the potential to solve food shortages and nutrient deficiencies, there are other methods that can be explored. In urban environments, rooftop farming can take unused space in cities to turn into urban farms. These farms provide extra agricultural output that can supplement open-field farming, which can improve food security.[29] Cooperation between communities, governments, and companies could lead to sustainable agriculture for expanding urban populations.

With the massive advancements in the field of biology, researchers can look towards new ways of combating blight. For example, researchers at Monsanto are testing a new spray that contains RNA that causes a pest's death by turning off a vital gene. [30]Investing more into novel pesticides and herbicides can reduce the necessity of GMOs for food security. Other methods of efficient farming in food insecure regions such as crop rotation and planting cover crops can also be considered.[31]

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[27] "Cross-Fertilization between Genetically Modified and Non-Genetically Modified Maize Crops in Uruguay. - PubMed - NCBI." Accessed November 11, 2018. https://www-ncbi-nlm-nih-gov.myaccess.library.utoronto.ca/pubmed/21975255.

[28] Wunderlich, Shahla, and Kelsey A. Gatto. "Consumer Perception of Genetically Modified Organisms and Sources of Information." *Advances in Nutrition (Bethesda, Md.)* 6, no. 6 (November 2015): 842–51. https://doi.org/10.3945/an.115.008870.

[29] "The Future of Food Series: Exponential Solutions to Transforming Our Food System | HuffPost." Accessed November 11, 2018. https://www.huffingtonpost.com/christiana-wyly/urban-farming-_b_2272249.html.

[30] Regalado, Antonio. "The Next Great GMO Debate." MIT Technology Review, August 11, 2015. https://www.technologyreview.com/s/540136/the-next-great-gmo-debate/.

[31] "What Is Sustainable Agriculture? | Union of Concerned Scientists." Accessed November 11, 2018. https://www.ucsusa.org/food-agriculture/advance-sustainable-agriculture/what-is-sustainable-agriculture#.W-e9DHpKi9Y.

Regulation of GMOs

Frameworks for regulating GMOs differ in many countries. While the Cartagena protocol created a global framework for the movement of GMOs, there does not exist global rules on what GMOs are permitted and how they are labelled.[32] Creating an international regulatory body or protocol to assess the safety of various GMO crops or devising rules on how GMOs are labelled could be a next step. With more consensus surrounding the state of GMOs, important projects such as Golden Rice may be able to see a definite conclusion.

[32] National Academies of Sciences, Engineering, Division on Earth and Life Studies, Board on Agriculture and Natural Resources, and Committee on Genetically Engineered Crops: Past Experience and Future Prospects. *Regulation of Current and Future Genetically Engineered Crops*. National Academies Press (US), 2016. http://www.ncbi.nlm.nih.gov/books/NBK424533/.

QUESTIONS TO CONSIDER

1. What are my country's current policies regarding GMOs?
2. How has my country responded to the use of GMOs in the past?
3. Does my country have any future plans for either implementing GMOs? If not, what other alternatives have they considered?
4. Who is primary in charge when it comes to deciding the use of GMOs in my country? In my region? Internationally?
5. How can my country collaborate with other countries with a similar stance?

TOPIC B: GLOBAL MENTAL HEALTH

INTRODUCTION

During times of crisis, primary focus is given to physical aid and rescue operations. However, an often overlooked consequence of catastrophic events such as natural or manmade disasters and wars are lasting effects on mental health. The death of loved ones, shock from the traumatic experience, and pressure of acting in chaotic situations can lead to depression, post-traumatic stress disorder (PTSD), and various other negative effects on mental health.[33]

There are several challenges that arise during times of emergency. Firstly, the magnitude of of people affected is drastically increased. Health relief efforts have to therefore try to efficiently and effectively target a broad spectrum of the population affected.[34] This includes not only those directly affected by trauma but also health workers frantically trying to accommodate a relentlessly growing number of tasks while being in danger themselves.[35] Secondly, in least economically developed countries (LEDCs) an already limited amount of resources makes it even more difficult for a proper functioning healthcare infrastructure during times of disaster, making it imperative that more robust systems are in place to deal with unexpected crisis.[34] Thirdly, during times of emergency, several organizations are at work trying to help the vast number of people affected. The organization of these various parties and the delegation of their tasks have been difficult to manage.[34]

Despite these challenges, we can still learn from past experiences such as the 2004 flooding of Sri Lanka and ongoing mental health reforms in Iraq since 2004. From these case studies, we are able to better understand the limitations to helping deal with mental health and how to overcome them. An important aspect as aforementioned is proper infrastructure. The domestic governing body has most responsibility in setting up local mental health facilities and raising awareness; however, WHO personnel and other NGOs have proven to play an essential role in training and assisting pre-existing healthcare structures under an overseeing governmental

[33] World Health Organization. *Building Back Better: Sustainable Mental Health Care after Emergencies*. Geneva: World Health Organization, 2013. http://public.eblib.com/choice/publicfullrecord.aspx?p=1692758.

[34] World Health Organization. *Building Back Better: Sustainable Mental Health Care after Emergencies*. Geneva: World Health Organization, 2013. http://public.eblib.com/choice/publicfullrecord.aspx?p=1692758.

[35] "'We're Doctors but We're Also Human': Helping Syrian Health Workers Handle Severe Stress," October 9, 2017. http://www.euro.who.int/en/health-topics/noncommunicable-diseases/mental-health/news/news/2017/10/were-doctors-but-were-also-human-helping-syrian-health-workers-handle-severe-stress.

body.[36] Further collaboration between these groups is instrumental in preparing for future disasters.

Lastly, a lack of awareness is still a pertinent issue in all countries, but even more prominent in LEDCs. Factors such as stigma and discrimination avert individuals from seeking assistance.[37] Working closely with national agencies to promote safe and accessible facilities for those in need is an important step in treating mental illness. Intervention programs such as the Problem Management Plus (PM+) have been vital in training new staff and raising awareness across a range of countries, cultures, and contexts.[38]

CASE STUDY: 2010 HAITI EARTHQUAKE

While efforts are often directed towards immediate relief during a state of emergency, studies have shown that there can be lasting effects on mental health for those both directly and indirectly exposed to a disaster such as the 2010 Haiti Earthquake. Messiah et al showed in a study that up to 45% of those directly exposed and 24% of those indirectly exposed to the earthquake could be diagnosed with depression 3 years after the incident.[39]

Since the incident in 2010, several risk factors were identified that made mental health an even greater issue in Haiti. Poor living conditions, history of sexual violence, and lack of reliable mental health services made it difficult to access those that were suffering. Since then the Pan American Health Organization/World Health Organization (PAHO/WHO), United Nations International Children's Emergency Fund (UNICEF), and International Organization for Migration (IOM) have been working with Ministry of Health Haiti (MSPP) to develop a national plan to more effectively aid those with mental health issues and better prepare for emergency situations in the future. The main priorities of this plan are providing access to healthcare at

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[36] World Health Organization. *Building Back Better: Sustainable Mental Health Care after Emergencies*. Geneva: World Health Organization, 2013. http://public.eblib.com/choice/publicfullrecord.aspx?p=1692758.

[37] "Stigma and Discrimination," November 6, 2018. http://www.euro.who.int/en/health-topics/noncommunicable-diseases/mental-health/priority-areas/stigma-and-discrimination.

[38] "WHO | Scaling up Capacity for Problem Management Plus (PM+)." WHO. Accessed November 6, 2018. http://www.who.int/mental_health/emergencies/PM_plus_2018/en/.

[39] Messiah, Antoine, Juan M Acuna, Grettel Castro, Pura Rodríguez de la Vega, Guillaume Vaiva, James M Shultz, Yuval Neria, and Mario De La Rosa. "Mental Health Impact of the 2010 Haiti Earthquake on the Miami Haitian Population: A Random-Sample Survey." *Disaster Health* 2, no. 3–4 (February 18, 2015): 130–37. https://doi.org/10.1080/21665044.2015.1014216.

both the secondary and primary level, train generalized health care workers into specialized fields, and increase the overall number of health workers in Haiti.[40]

The case study of Haiti has revealed inherent flaws in our medical system globally. About 75-80% of people with mental health problems in LEDCs fail to receive proper medical attention. As of 2014, WHO has estimated 0.07 psychiatrists and 0.29 nurses are working in the mental health sector per 100,000 people. Moreover, religion plays an important role in Haitian life. 70% of Haitians believe in the Voudou, a religion based on a "harmonious relationship with the spirit world."[41] In the context of mental health, many would choose traditional health workers or local priests to help them than governmental bodies. This mistrust in secular healthcare is only exacerbated by the lack of healthcare personnel and minimal efficiency in the eyes of the Haitian citizens.

Continued collaboration with local systems, both traditional and governmental is imperative to develop an effective solution to mental health problems. The disaster in Haiti has been disheartening but valuable insight also has been gained regarding how successful current systems to cope with mental health have been. WHO as well as other organizations have analyzed case studies in several other areas of the world that have experienced disasters such as Sri Lanka, Iran, and Syria. Learning from these events and raising awareness about mental health globally continues to be a priority of WHO.

WHAT HAS BEEN DONE?

The largest piece of action by the United Nations and WHO to date is the Mental Health Action Plan for 2013 - 2020. This action plan sets the goals to strengthen leadership and governance, to implement strategies for promotion and prevention, to strengthen information systems, and provide community based mental health and social care strategies. WHO believes that risk can often be based on local context, many people can be put at a greater risk due to a range socio-economic factors. WHO proposes a number of solutions to achieve the action plan's goals. It asks it member countries to allocate greater resources to ensure that people with mental disorders are given autothirity and can influence health policies. They hope to make mental health a greater concern in humanitarian emergencies, given the increased risk for mental health issues in those circumstances. Throughout the plan, WHO emphasizes the importance of giving special attention to groups with a higher risk. The plan asks its member states to further integrate mental health into their health information systems, improve their

[40] "Earthquake in Haiti—One Year Later PAHO/WHO Report on the Health Situation." World Health Organization, January 2011. http://www.who.int/hac/crises/hti/haiti_paho_jan2011_eng.pdf?ua=1.

[41] Chung, Hyunsoo. "Mental Health in Haiti: Beyond Disaster Relief." *The Journal of Global Health*, 2016. www.ghjournal.org/mental-health-in-haiti-beyond-disaster-relief/.

research capacities and academic collaboration. Finally, WHO implores its member's to ensure the human rights of all persons with mental disorders.[42]

WHO has been making large strides to ensure that there is universal awareness about mental health and mental disorders. During 2018 world mental health day, WHO aimed to increase the awareness about adolescents struggling with their mental health. Through many new technologies and social medias, there is an increasing pressures to be connected with the world. WHO believes that good adolescent mental health will greatly benefit the future. Healthy young adults contribute to a better work force and more engaged community. Through days with emphasized mental health awareness, WHO is working towards a world with greater mental health.[43]

WHAT CAN BE DONE?

Many prominent organizations around the world, including the WHO, have been creating action plans to attack the issue at hand, many mental health services remain inaccessible to those who need the services most. One of the first things that needs to be acknowledged is that mental, neurological and substance use disorders occur in every part of the world, affecting every community and age group from a diversity of socioeconomic groups.[44] As mental health affects those from both underdeveloped and developed Countries, the solutions need to be internationally accessible. The solutions should address education and first response to the issues at hand, as well as, equal accessibility to preventative and rehabilitative services regardless of your location. Four strategies that could be implemented to further foster equality in mental health from Nation to Nation include; increasing and improving information for decision-making and technology transfer to increase country capacity, raising awareness about mental health disorders through education and advocacy for more respect of human rights and less stigma, assisting countries in designing policies and developing comprehensive and effective mental health services, and finally, building local capacity for public mental health research in poor countries.[45] Education programs aim to inform the public about health disorders while simultaneously reducing the stigmas associated to the disorder that only cause further trauma.[46] Additionally, The United Nations has included mental health and development in its priority theme list, encouraging participating countries to promote access to mental health

[42] "WHO | Comprehensive Mental Health Action Plan 2013–2020." WHO. Accessed November 12, 2018. http://www.who.int/entity/mental_health/action_plan_2013/en/index.html.
[43] "WHO | World Mental Health Day 2018." Accessed November 12, 2018. https://www.who.int/mental_health/world-mental-health-day/2018/en/.
[44] World Health Organization, and Noncommunicable Disease and Mental Health Cluster. *Investing in Mental Health*. Geneva: World Health Organization, 2003. http://www.myilibrary.com?id=9723.
[45] World Health Organization. *Building Back Better: Sustainable Mental Health Care after Emergencies*. Geneva: World Health Organization, 2013. http://public.eblib.com/choice/publicfullrecord.aspx?p=1692758.
[46] "Expanding Awareness of Mental Health." Accessed November 9, 2018. https://www.icaf.org/pdfs/Expanding Awareness of Mental Health in Childhood and Adolescence.pdf.

care as a human right.[47] For anything to happen at a global scale it is important that all countries and cultures come to accept the fundamental that mental health exists, and effects all classes.

[47] "Mental Health and Development Enable." United Nations. Accessed November 09, 2018. https://www.un.org/development/desa/disabilities/issues/mental-health-and-development.

QUESTIONS TO CONSIDER

1. What current healthcare systems does my country have in place to deal with mental health?
2. How prevalent are mental health issues in my country and what are the main causes of these issues?
3. Does my country have any plans to further develop healthcare infrastructure? Are there any precautionary measures in place for emergencies?
4. How can we reach out to people across a variety of cultures and context?
5. What should we do for those that deny help from government organizations?

ADVICE FOR RESEARCH AND PREPARATION

This background guide should be the beginning point of your research to get the general idea of the topics. However, in order to represent your country properly, you must also do research into general country policies and affiliations. For example, you should know basic information such GDP, common trading partners, political system, any prominent cultures or religions, influential groups, etc. Some good resources for this kind of information include BBC country profiles and the CIA world factbook, both of which are provided below under GMO Key resources.

For specific topics, it is also important that you look into past UN actions regarding certain issues. Specifically, focus on case studies within your country or the case studies provided in this background guide. It is important that we do not just discuss ideas that have already been discussed in previous UN meetings and pass on derivative resolutions.

Lastly, it is also important that you verse yourself with policies of other countries both similar and different from yours. In order to facilitate stimulating discussions, each delegate must not only represent their country, but also ensure others are following with their country policies as well. Consistency is crucial and that can only be achieved through proper research. We cannot emphasize enough that you are representing your country's policies, not your own personal stance on these issues. We have complete faith that you will follow these guidelines and wish you the best of luck with your research!

GMO KEY RESOURCES

"BBC NEWS | Country Profiles." Accessed November 10, 2018. http://news.bbc.co.uk/2/hi/country_profiles/default.stm.

"The World Factbook — Central Intelligence Agency." Accessed November 10, 2018. https://www.cia.gov/library/publications/the-world-factbook/.

Both of these sources are great places to start learning the essential facts about your country.

"Golden Rice Fact Series." VIB, 2016. http://www.vib.be/en/news/Documents/vib_fact_GoldenRice_EN.pdf.

This document provides information on golden rice with various perspectives and analysis.

"WHO | Frequently Asked Questions on Genetically Modified Foods." WHO. Accessed November 6, 2018. http://www.who.int/foodsafety/areas_work/food-technology/faq-genetically-modified-food/en/.

This page is created by the WHO and answers some of the most commonly asked questions regarding GMOs.

GLOBAL MENTAL HEALTH KEY RESOURCES

World Health Organization. *Building Back Better: Sustainable Mental Health Care after Emergencies*. Geneva: World Health Organization, 2013. http://public.eblib.com/choice/publicfullrecord.aspx?p=1692758.

This is a crucial document which essentially tackles the core issues regarding mental health after emergencies and what we have learned from history so far.

"WHO | Scaling up Capacity for Problem Management Plus (PM+)." WHO. Accessed November 6, 2018. http://www.who.int/mental_health/emergencies/PM_plus_2018/en/.

This is an example of a proposed solution to mental health. Basically an intervention program, but be sure to analyze at how effective it is.

"Earthquake in Haiti—One Year Later PAHO/WHO Report on the Health Situation." World Health Organization, January 2011. http://www.who.int/hac/crises/hti/haiti_paho_jan2011_eng.pdf?ua=1.

This document provides insight into our case study of the Haiti 2010 Earthquake and the various factors involved when trying to create better mental healthcare facilities.

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