

YMCA Model United Nations 2025
Topic Descriptions

Committee: Pan-American Summit
Chair: Demetri Passalaris

Topic #1: Parasitic and Zoonotic transmitted diseases

Introduction and Background

Parasitic and Zoonotic diseases are any disease that spread between animals and people and have been around longer than human civilization. Many major diseases affecting billions across the globe, such as **COVID-19**, **AIDS**, and **Rabies** started from animals. Additionally, many diseases are spread through parasites, such as **Lyme Disease** and the **Zika Virus**. Furthermore, at least 60% of all modern diseases emerge from species other than humans. Although many of these diseases originate in isolated rural areas, they quickly spread due to **modern travel systems** and the **lack of proper surveillance** that can monitor and catch outbreaks rapidly. These diseases not only affect the human population, but can damage some of the already fragile ecosystems in America, such as the rainforest, and agricultural life. Moreover, because of global trade across continents, **invasive diseases** can spread to areas that have no natural immunity and cause immense damage to **wildlife**, **agriculture**, and the human population. For example, BSE, or mad cow disease, started in Great Britain but has had several outbreaks in multiple nations in Pan-America, including Brazil in 2023, often resulting in a suspension of beef production and trade.

Current Status

Despite many parasitic and zoonotic, such as COVID-19, the Zika Virus, and **Swine Flu** diseases seeming to have ebbed in recent years, there are still very few ways to **prevent these fatal outbreaks** from starting in the first place. Yet, many less well known diseases, such as **Chagas Disease** still cause over ten thousand fatalities each year. Unfortunately, contemporary society often causes these outbreaks to occur. In recent studies, many epidemiologists speculate that the next pandemic may start in the deforested areas of the rainforest. However, Many saw firsthand how **CDC Guidelines** were ignored during the COVID-19 pandemic with only 41% of people avoiding large crowds in the US. The lack of a total global effort to prevent the spread of the disease has caused many countries to reconsider how they **educate people on public health safety**. However, many prevention tactics of diseases can cause recessions in the economy, in the beginning months of the 2020 pandemic the global GDP dropped 9% as safety guidelines prevented businesses from prospering.

Themes to Consider

Delegates need to determine what their country already does to prevent the spread and effect of parasitic and zoonotic diseases. Many countries may need to focus on **research for cures**, **municipal sanitation**, or **public health education**. It is also crucial to explore how zoonotic diseases that impact Pan-America's **agricultural system** directly affect the **population's health** and **global trade**. However, because there are vastly different zoonotic diseases in different parts of Pan-America, this committee has to find **commonalities in the prevention of different diseases**.

Discussion Questions

1. How can your country improve its public health, transportation, and sanitation systems to prevent the risk of zoonotic diseases from spreading and having mass outbreaks in urban areas?
2. What do the CDC or other nations recommend to stop the spread of the most prevalent diseases in your country and if your country adheres to these guidelines in the most effective manner?
3. Are the impacts of your nation's zoonotic diseases differ across economic levels, density in population, and age groups?

Resources

“Bovine Spongiform Encephalopathy Aka BSE- WOAHA.” *WOAH - World Organisation for Animal Health*,

www.woah.org/en/disease/bovine-spongiform-encephalopathy/#:~:text=Classical%20BSE%20is%20considered%20zoonotic. Accessed 16 Aug. 2024.

Description: describes how Bovine spongiform encephalopathy, BSE, affects cattle and how it can become a risk to humans.

ellerbeck, Stefan. “What Are Zoonotic Diseases - and How Dangerous Are They? | Gavi, the Vaccine Alliance.” *Www.gavi.org*, 6 June 2022,

www.gavi.org/vaccineswork/what-are-zoonotic-diseases-and-how-dangerous-are-they. Accessed 16 Aug. 2024.

Description: explanation of zoonotic diseases, such as COVID-19, and how they impact the globe

Lee, Kelley. “The Global Governance of Emerging Zoonotic Diseases.” *Council on Foreign Relations*, 13 Feb. 2023,

www.cfr.org/report/global-governance-emerging-zoonotic-diseases/#:~:text=An%20estim

ated%2060%20percent%20of. Accessed 16 Aug. 2024.

Description: tactics that global governments use to prevent and manage Zoonotic diseases

Steverding, Dietmar. "The Spreading of Parasites by Human Migratory Activities."

Virulence, vol. 11, no. 1, 1 Jan. 2020, pp. 1177–1191,

www.ncbi.nlm.nih.gov/pmc/articles/PMC7549983/,

<https://doi.org/10.1080/21505594.2020.1809963>. Accessed 16 Aug. 2024.

Description: diseases that are not native to Pan-America but have become invasive diseases

Strydom, Tom, et al. "The Economic Impact of Parasitism from Nematodes, Trematodes and Ticks on Beef Cattle Production." *Animals*, vol. 13, no. 10, 1 Jan. 2023, p. 1599,

www.mdpi.com/2076-2615/13/10/1599, <https://doi.org/10.3390/ani13101599>. Accessed

16 Aug. 2024.

Description: How parasitic diseases impact livestock and agriculture

World Health Organization. "Zika Virus." *Www.who.int*, 8 Dec. 2022,

www.who.int/news-room/fact-sheets/detail/zika-virus#:~:text=Overview. Accessed 16 Aug. 2024.

Description: History of the Zika virus

Topic #2: Water contamination and pollution

Introduction and Background

In most Countries in Pan-America anywhere from 40-60% of freshwater supplies are polluted to the point where they are unusable for swimming, fishing, or drinking. While littering pieces of waste contribute to water pollution there are more detrimental factors. According to the UN 80% of wastewater from sewage systems reenters bodies of water without treatment, this includes **storm runoff** that collects oil, grease, and other chemicals from urban areas that flow into water supplies. **Radioactive waste** from military testing sites, nuclear power plants, and uranium mines are often not securely disposed of because proper radioactive disposal takes decades and billions of dollars. The **oil industry** also contributed to unclean water supplies through malpractice such as **fracking** and oil spills that can release millions of gallons of crude oil into the water. However, the largest contributor to water contamination is the agricultural industry, with excess **phosphorus** and **nitrogen** coming from fertilizers into bodies of water creating deathly algal blooms. Subsequently, **dead zones** are formed, where almost all ecological life dies can occur, for example, a dead zone has formed in the gulf of mexico over 3,000 square miles.

Current Status

high levels of water contamination, have left bodies of water previously used for fishing unusable. In the US, 40% of all lakes cannot be fished because of high levels of pollution. Another form of water contamination that has been researched in recent years are **Forever Chemicals**. Chemicals such as **Microplastics** and **Polyfluorinated alkyl substances** make up trace amounts in water supplies and are almost impossible to break down. These chemicals also contribute to increasing the **health risks** of drinking polluted water. Moreover, because many rural communities rely on local water supplies, once they are polluted locals are subjected to use these water supplies. Subsequently, Millions of people a year are diagnosed with Cholera, Dysentery, Hepatitis A, and Typhoid causing nearly over 800,000 deaths globally each year.

Themes to Consider

Delegates need to research what forms of pollution most contribute to water contamination. Likewise, the contaminated water does not only affect the people drinking the water, but it may affect the **tourism industry** for countries that are historically known for clear water and countries dependent on their **fishing industries**. Delegates must also consider what existing laws or regulations their countries have in place to prevent and **depollute** their bodies of water. Additionally, because many bodies of water flow through multiple countries it is especially

crucial to this issue for delegates to have an **international perspective** and how they can work with neighboring countries to clean up water supplies.

Discussion Questions

1. How can a country regulate major industries to prevent pollution without hindering the global economy?
2. Although they cannot be used for drinking water, how has the pollution of bodies of saltwater had an environmental impact on your country?
3. What are ways to ensure there is less nutrient runoff from farms without harming crop yields or preventing small and rural farms from staying in business?

Resources

“AE73/AE027: Potential Impacts of Improper Irrigation System Design.”

Edis.ifas.ufl.edu, 15 Aug. 2022, edis.ifas.ufl.edu/publication/AE027. Accessed 16 Aug. 2024.

Description: How poor irrigation systems can cause chemical runoff to flow into water supplies

Chrissie Giles. “What Would an Earthquake-Proof City Look Like?” *The Guardian*, The Guardian, 11 Dec. 2017,

www.theguardian.com/cities/2017/dec/11/earthquake-proof-city-christchurch-japan-colombia-ecuador. Accessed 16 Aug. 2024.

Description: Explains the main factors that have led to water contamination in Latin America

Denchak, Melissa . “Water Pollution: Everything You Need to Know.” *NRDC*, 11 Jan. 2023, www.nrdc.org/stories/water-pollution-everything-you-need-know#whatis.

Accessed 16 Aug. 2024.

Description: A broad overview of what pollutes fresh bodies of water

“Microplastics in Water and Wastewater: What You Need to Know.” *Hazen and Sawyer*, 2022, www.hazenandsawyer.com/horizons/microplastics-in-water-and-wastewater.

Accessed 16 Aug. 2024.

Description: Water pollutants that are not visible and are in many drinking water reserves
Prashad, Jennifer. "Latin America's Water Pollution Crisis and Its Effects on Children's
Health." *Humanium*, 28 July 2020,
[www.humanium.org/en/latin-americas-water-pollution-crisis-and-its-effects-on-childrens-
health/](http://www.humanium.org/en/latin-americas-water-pollution-crisis-and-its-effects-on-childrens-health/). Accessed 16 Aug. 2024.

Description: General overview of how our water is polluted and the effects it has on
health

U.S. Energy Information Administration. "Oil and the Environment - U.S. Energy
Information Administration (EIA)." *Eia.gov*, U.S. Energy Information Administration, 1
Aug. 2022,
www.eia.gov/energyexplained/oil-and-petroleum-products/oil-and-the-environment.php.
Accessed 16 Aug. 2024.

Description: Describes how the oil industry affects clean water supplies

Topic 3: Natural disaster prevention and rehabilitation

Introduction and Background

Much of Pan-America is deeply affected by many natural disasters such as **earthquakes**, **hurricanes**, and **wildfires**. However, because of each country's geographical location, they are more susceptible to certain disasters. The Caribbean islands and the parts of North America bordering the Atlantic and the Gulf of Mexico face a hurricane season from June to November. All countries that border the Pacific are on the **Ring of Fire** and are predisposed to volcanic eruptions and earthquakes. And many countries with dry periods exhibit wildfires. Although most countries have developed some methods to limit the effect of the natural phenomena, many times millions of people are forced to flee their homes and the death toll reaches the thousands. In 2010 Haiti had a huge earthquake that killed 200,000 people, **left millions homeless**, and cost **7 billion dollars to repair**. That same year, Chile suffered an earthquake that had a magnitude of 8.8 that simultaneously caused **tsunamis**. In 2017 Hurricane Harvey hit countries in the Caribbean Central, South, and North America costing the state of Texas alone almost 3 billion dollars in immediate damages.

Current Status

Climate Change has exacerbated almost every natural disaster. Pan-America has experienced the warming and drying of areas already prone to wildfire, causing recent ones, such as the **2023 Canadian** and **2024 Colombian fires**, to be more intense than ever. The climate crisis has also increased the number of severe hurricanes while decreasing the number of mild ones. Consequently, the UN reports that only **half the global population is prepared for natural disasters** claiming most countries have not invested enough into early action planning, especially in poor and rural communities. Prevention is key when it comes to natural disasters as rebuilding damaged areas can reach the billions. In the US, 22 natural disasters cost over a billion dollars in rehabilitation, and poorer nations like Haiti still have not fully recovered from the 7.0 earthquake almost 15 years ago.

Themes to Consider

First and Foremost, delegates need to consider what natural disasters are common in their country and what other countries face similar ones, and also understand that some natural disasters such as volcanic eruptions, tornados, and droughts are **region specific**. Delegates also need to research what systems their countries already have in place to prevent and predict natural disasters from happening. However, some level of destruction is often inevitable causing millions to become displaced from their homes. Delegates need to develop ways to provide resources for those left **homeless from disasters**. Moreover, **educating the public** in areas often affected by disasters is prudent, for example, what resources they need if they must stay at home indefinitely and where the nearest place to live is if it is no longer safe where they are.

Discussion Questions

1. What are the newest ways to predict and prevent natural disasters, and how does the committee ensure that every country can have access to the best preventative measures possible?
2. How can countries work together to safely and responsibly handle displaced people from natural disasters?
3. In what ways can we limit the effects of climate change that heighten the effects of natural disasters?

Resources

Center for Climate and Energy Solutions. "Hurricanes and Climate Change." *Center for Climate and Energy Solutions*, 26 Sept. 2018,
www.c2es.org/content/hurricanes-and-climate-change/. Accessed 16 Aug. 2024.

Description: Describes how Climate change has worsened hurricane severity

"Chile Earthquake of 2010 - Reconstruction." *Encyclopædia Britannica*, 2019,
www.britannica.com/event/Chile-earthquake-of-2010/Reconstruction. Accessed 16 Aug. 2024.

Description: Details about the 2010 Earthquake and tsunami in Chile

Chrissie Giles. "What Would an Earthquake-Proof City Look Like?" *The Guardian*, The Guardian, 11 Dec. 2017,
www.theguardian.com/cities/2017/dec/11/earthquake-proof-city-christchurch-japan-colo

mbia-ecuador. Accessed 16 Aug. 2024.

Description: real-life examples of strategies to prevent destruction in cities from an earthquake.

Communications, BIDMC. “Natural Disaster Recovery Costs Set to Spiral, Study Shows.” *Harvard Gazette*, 5 Apr. 2023,

news.harvard.edu/gazette/story/2023/04/natural-disaster-recovery-costs-set-to-spiral-study-shows/. Accessed 16 Aug. 2024.

Description: Data about the costs of preventing natural disasters and the reconstruction Meadows, Sam. ““We Are in an Era of Megafires”: New Tactics Demanded as Wildfires Intensify across South America.” *The Guardian*, 13 Feb. 2024,

www.theguardian.com/global-development/2024/feb/13/megafires-wildfires-chile-argentina-south-america. Accessed 16 Aug. 2024.

Description: Explaining how new methods are needed to prevent the worsening wildfires “UN Warns That Half the World Is Not Prepared for Disasters | PreventionWeb.”

Accessed 16 Aug. 2024.

Description: Article on the UN report that outlines inadequacies in many countries' natural disaster systems