

JejuMUN XI

BACKGROUND GUIDE

World Health Organization (WHO)

1 | Mitigating the Effects of Global Warming on Human Health in Urbanized Areas

SDG: 3. Good Health and Well-Being | 7. Affordable and Clean Energy | 13. Climate Action

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Committee Introduction

The World Health Organisation (WHO) is an United Nations agency responsible for international public health. Established on April 7th, 1949, the World Health Organisation's primary role is to direct and coordinate health initiatives globally. The organisation aims to ensure the health of the world population and provide sufficient health care to all people around the world, including the vulnerable population.

In order to achieve those goals, the World Health Organisation works on numerous areas in relation to public health. It establishes standards for disease control in situations such as the COVID-19 pandemic, conducts education and research programs, foster health security, and develops partnerships between different nations. It also focuses specifically on the vulnerable populations in developing countries that require further assistance in developing healthcare services in the area.

Inside the World Health Organisation, there are two committees: the World Health Assembly (WHA) and the Executive Board. The World Health Assembly is composed of delegates from 194 member states. The Assembly meets annually to set policies, approve budgets and review organisational reports. The Executive Board, consisting of 34 health experts elected for three-year terms, is responsible for implementing the World Health Assembly's decisions and providing technical guidance. Together, the two committees aim to bring health and safety to everyone around the world.

Agenda Introduction

Rapid warming on a global scale has escalated the health risks in urban areas, where intense population density and wide infrastructure have exacerbating impacts. The changing climate and the warming of cities heighten the risk of a number of respiratory and cardiovascular health risks; for example, heat can exacerbate chronic conditions like asthma and combined chronic obstructive pulmonary disease. Other effects of warming temperatures include heat exhaustion and heat stroke, dehydration, and even death: in 2003, more than 70,000 people died in Europe due to a violent heatwave. Unfortunately, urban areas generally have warmer temperatures than rural areas due to the urban heat island effect, which makes urban populations more susceptible to heat waves.

Moreover, the air quality in urban areas can pose significant health risks to the population, especially for children, the elderly and the immunocompromised, who are more sensitive to air pollution. Increased exposure to high temperatures and ozone can exacerbate respiratory or cardiovascular disease, breathing difficulties and allergies, as well as lead to hospitalisation and premature mortality.

Urban public health systems are encountering substantial challenges as a result of the compound effects of global climate change. Among these disruptions are the more frequent and intensive climate-related health emergencies, such as heat waves and pollution incidents, that lead to greater demands on healthcare resources and infrastructure. Those in vulnerable populations, like low-income communities, are often more susceptible to health threats due to inadequate resources and information to protect themselves. These challenges underscore the need for increased community resilience and public health preparedness.

Letter from the Chairs

Dear Delegates,

We, Peta Oliver, Naeun Kim and Seoha Han would like to welcome you to JejuMUN XI's World Health Organisation Committee.

My name is Peta T Oliver and I will be serving as your Head Chair for this conference. I am a Year 11 (Sophomore) in North London Collegiate School Jeju and this is my second experience as a head chair. I have been an active member of my school's MUN scene since Year 7 (6th Grade) and I am expecting to see many **unique and creative solutions** made during our conference which provide a thoughtful and well rounded solution to our set agenda. I firmly encourage all delegates to give it their best shot and to make an impact within our committee.

Hello, I am Naeun Kim, a junior at NLCS Jeju, and I will be serving as the Deputy Chair of WHO. My first MUN conference was, in fact, JEJUMUN IX. I remember sitting there awkwardly not being able to say a word during the whole two days. However, once I realised that no one is going to remember my mistakes and started to speak up more, MUN became a much more enjoyable experience for me. Therefore, I want to remind all of you that all opinions and efforts are valued at the conference. Stepping out of your comfort zone might be nerve wracking at first, but that will eventually make your two days enjoyable!

Hello, this is Seoha Han, a sophomore at NLCS Jeju, and I am honoured to serve as the Associate Chair of WHO. I have been to 5 conferences as a delegate, and this is my third conference as a chair. My favourite part of Model United Nations is that every conference is an opportunity to learn something new. Also, I personally believe that 90% of MUN is about being the most confident version of yourself you can be. Hence, I encourage all of you to step out of your comfort zone, make a new friend, and show us what you can do.

As the chairs of this conference it will be our pleasure to make this conference memorable and enjoyable for everyone involved. Please don't hesitate to reach out to any and all of the chairs with questions about the agenda or conference in general if needed.

We look forward to seeing you,

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Key Terms

Air Pollution

Contamination of air both indoor and outdoor due to any chemical, physical or biological agent. Common sources of air pollution include combustion devices, motor vehicles, industrial factories and forest fires.

Asthma

A chronic lung disease that may be present in people of all ages. Asthma is caused by air pollution, family history, smoking and more. Symptoms can include coughing, chest tightness, and more.

Bronchitis

Bronchitis is caused by inflammation of the lining of the bronchial tube. Symptoms include coughing up discoloured, thickened mucus. Bronchitis can be either acute or chronic, depending on the individual.

Chronic Obstructive Pulmonary Disease (COPD)

A type of chronic inflammatory lung disease. It leads to obstructed airflow from the lungs. Patients with COPD may show symptoms such as breathing difficulty, cough and mucus production.

Climate Change

Long-term shifts in temperatures or weather patterns caused by both natural and human activities. Since the 1800s, human activities including burning of fossil fuels have been one of the major contributing factors to climate change.

Climate Sensitive Disease

Infectious diseases whose location and number is easily affected by climate factors, including global warming and more. Examples include malaria, lyme disease, dengue fever and more.

Healthcare Sector

Healthcare sector includes a variety of different businesses that work to provide medical services, develop medical equipment or drugs, and take care of medical insurance to make healthcare more accessible to patients in need.

Respiratory Illness

An acute or chronic illness which affects the respiratory system. Respiratory illnesses include acute respiratory infections, bronchitis, pneumonia, influenza, and chronic obstructive pulmonary diseases.

Rural Area

A less developed area located further away from towns and cities, with low population density and small settlements. It is often referred to as the countryside or agricultural areas, and most residents of rural areas have agricultural jobs.

Urban Area

A very developed region surrounding a city, with high population density and large amounts of built infrastructure. It is often referred to as towns, cities and suburbs, and most residents of urban areas have non-agricultural jobs.

Historical Background

1760~1830	First Industrial Revolution. Coal, railroads, and land clearing elevate greenhouse gas emissions, whereas improved agriculture and sanitation increase population development.
1992	The Rio de Janeiro Earth Summit convened. This summit resulted in one of the first global agreements regarding climate change: the UN Framework Convention on Climate Change (UNFCCC), which intended to prevent harmful human intervention in the climate system, recognised that human activities contribute to climate change, and acknowledged climate change as an international concern.
2005	The Kyoto Protocol, a legally binding global climate treaty adopted in 1997, was entered into force. It mandated industrialised countries to reduce emissions by an average of 5% below 1990 levels and set up a framework to track countries' progress. However, the agreement did not require developing countries, notably significant carbon emitters China and India, to take action. The United States signed the treaty in 1998 but never ratified it, eventually withdrawing its signature.
2015	The Paris Agreement, another legally binding international treaty on climate change, was adopted by 196 Parties at the United Nations Climate Change Conference (COP21). Its principal goal was to restrict “the increase in the global average temperature to well below 2°C above pre-industrial levels” and pursue efforts “to limit the temperature increase to 1.5°C above pre-industrial levels.
2023	The Intergovernmental Panel on Climate Change publishes its 6th report on climate change. It stated that “human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850–1900 in 2011–2020.” Regarding climate change in urban areas, it stated that “in urban areas, observed climate change has caused adverse impacts on human health, livelihoods and key infrastructure,” causing “economic losses, disruptions of services and negative impacts to well-being.” This report elucidated the severity of global warming and its impact on the world, particularly on urban areas.

Current State of Affairs

As Global Warming continues, it is becoming the cause of numerous health concerns around the world. Global Warming engenders extreme weather such as heat waves, storms, and floods, and also is the cause of an increase in vector-borne diseases.

Based on the records, the summer of 2023 is said to be the hottest ever in 2000 years. In May 2023, there was a large heat wave that affected Western North America. It led to record temperatures in Canada and the United States, and even caused 100 deaths in Mexico. Heat can cause heat exhaustion, heatstroke, worsen existing medical conditions and even lead to heart attacks. It engenders not only physical illnesses but also conditions such as Alzheimer's and Parkinson's. Heat waves are not only a problem in cities but also in urban areas due to the urban heat island (UHI) effect.

Other than direct deaths and illnesses, the heat wave also led to floods and mudslides in certain mountain ranges. More than 800 active wildfires happened throughout Canada and more than 200 in the US, leaving smoke composed of toxic gases and particulate matter that may lead to severe damage to the lungs.

This heatwave also repeatedly occurred in the summer of 2024, with more than 44 million people in the US having been placed under warnings as of June. Global warming is expected to eventually cause 250,000 deaths per year due to undernutrition, malaria, diarrhoea, and heat stress alone. By 2020, global warming may even be the cause of 14.5 million deaths.

On the 10th of June 2024, health professionals gathered together in Geneva in order to discuss the relationship between climate change and health. In 2023, the WHO also hosted the first ever 'Health Day' and climate-health ministerial in COP28. Alliance for Transformative Action on Climate and Health was also established in 2022's COP26 for the member states, aimed to help develop climate-resilient health systems, climate action and nutrition, and more.

Stances of Parties

Afghanistan

Air pollution from climate change contributed to 37,033 deaths in Afghanistan around 2019. Afghanistan health care services face critical underfunding and high poverty rates make it inaccessible to many parts of the population. Before the Taliban took over, Afghanistan planned to spend as much as \$20.6 billion to fund climate adaptation. However, the Taliban's seizure of the country in 2021 led to Afghanistan's exclusion of global talks making it difficult for Afghanistan to secure an international position on these issues.

Bangladesh

While Bangladesh suffers mainly from floods, the side effects from climate change also causes a large number of respiratory issues for the population, leading to annually rising cases of asthma, COPD, PIAT. Bangladesh is especially vulnerable to heat stroke since it is located near the Tropic of Cancer. The Bangladesh Health-National Adaptation Plan (HNAP) has been designed by the government to clarify the country's response towards building resilience to climate change impacts on health.

Brazil

Brazil's healthcare has improved in terms of controlling infectious diseases. However, COPD still remains to be the sixth greatest cause of death in the country. Furthermore, red alerts for heat waves have been released for around 3,000 towns and cities in Brazil during 2023. In 2024, Brazil collaborated with the United States of America, International Labour Organisation (ILO) and used the Partnership for Workers' Rights (PWR) to initiate a global campaign protecting workers from heat strokes to prevent health issues.

China

45.7 million adults in China suffer from asthma, following China's rapid industrialisation and subsequent pollution there has been a clear increase in asthma mortality rates. Furthermore, in 2019, 593,900 thousand deaths were caused due to non-optimal temperatures in China. The World Health Organisation (WHO) initiated a global project to increase public health adaptations to climate change in China, strengthening China and its urban region to increase its resilience to health risks from climate change.

France

7.3 million live with respiratory disease within France due to the increased exposure to particulate matter. Particulate matters affect the entire immune system, increasing vulnerability to complications. France released its Global Health Strategy for 2023 - 2027 at the end of 2023, which urges the global community to address healthcare issues related to climate change. Paris is expected to encourage cooperation and lead other European nations to increase the health care system and infrastructure regarding global health.

India

A significant rise in dust and fine matter found in air is worsening pre-existing respiratory issues like asthma, COPD and bronchitis within the nation. India established the National Programme on Climate Change & Human Health (NPCCHH) to address health issues regarding climate change. Due to the current lack of healthcare infrastructure in India, it is essential for India to increase the capacity of its healthcare infrastructure to address health problems regarding climate change.

Indonesia

Higher temperature and rainfall in Indonesia is leading to increasingly higher cases of Dengue fever. An economic loss of roughly 21.6 billion due to climate change in the health sector is estimated to occur in coming years. Indonesia was one of the first to implement a “global climate and health investment initiative” as a collaborative effort between the WHO and Indonesia Ministry of Health (MoH). Developing its health care infrastructure would be one of Indonesia’s first priority in combating health care issues related to climate change.

Iraq

Due to a shortage of medicinal drugs and qualified doctors compared to the surrounding region, Iraq has a lower average life expectancy. As one of the five countries predicted to be worse hit by climate change, Iraq will face increased desertification, posing a risk to the region's standard of human health with the increase of fine particles (dust/sand) that causes respiratory issues. Iraq will need to cooperate with other nations to strengthen its healthcare services and infrastructure in order to combat health problems created from climate change.

Italy

In Italy, great progress has been made in recent years to improve outdoor air quality. Progress was shown in the clear decrease in primary pollutants such as Benzene, Sulphur Dioxide and Carbon Monoxide, thus also decreasing the risk of death due to such pollutants. This effort, paired with Italy's health system which has been consistently ranked as one of the best in the world, proves Italy as a prime nation that can help other member nations to address the agenda. Currently, Italy has implemented a national program to prevent heat related health effects of climate change, which began from the largest urban areas and was gradually expanded to the entire nation. As 72.1 percent of Italy’s population lives in urban areas, Italy wishes to pursue solutions that provide targeted aid to urban areas.

Japan

Even though Japan was ranked second globally for its healthcare system in 2024, the increasingly more common extreme rain phenomena is leading to not only a higher number of deaths but also affecting people who suffer with long term/underlying respiratory problems. In 2018, the Japanese government implemented the Climate Change Adaptation Act to manage impacts of climate change, particularly those on human health. During a G7 Summit in 2021, the Japanese government announced that Japan would provide financial aid of 6.5 trillion yen, until 2025, to assist developing countries in addressing climate change impacts. With 92 percent of the population living in Urban areas and about a third approximately 65 years or older as of October 2022, Japan should pursue solutions that protect such vulnerable populations.

Laos

Laos' health sector is underfunded leading to limited access for all citizens to business in urban areas, meaning the acute respiratory infections that overburden the population are only treated to a certain extent. 63% of child deaths due to these previously mentioned acute respiratory diseases are caused by household air pollution. With the aid of WHO, Laos developed the Health National Adaptation Plan to include climate risk factors in existing public health programs such as sanitation, disease control, and disaster management. As one of the poorest countries in the world, Laos urgently needs financial aid in order to address this agenda.

Malaysia

Public healthcare standards in Malaysia excel in urban areas. In Malaysia, respiratory diseases are within the top three reasons for mortality and hospitalisation. Respiratory diseases commonly affect the low income and lower class of the country and are often neglected in treatment. Studies of major cities in Malaysia like Kuala Lumpur show that exposure to the city's ambient air pollution increases the risk of respiratory diseases with as little as 7-8 days of exposure. Hence, Malaysia should seek solutions that allow the health sector to better address the impact of air pollution on health. Currently, Malaysia is working on health adaptation initiatives to climate change, developing institutional and technological capabilities and conducting a national assessment of climate change impacts, susceptibility, and adaptation for health.

Pakistan

Due to an inefficient distribution of resources in Pakistan's health sector it struggles to keep up with different respiratory diseases like pneumonia and bronchitis. Global warming has not only brought on more vicious drought and flood cycles which are attributable to thousands of deaths annually but 12% of all Pakistani children's deaths under five years old are due to respiratory diseases - a number which has increased from previous generations due to global warming. In 2012, Pakistan formulated the National Climate Change Policy, which provided several measures to mitigate the impact of climate crises on human health. Pakistan, an LEDC, with the aid of developed countries, should implement measures to make the country more resilient to diseases and natural disasters.

Philippines

With the Philippines struggling with unequal access to healthcare, and expensive medical fees it makes treating the rampant respiratory diseases in urban areas more difficult. The air quality average in 2020 was two times higher than the WHO's recommended value and has only gotten worse since then. 46% of child deaths from acute respiratory diseases are attributable to air pollution due to the high amounts and low average air quality. The Philippines implemented the National Climate Change Action Plan (2011~2028), which outlines how the nation will address the effect of climate change on many aspects including human security and health. Moving forward, the Philippines would benefit from solutions that make healthcare more accessible and affordable.

Qatar

Qatar, which has more recently risen to rank within the top 20 for Healthcare, is currently being challenged in this sector due to the growing health problems caused by poor air quality. With the highest CO₂ emissions per capita in the world (2022), Qatar will soon start seeing increased effects as rising sea levels are estimated to affect 97% of the population living in coastal urban areas. Moreover, in recent years, Qatar has installed outdoor air conditioning systems due to extreme heat. Considering these problems Qatar is facing, the country should seek solutions that alleviate the impact of poor air quality and heat on health.

Republic of Korea

South Korea is renowned for its healthcare being ranked 18th globally for healthcare innovation in 2022. With its high-quality and affordable healthcare system, South Korea could aid developing countries in healthcare development. Yet that does not mean it is exempt from the common correlation between major cities/heavily urbanised areas like Seoul's, air pollutant levels and the number of hospital admission for respiratory diseases. This increase in respiratory diseases can be attributed to the 1.5 degree celsius increase in annual mean in the past 29 years in urbanised areas. Hence, the Republic of Korea would benefit from solutions that provide targeted aid to urban areas.

Saudi Arabia

The Saudi Initiative for asthma frequently updates guidelines to help diagnose and manage asthma in adults and children. Yet there is a lack of action about Middle East Respiratory Syndrome Coronavirus (MERS-Cov) and a lack of research into the outbreaks and their links to climate change. Saudi Arabian farmers are highly susceptible to climate change's negative impacts due to fieldwork exposure, highly transferable infectious diseases and poor crop yields. Saudi Arabia wants to protect its most vulnerable citizens who are suffering the worst effects of climate change on their health.

Singapore

Climate change will also increase the risk of disease like dengue and malaria by allowing mosquitos and other vector carried diseases to be in regions they previously could go to due to colder temperatures. Singapore's healthcare is among the best in the world being efficient, well funded and patient centred which helps treat the 1 in 5 children in Singapore who suffer from asthma. Singapore has previously done three National Climate Change Studies in the past decade to understand the effect climate change will have on their country and the health of their increasing population. Singapore believes that climate change and its consequences on human health need to be addressed more globally and it needs to be quickly.

Spain

After the government's 2019 declaration of climate emergency Spain has begun to take action to fix global warming and factors which stem from it. Spain's public has been very clear that the government needs to take more action in the short term. Increasing cases of vector spread disease like Lyme disease year round due to warmer temperatures continue to affect the general population but especially the more vulnerable. Being one of the EU's most climate vulnerable countries Spain wishes for a solution to the ever increasing health problems being caused.

Sri Lanka

The Sri Lankan healthcare system has shown great ability to adapt under pressure and keep the healthcare system running even through the country's economic struggle but as both a small island and a developing Sri Lanka is increasingly susceptible to climate change. Sri Lanka needs help to continue to keep afloat the healthcare systems as infectious diseases and heat related issues rise, COPD currently affects 10.5% of all adults over 40 and the number may continue to rise putting strain on the system.

United Arab Emirates

The UAE is at risk as the majority of respiratory issues are caused by air pollution and desert dust exposure and as a country being desertified and is exposed to highly concentrated pollutants. As pollutants continue to rise it will increase the detrimental effects on human health. The UAE wishes for more innovative healthcare which can help solve many issues which are arising, yet a long term solution does also need to be considered.

United Kingdom

Respiratory diseases affect 1 in 5 people and is the third biggest cause of death throughout the UK. While the UK is placed 8th globally for patient centred care it is ranked 19th for disease prevention, and as rates of infectious diseases rise due to increasing heat levels it will be important for the UK to continue to improve its healthcare and help other LDCs to develop their systems. The UK has previously done four "Health effects of Climate Change in the United Kingdom" reports to analyse recommendations based on climate change predictions, yet the UK believes there needs to be a global cooperation.

Vietnam

From 1977 to 2016 there has been a clear increase in climate sensitive diseases, however this is becoming a bigger problem when paired with the country's high rate of respiratory diseases like asthma and COPD from the country's high rate of smoking but mainly air pollution. Being one of the world's top five most vulnerable to climate change and having a critically underfunded health system is not leading to a decrease in cases. Vietnam believes that global cooperation, respiratory and infectious disease research into causes and supporting underfunded healthcare systems globally is one of the only ways forward.

Possible Solutions

Investment in Public Health Sector

Healthcare systems can be improved by increasing funding to the sector, offering incentives to encourage more people to join the practice to reduce understaffing and researching various common diseases which are a side effect of air pollution and other factors of climate change. As the healthcare systems of numerous developing countries are severely underfunded, developed countries should provide necessary financial assistance to such countries.

Research and Monitoring

Consistent research and monitoring could be one of the methods to hold control about health issues from climate change. Since illnesses due to climate change are rising recently, it will be necessary to improve understanding of health due to climate change as not all is discovered yet. This will accelerate and improve the quality of medical and social responses to health care during climate change. Also, a strong establishment of a research and monitoring system may prevent exposure and the risk of illness for pollutants, extreme heat and more.

Direct Aid for Urban Areas

Urban areas have a great range of people often with social inequality, marginalising economically disadvantaged households in healthcare. Those people are also more likely to be exposed to pollutants and pathogens that thrive in areas with poor sanitation. By providing direct aid in terms of establishing cooling centres, financially funding people suffering from health issues, and providing medical supplies against pollution or extreme climate, nations can help improve health in these urban areas. Humanitarian aid for food and water can also be provided as climate change also limits access to nutritious food and clean water.

Although not a long term solution, this could be a temporary plan for nations until the healthcare system improves. As a committee delegates should understand that some member nations will need more assistance than others when it comes to receiving aid, making it important to set priorities and discuss standards of aid as resources are limited.

Questions to Consider

1. What are the main **causes** of global warming in urban areas and how can we address each of those causes?
2. What are the main **effects** of global warming on human health and how can we address each of those effects?
3. What lessons can be learned from past actions regarding global warming and health?
4. How can the WHO collaborate with other organisations, for example, the UNEP, to mitigate global warming and its effects of human health?
5. What measures can be implemented to protect the groups most vulnerable to climate-related health issues?
6. How should cities be designed to be more resilient to health threats exacerbated by global warming?
7. What role can international treaties play in addressing the agenda?
8. What policies, regulations, and incentives should governments place on countries to mitigate health impacts precipitated by global warming?

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