

Committee: World Health Organization (WHO)

Issue: Implementing Net-Zero healthcare standards to fortify health system resilience and endurance in Latin America and the Caribbean

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Position: Deputy President

PERSONAL INTRODUCTION

Dear Delegates,

My name is Sofia Antoniadou, and I am an IB1 student at Athens College. It is my utmost honor to serve as the Deputy President of the World Health Organization for the 7th ACGMUN. My MUN journey started last year in CGSMUN, and this will be my first time attending a conference as a Student Officer. Throughout the conferences I have attended, I have realized how unique the MUN experience is. MUN connects people from many schools and countries, and it is a way for young people to debate crucial problems concerning today's society.

The topic that will be elaborated on in this study guide is "Implementing Net-Zero Healthcare standards to fortify health system resilience and endurance in Latin America and the Caribbean", a topic that is of importance and needs careful attention since the health sector is partly responsible for global greenhouse gas emissions.

If you have any questions, please don't hesitate to contact me via e-mail at sophiantoniades@gmail.com. All questions are welcome, be they on the topic, procedural matters, or the committee.

Looking forward to meeting you all!

Kind regards,

Sofia

TOPIC INTRODUCTION

Net-zero healthcare is a concept meant to fight the climate crisis while improving public health. The global healthcare sector, which includes hospitals, medical facilities, and medical supply chains like manufacturing and distribution of pharmaceutical companies, accounts for nearly 5% of global emissions.¹ Emissions in the healthcare sector are primarily due to the energy consumption of medical facilities and buildings. However, 70% of healthcare emissions do not come from the facilities and buildings themselves, but rather from the hospitals' supply chain.

For emissions regarding the healthcare sector there have been 3 "scopes" separately categorized: "Scope 1" refers to emissions an organization produces directly, "Scope 2" refers to emissions from purchased electricity, and "Scope 3" refers to all other emissions, including purchased goods and services (for example from plastic tubes used in hospitals).²

The healthcare sector has been facing difficulties in cutting its emissions primarily due to the COVID-19 pandemic. During this time hospitals were required to work at their full capacity. Additionally, the primary social mission of healthcare is no longer based on unsustainable practices because patients, for example, are not going to choose a hospital based on its environmental performance.

The benefits of reducing emissions caused by the healthcare sector are significant. First and foremost, this reduction would contribute to mitigating the impacts of climate change. Moreover, reduction in emissions decreases air pollution which is the number one cause of noncommunicable diseases and deaths globally.

To achieve net-zero healthcare it is required that medical facilities, medical supply chains, insurance companies, government leaders and policymakers, and the public join their forces. Medical facilities can persuade/incentivize their suppliers to change their way of operation to cut some of the emissions in their processes. Medical facilities should also start measuring and reporting their emissions so as to understand where they are standing currently and how they should act in the future to mitigate emissions.

¹ "Yale Experts Explain Net Zero Healthcare." *Yale Sustainability*, www.sustainability.yale.edu/explainers/net-zero-healthcare-explained

² "Yale Experts Explain Net Zero Healthcare." *Yale Sustainability*, www.sustainability.yale.edu/explainers/net-zero-healthcare-explained

DEFINITION OF KEY TERMS

Greenhouse gasses (GHGs)

Greenhouse gasses (also known as GHGs) are gasses in the earth's atmosphere that trap heat. The gases act like the glass walls of a greenhouse- hence, the name greenhouse gasses. The main greenhouse gasses are Carbon Dioxide (CO₂), Methane, Nitrous Oxide, and Water Vapor.³

Supply chain

A network between an organization or a company (e.g., hospital) and its suppliers (e.g., pharmaceutical manufacturer and distributor) to produce and distribute a specific product to the final buyer; it includes different activities (e.g., transport on patients or materials), people, entities, information, and resources.⁴

Noncommunicable diseases

Noncommunicable diseases (NCDs), such as heart disease, cancer, chronic respiratory disease, and diabetes, are the leading cause of death worldwide and represent an emerging global health threat.⁵

Air pollution

Air pollution is contamination of the indoor or outdoor environment by any chemical, physical, or biological agent that modifies the natural characteristics of the atmosphere.⁶

Latin America and the Caribbean Countries (LAC)

The term Latin America and the Caribbean (LAC) is an acronym that refers to the Latin America and Caribbean Region. The term LAC covers an extensive region, extending from the Bahamas and Mexico to Argentina and Chile. The population exceeds 670,230,000 people and spans for 21,951,000 square kilometers.⁷

³ "What Are Greenhouse Gases? | GHGs Explained | National Grid Group." *Welcome to National Grid Group | National Grid Group*, www.nationalgrid.com/stories/energy-explained/what-are-greenhouse-gases

⁴ "The Supply Chain: From Raw Materials to Order Fulfillment." *Investopedia*, 25 Nov. 2003, www.investopedia.com/terms/s/supplychain.asp

⁵ "About Global NCDs." *Centers for Disease Control and Prevention*, 5 Jan. 2022, www.cdc.gov/globalhealth/healthprotection/ncd/global-ncd-overview.html

⁶ "Air Pollution." *World Health Organization (WHO)*, 30 July 2019, www.who.int/health-topics/air-pollution#tab=tab_1

⁷ "Latin America and the Caribbean." *Wikipedia, the Free Encyclopedia*, Wikimedia Foundation, Inc, 7 Jan. 2024, www.en.wikipedia.org/wiki/Latin_America_and_the_Caribbean, Accessed 12 Jan. 2024

BACKGROUND INFORMATION

The issue in Latin America and the Caribbean

LAC countries represent 8% of total population and also represent 6% of global GDP. Argentina, Brazil, Mexico, and Venezuela are the largest CO₂ emitters, responsible for over 70% of emissions currently in LAC. Brazil had a recent government change which led to a pro-net-zero government, under the Presidency of Luis Ignacio Lula da Silva. Mexico under President Obrador, Argentina under a newly elected President, and Venezuela are more unclear about their commitments. Chile and Colombia with sizable economies, have increased their Paris commitments. All 35 countries in Latin America and the Caribbean (LAC), have ratified the Paris Agreement.

Transport is a major emission source due to the large size of many LAC countries, high motorization rates and fossil fuel driven motor vehicle fleets. Emissions in LAC countries also hail from agriculture, forestry, and land use change. South America generates most of LAC GHG emissions (71%), followed by Central America (24%) and the Caribbean (4%). Brazil contributed almost a third (32%) of LAC's total gross GHG emissions in 2019. The energy sector in LAC is in a much better position versus the rest of the world because 60% of electricity generation in LAC comes from renewable sources, and most LAC countries have vast experience in producing biofuels, like ethanol and biodiesel.

Agriculture, Forestry and Land Use (AFOLU) is the biggest issue in carbon emissions in LAC, because it accounts for 40% of the LAC emissions, almost double the global average. The main contributors to AFOLU are deforestation and land-use change due to a great degree to massive wildfires in the Amazon region.

Healthcare sector and carbon emissions

The healthcare sector accounts for approximately 4-5% of global greenhouse gas emissions. Josh Karliner, HCWH's International Director of Programs and Strategy states that "hospitals and health care systems make a major contribution to the climate crisis."⁸

Healthcare contributes to greenhouse gas emissions through energy consumption, transport, and product manufacture, use, and disposal. Emissions hailing directly from health care facilities and health care owned vehicles (Scope 1) make up 17% of the sector's worldwide footprint. Indirect emissions from purchased energy sources such as electricity, steam, cooling, and heating (Scope 2) comprise

⁸ "HEALTH CARE'S CLIMATE FOOTPRINT." *Health Care Without Harm*, Health Care Without Harm Climate-smart health care series Green Paper Number One, www.noharm-global.org/sites/default/files/documents-files/5961/HealthCaresClimateFootprint_092319.pdf

another 2%. 71% of emissions in the healthcare sector are derived from the health care supply chain (Scope 3) through the production, transport, and disposal of goods and services, such as pharmaceuticals and other chemicals, food and agricultural products, medical devices, hospital equipment, and instruments.

There is a strong correlation between a country's health sector climate footprint and a country's health spending. The higher the spending, measured as a percentage of a country's GDP, the higher the per capita health care emissions are in that country.

The biggest issue in the LAC region is the increased CO2 emissions because of wildfires, deforestation and change of land use. These pose a threat to public health, with air pollution being the leading cause of noncommunicable diseases and deaths globally.

The healthcare supply chain depends on biopharmaceutical companies that use raw materials and supplies from the agricultural sector for the manufacturing of drugs, vitamins, and other medical materials. Therefore, by setting high standards and requirements to the agricultural suppliers and the entire healthcare supply chain, the healthcare sector can contribute in making a difference in the LAC region's efforts for a net-zero future.

The effect on LAC countries

One of the regions of the world that are most vulnerable to the effects of climate change is LAC. Thirteen of the fifty nations most impacted by the climate emergency are located in LAC. It is estimated that over half of the population is very or severely sensitive to the potential effects of climate change. In contrast to the two decades prior, the majority of the LAC nations experienced a rise in the average number of extreme climate-related weather occurrences between 2001 and 2022. 17.1% of the 11,933 severe weather occurrences linked to climate change that were reported globally between 1970 and 2022 were in LAC. Temperature increases, intense precipitation events that cause droughts, landslides, and floods, sea level rise, coastal erosion, acidity of lakes and the oceans that causes coral bleaching, and storm surges are all predicted to occur more frequently, having a negative impact on people's socioeconomic situation. The fragility of the area emphasizes how urgently and seriously climate change has to be addressed.

TIMELINE OF EVENTS

Date	Description of event
16 February 2005	The Kyoto Protocol officially comes into force, setting international targets for reducing greenhouse gas emissions
12 December 2015	The Paris Agreement is adopted, outlining a global framework to limit global warming to well below 2 degrees Celsius
2016	Formation of Health Care Without Harm (HCWH) establishes a regional presence in Latin America, focusing on promoting environmentally sustainable practices within the healthcare sector
1 January 2019	Brazil undergoes a governmental change with President Lula da Silva, initiating a pro-net-zero approach and influencing the region's stance on climate-related policies
2020	The COVID-19 pandemic underscores the importance of resilient healthcare systems
10 September 2022	Venezuela announces a national policy promoting the use of renewable energy, potentially influencing the healthcare sector's environmental initiatives
8 March 2023	Latin American and Caribbean nations sign a regional agreement for collaborative efforts in implementing net-zero healthcare standards

RELEVANT UN RESOLUTIONS, TREATIES AND EVENTS

United Nations Framework Convention on Climate Change (UNFCCC)

The UNFCCC was established in 1992 as the main forum for international action on climate change. Since then, 195 countries have joined the international agreement (known as a convention). Negotiations focus on mitigating greenhouse gas emissions, adapting to climate change, reporting of national emissions and the financing of climate action in developing countries. Since 2021, the convention has successfully engaged health care institutes in their “Race to Zero”, reaching net-zero action, having involved 3000 facilities in 18 countries, all committing to halving climate emissions by 2030 and achieving net-zero by 2050.

Paris Agreement

The Paris agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at the UN Climate Change Conference (COP21) in Paris, France, on December 12, 2015. The agreement was created to improve and replace, eventually, the Kyoto Protocol. It was a legally binding agreement which hoped to have a result of zero emissions released into the atmosphere. The agreement aimed at limiting the climate from rising temperatures by 2 degrees Celsius. All parties involved assess their progress every five years with the first being in 2023. All countries that signed have to assess their progress every five years with a “global stocktake”, the first being in 2023. The Paris Agreement has been a crucial step in reaching net-zero, however, as the UN Framework Convention on Climate Change claims, “much more is needed”.⁹

Health Care Climate Challenge

The Health Care Climate Challenge equips health institutions -from small clinics to large health systems to ministries of health- to commit to effective climate action while building collective impact across countries and across borders. Each institution is committed to reduce the health sector’s footprint. This challenge has gathered 350 participants representing 26,000 hospitals in 44 different countries. As an organization, Health Care Without Harm has connected this challenge with the “Race to Zero”. Since 2021, they have collaborated with the UNFCCC High Level Climate

⁹ "The World Isn't on Track to Meet Paris Agreement Goals, Says UN Climate Review." *POLITICO*, 9 Sept. 2023, www.politico.eu/article/paris-agreement-goals-failed-climate-change-global-warming-united-nations-climate-review/

Champions in building a coalition between health care institutions and committing to reaching net-zero goals.

MAJOR COUNTRIES AND ORGANIZATIONS

Brazil

Brazil's Unified Healthcare System (SUS) is the sole provider of health services to approximately 72% of the population. In addition to medical diagnostics and treatment, the public system provides free medication for some chronic diseases and promotes national vaccination programs, mostly focused on the elderly and children. It has also played a major role in Covid-19 vaccination programs around the country. Additionally, the Ministry of Health has been regulating and encouraging the expansion in the municipal level of Integrative and Complementary Health Practices (PICS), that consists of therapeutic approaches that aim to prevent health problems, promote and recover health, emphasizing welcoming listening, the construction of therapeutic bonds and the connection between human beings, the environment and society. It is estimated that 50.7 million Brazilians have access to the private healthcare system. Brazil is responsible for 5% of the current GHG emissions and will be responsible for 4% of the estimated 2030 emissions. The main source of emissions in Brazil is the forestry sector. Deforestation is responsible for 55% of the country's GHG emissions. Brazil is the largest healthcare market in Latin America and spends 9.47% of its GDP on healthcare. Brazil is by far the largest emitter in LAC and has suffered on average one extreme climate-related weather event every year since 2017, a notable example being the Amazon wildfires. Brazil has been a signatory of the Paris agreement and despite the anti-net zero approach of the previous government, led by President Bolsonaro, his successor Lula is a driver of the country's net-zero commitments. He has implemented the low-carbon agriculture plan, including recovering degraded land and integrating forest management with crops, cattle breeding and agroforestry. He has enhanced native forest management systems and increased the share of sustainable biofuels in the energy mix. Lastly, he has expanded the use of renewable energy sources other than hydropower in the total energy mix.

Colombia

Colombia's healthcare system is one of the world's best as it is ranked as the 22nd most efficient by the WHO. Colombia's healthcare system operates a public health insurance plan called Entidades Promotoras de Salud (EPS). EPS is administered by various insurance companies, including SURA, Comfenalco, and Coomeva. The EPS

program is available to all residents at a low cost. For instance, the premium for retirees is 12% of the declared pension income. There is no maximum age limit to apply for EPS coverage. Colombia is not a major carbon emitter; however, it is particularly vulnerable to the impacts of climate change. Over the past 10 years it has created adaptation plans for key sectors such as agriculture, biodiversity, health, and water. Currently, 59 percent of Colombia's GHG emissions result from agriculture, forestry, and other land use sectors, and 30 percent of emissions result from the energy sector, including transportation. Agricultural and hydroelectricity production, which generates two-thirds of the country's electricity, are highly vulnerable to a changing climate, affecting the economy and rural and ethnic populations. Colombia has recently increased its targets to reduce greenhouse emissions with measures like consolidation of commercial forest planting, deforestation reduction, management of protected areas, diversification of the energy mix promoting self-generation of energy from alternative sources, regulatory and financial framework to accelerate the transition to light-duty electric vehicles, renewal of heavy duty transport fleets and shifting to rail and river routes, and creation of National Strategy of Circular Economy.

Argentina

Argentina's healthcare system is comprised of four subsectors: public hospitals, the Social Security/union-run health insurance system, private medical insurance (prepagas), and PAMI (similar to Medicare in the United States). Around 35% of the population relies on public hospitals. The rest have some form of healthcare coverage, either from social security/union-run (60% of the population) or the private healthcare system (13%). Almost 10% of the population have more than one coverage system. Around 3.5 million elderly people and individuals with disabilities are covered by PAMI.

Mexico

The healthcare sector in Mexico is a complex and diverse system that provides a wide range of services to the population. Mexico has a mixed healthcare system with participation from the public and private sectors. The public sector provides healthcare services through the Mexican Institute of Social Security (Instituto Mexicano de Seguro Social or IMSS), the Institute of Safety and Social Services for Public Sector Workers (Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado or ISSSTE), and the Secretary of Health (Secretaria de Salud or SSA). The private sector includes hospitals, clinics, and healthcare providers.

The system faces ongoing challenges including high rates of non-communicable diseases such as obesity, diabetes, and cardiovascular diseases. Additionally, infectious diseases, including respiratory infections, gastrointestinal diseases, and vector-borne diseases, pose significant health risks. Mexico is the second-largest greenhouse gas emitter in Latin America and the Caribbean. Mexico's geography makes it vulnerable to extreme weather events, such as tropical cyclones and floods, that threaten the country's aging transportation, power, and water infrastructure. Mexico's important coastal tourism hubs are at risk from the effects of climate change. In rural areas, where small-scale producers earn a large proportion of their income from agriculture, extreme temperatures and erratic rainfall drastically affect both crops and livestock.

Health Care Without Harm (HCWH)

Health Care Without Harm (HCWH) is committed to encouraging climate-resilient and ecologically sustainable practices in the healthcare industry. HCWH Latin America, the chapter, focuses on the particular opportunities and difficulties that the region presents. HCWH Latin America works with healthcare organizations, experts, and legislators to promote good change, guided by the principle that healthcare shouldn't hurt individuals or the environment. The group helps healthcare facilities that want to adopt sustainable practices by offering technical support. This covers recommendations for implementing sustainable energy practices, lessening the effects of medications on the environment, and enhancing overall operational sustainability. Additionally, it runs advocacy campaigns and educational activities to increase public understanding of the effects that healthcare practices have on the environment. This includes promoting sustainable waste management, reducing energy consumption, and encouraging the use of eco-friendly products within healthcare facilities.

Pan American Health Organization (PAHO)

The Pan American Health Organization (PAHO) is the regional office for the Americas of the World Health Organization (WHO). PAHO collaborates with nations to enhance health and well-being as the premier international public health organization in the area. The work of PAHO involves not just clinical and public health treatments, but also tackling larger determinants of health, such as sustainable behaviors and environmental problems. PAHO conducts studies and gathers data to comprehend how environmental issues, such as climate change, affect human health. Evidence-based policies and activities that protect public health from environmental hazards are informed by this information.

International agencies, states, and non-governmental organizations are just a few of the many partners with whom PAHO works. This cooperative strategy guarantees an all-encompassing and synchronized reaction to health and environmental problems in the region.

POSSIBLE SOLUTIONS AND POLICY RECOMMENDATIONS

Reuse of medical devices and materials

Healthcare facilities should encourage research and development in creating innovative, eco-friendly medical materials and devices that are biodegradable/recyclable, reducing the environmental impact of healthcare waste. It is commonplace that many materials related to healthcare can be used only once and then they are thrown away. Healthcare facilities should now seek to hire researchers and scientists to develop materials that can be reused and eco-friendly if they do not already exist.

Low carbon prescribing

Healthcare facilities can use electronic health records instead of using paper. All documents, be they patients' examinations or documents belonging to the facility, should be transformed into electronic form in order to reduce the limitless use of paper. This not only efficient in terms of achieving net-zero but it is also more practical as patients and people working in healthcare facilities will not be dependent on documents that can be easily lost or destroyed. Healthcare facilities should implement the appropriate software and also hire the right personnel to create large databases of patients' medical history and other important health information.

Transportation

Healthcare facilities should encourage the use of public transportation for patients, employees, and for visitors. To do so, they have to remove any parking places to prevent patients, visitors, and employees from using vehicles that emit carbon, such as cars and motor vehicles. Furthermore, the use of electric and biofuel transportation vehicles, also battery power and biofuels to expand electricity supply from renewable sources and reduce the need for fossil fueled generators is recommended. Patients, employees, and visitors should provide proof of their transportation means to ensure that low-carbon transportation is achieved.

Partnership with banks and consulting firms

Achieving net-zero and resilience in the healthcare sector is a demanding goal, but it can be achieved. Banks need to partner up with healthcare facilities and financially support them to reach this goal, as achieving net-zero in healthcare systems involves the financial spending which can be at great amounts. Furthermore, consulting firms should reach out to healthcare facilities and help them (even voluntarily) with the creation of a plan and a strategy to see all the gradual steps that will ensure the goal of net-zero is achieved.

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