COMMITTEE C THEME GUIDE

Climate Change and Environmental Health

2024 WORLD HEALTH ASSEMBLY SIMULATION, YORK UNIVERSTIY

Committee C: Climate Change and Environmental Health

Climate change poses a profound threat to environmental health, significantly impacting ecosystems, weather patterns, and natural resources. Rising temperatures, sea level rise, extreme weather events, and altered precipitation patterns are causing shifts in habitats and triggering disruptions in ecosystems. These changes have far-reaching consequences for both human and animal health, highlighting the interconnectedness emphasized by the One Health approach. One Health recognizes the inextricable links between human, animal, and environmental health, and emphasizes collaboration among these disciplines to address complex global challenges. In the context of climate change, the One Health framework becomes especially pertinent. The three pillars of One Health—human, animal, and environmental health—demonstrate how changes in one sphere can reverberate across the others. For instance, as warming climates force certain animal species to migrate to new areas, zoonotic disease patterns might change, posing novel health risks to human populations. Similarly, environmental degradation from climate change can lead to the loss of critical resources, impacting both human livelihoods and animal habitats. By recognizing the interdependence of these health domains, One Health underscores the need for holistic strategies that account for the intricate relationships between climate change, environmental health, and the well-being of all living organisms on our planet.

The World Health Organization (WHO) is actively enhancing environmental health by developing policies, conducting research, and providing guidance on issues such as air and water quality, sanitation, and disease prevention. Through collaborations with governments and organizations, WHO aims to create healthier environments that safeguard human well-being and promote sustainable development.

Theme Guide for May 2nd
Committee Session 1 – Air Pollution
Air pollution plays a pivotal role in the intersection of climate change and environmental health. Emissions from industrial activities, vehicles, and deforestation release pollutants that not only compromise air quality but also contribute to global warming by releasing greenhouse gases. These pollutants not only harm human respiratory systems but also impact ecosystems and biodiversity. Addressing air pollution becomes integral to mitigating climate change and safeguarding overall environmental and human well-being.
Guiding Questions 1. In what ways does air pollution disproportionately affect vulnerable populations, and what strategies can be employed to address these disparities in environmental health? 2. Given the multifaceted nature of air pollution's impacts, how might One Health approach which considers human, animal and environmental health enhance our understanding of and responses to air quality issues and their consequences? 3. How does the disproportionate burden of air pollution affect low- and middle-income countries in term of global health outcomes?
Resources - https://www.who.int/news-room/feature-stories/detail/air-pollution--the-invisible-health-threat - https://www.who.int/health-topics/air-pollution - https://www.niehs.nih.gov/health/topics/agents/air-pollution/index.cfm - https://link.springer.com/article/10.1007/s11356-019-04874-z
Committee Session 2 – Deforestation
Deforestation is intricately linked to both climate change and environmental health. The removal of trees and forests releases stored carbon dioxide into the atmosphere, exacerbating the greenhouse effect. This contributes to rising global temperatures and disrupted weather patterns. Moreover, deforestation diminishes critical habitats, biodiversity, and water regulation, negatively impacting ecosystems and human communities that rely on these services. Addressing deforestation is crucial for mitigating climate change and promoting a balanced and sustainable environment.
Guiding Questions: 1. What are the ecological implications of deforestation beyond the direct loss of tree cover? How do these ripple effects impact biodiversity, soil quality, water cycles and overall ecosystem stability? 2. How does deforestation disproportionately affect marginalized communities both locally and globally? What strategies can ensure equitable access to and benefits from forest resources while maintaining environmental health? 3. How does the release of stored carbon dioxide contribute to global warming, and how might this phenomenon further exacerbate deforestation rates?
Resources - https://journals.library.columbia.edu/index.php/jgh/article/view/4864 - https://www.sciencedirect.com/science/article/abs/pii/S0038071720304065 - https://www.scielo.br/j/aabc/a/fRVhxyPq4NLCsKTZPJMzV8J/?format=html&lang=en - https://go.gale.com/ps/i.do?id=GALE%7CA632281042&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=00280836&p=AONE&sw=w&userGroupName=anon%7E1fc6b2cd&aty=open-web-entry

Theme Guide for May 3rd
Committee Session 1 – Biodiversity Loss
Biodiversity loss significantly impacts environmental health as it disrupts the delicate balance of ecosystems. Each species plays a role in maintaining ecosystem functions such as nutrient cycling, pollination, and disease regulation. The decline of biodiversity weakens these services, making ecosystems more vulnerable to disturbances and less resilient in the face of environmental changes. This not only threatens the stability of natural systems but also undermines the resources and services that humans rely on for their well-being.
Guiding Questions: 1. In what ways does urbanization contribute to biodiversity loss and impact environmental health? How might urban planning and design mitigate these negative effects while promoting coexistence with nature? 2. How to international conservation agreements and policies such as the Convention on Biological Diversity, address the complex challenge of biodiversity loss? What are the areas withing such agreements where efforts can be improved? 3. How does biodiversity loss impact ecosystem functioning and services, such as nutrient cycling, pollination and disease regulation for humans?
Resources - https://www.cbd.int/ - https://www.who.int/news-room/fact-sheets/detail/biodiversity-and-health - https://www.worldwildlife.org/magazine/issues/summer-2021/articles/a-warning-sign-where-biodiversity-loss-is-happening-around-the-world - https://www.un.org/en/climatechange/science/climate-issues/biodiversity
Committee Session 2 – Climate Change
Climate change is intricately tied to environmental health, exerting profound impacts on ecosystems and human well-being. Rising temperatures, extreme weather events, and altered precipitation patterns disrupt ecosystems, endanger species, and threaten resources like clean water and food. Human populations face increased risks of heat-related illnesses, vector-borne diseases, and displacement due to sea level rise. Addressing climate change is essential not only for safeguarding the environment but also for protecting the health and resilience of both ecosystems and communities.

Guiding Questions:

1. How do changes in temperature, precipitation and sea levels affect the prevalence and distribution of vector-borne disease? Explore the dynamics between climate change, disease vectors and spread of infectious diseases.
2. Explore the concept of 'co-benefits' in climate change mitigation and adaptation strategies. How can actions aimed at reducing greenhouse gas emissions simultaneously improve environmental health, enhance biodiversity and promote socio-economic well-being?
3. In what ways can global health researchers and practitioners contribute to building climate-resilient health systems? How can innovations in healthcare delivery worldwide strengthen a community's ability to adapt to changing health risks associated with climate change?
4. How does climate-induced displacement impact global health? Can the WHO and different governments implement new healthcare practices in providing healthcare, sanitation and social services to populations that are focused on migrating due to climate-related factors?

Resources

- https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health
- https://www.thelancet.com/journals/lancet/article/PIIS0140-67360960935-1/fulltext
- https://jamanetwork.com/journals/jama/article-abstract/1909928