

POH 101: PLANETARY HEALTH, CLIMATE CHANGE AND PANDEMICS

Module Overview

Concepts ecosystem, Planetary Health, One Health, abiotic and biotic cycles, habitat, biodiversity, symbiosis, adaptation, ecology, biosphere; ecosystem, niche, toxins, function, disruption to the ecosystems on which human health depends include; biodiversity loss, climate change, freshwater depletion, deforestation, and urban development; Factors impacting on ecosystems; Energy and nutrients flows; producers, consumers and decomposers; food chains; sustainability, biogeochemical cycles (Carbon, Nitrogen, Phosphorus and Sulphur); ecosystem health assessment.

Planetary Health: Catalyst or exacerbation of animal and humanitarian crises, pollution of air and water, biodiversity loss, disruption of food production systems and changing patterns of diseases are affecting animal, human health and healthcare systems in relation to pandemics; analyses how acute climate-related shocks (e.g., floods, sea level rising) or chronic (e.g., drought and desertification) increase human mobility

Climate change: Climate change concept, threats to climate change, impacts of climate change; the relation between pandemics and climate change. Adaptation and mitigation climate change, global resolutions, meteorology, forecasting and early warning. Human health impacts include increases in heat-related deaths, infectious diseases, malnutrition, psychological distress and trauma and pollution-related illnesses. These health impacts are amplified in disadvantaged communities that are less able to adapt to environmental challenges. Global and regional frameworks on climate change. Anthropogenic activities and the environment.

Mode of Delivery

This includes lectures: problem-based learning using interactive tutorials, small group discussions and written assignments, plenary presentations; case studies, experiential learning through independent/reflective study and field visits and placements and online peer discussions using video clips and conferencing, case study and case series, tabletop exercises, field work.

Instructional Materials

Materials: Lecture notes and slides, video clips, handouts, case studies, reference materials (textbooks, journals, policy document-guidelines), institutional placements and field visits

Equipment: LCD projectors, laptops, white board, markers and flipcharts, LCD, printers, internet access for e-resources, PDAs, mobile phones.

Core Reference Materials

1. Haines, A., & Frumkin, H. (2021). *Planetary health: Safeguarding human health and the environment in the Anthropocene*. Cambridge University Press.
2. Ramanathan, V. (2020). Climate Change, Air Pollution, and Health: Common Sources, Similar Impacts, and Common Solutions. In: Al-Delaimy, W., Ramanathan, V., Sánchez Sorondo, M. (eds) *Health of People, Health of Planet and Our Responsibility*. Springer, Cham. https://doi.org/10.1007/978-3-030-31125-4_5
3. Cole, J. (2019). *Planetary health: human health in an era of global environmental change*. CABI.
4. Myers, S., & Frumkin, H. (2020). *Planetary health: protecting nature to protect ourselves*. Island Press.

Recommended Reference Materials

1. 350 Africa: 8 ways climate change is already affecting Africa: <http://350africa.org/8-ways-climate-change-is-already-affecting-africa/>
2. Charron, D. F. (2012). *Ecohealth research in practice* (pp. 255-271). Springer New York.
3. SEAOHUN One Health. (2014). One Health Course Modules Introduction. Retrieved from <https://seahunonehealth.wordpress.com/>