

Planetary health: a flexible health, environmental and social sciences curriculum approach is needed

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The Earth system and humanity are on the brink of an irreversible climate catastrophe (Ripple *et al.*, 2024). In 2024, the Earth exceeded the 1.5°C climate threshold for the first time (Tollefson, 2025), making it essential to cultivate a collective understanding that prioritises protecting planetary health.

Planet Earth's well-being is linked to our well-being because climate change disrupts our air, water and food (Leal Filho *et al.*, 2024). Planetary impacts characterise Public Health in the Anthropocene triple planetary crisis: i) Global heating and the climate crisis, ii) Large-scale pollution, iii) Ecosystem collapse and mass extinction (UNFCCC, 2024). Hence, aspects of Planetary Health are becoming mainstream in the international debate due to the interdependence of climate, biodiversity and human societies (IPCC, 2022; UNFCCC, 2024).

The planetary health approach (PHA) underscores the interconnectedness between the health of natural systems and humans (Butler, 2024; IPCC, 2022) from a comprehensive and multidisciplinary perspective, aligned with sustainable development and pre-emptive measures to safeguard and rejuvenate the health of natural and human systems. Hence, it should be a cornerstone in curricula (Mago *et al.*, 2024). However, the PHA has been chiefly



confined to Medicine and related sciences (Lokmic-Tomkins *et al.*, 2024) rather than being a pervasive element in higher education institutions (HEI) degrees (Ternova *et al.*, 2024).

HEIs are key in building sustainable societies that reconcile development with the protection of natural systems and a universal, accessible and quality healthcare system. Training professionals with comprehensive skills in complex systemic thinking (Simon *et al.*, 2023) is ideal for fulfilling this fundamental role.

Introducing PHA is necessary at all levels and disciplines of educational training (Mago *et al.*, 2024; Jochem *et al.*, 2024). Curricular decision-makers must be informed about ecosystem services and planetary boundaries (Malmqvist and Oudin, 2024) to i) understand environmental issues from a socio-ecological perspective (White *et al.*, 2024), ii) raise awareness of the anthropogenic causes of the triple planetary crisis and their link with inequality and lack of environmental and climate justice, iii) develop a multi-layered, multi-dimensional, comprehensive, inter/transdisciplinary curriculum (Malmqvist and Oudin, 2024).

The social sciences play a fundamental role in epistemologically studying human interactions with environmental impacts. Together with the environmental sciences and ancestral knowledge, a system of ontological, gnoseological and axiological principles should support the PHA, which requires overcoming the fear of disciplinary transgression (Butler, 2024) and removing disciplinary boundaries (White *et al.*, 2024).

HEI curriculum must train professionals who move from knowledge to action (Ternova *et al.*, 2024), promote transformational leadership (Malmqvist and Oudin, 2024) and defend the health (Mago *et al.*, 2024) of the planet.

However, as the degradation of Planet Earth is progressing too fast, three stages are needed to reform the curriculum. HEIs should:

- (1) Organise short information courses on Planetary Health and the triple planetary crisis (Ihsan *et al.*, 2024), its causes and its challenges for humanity and health professional performance;
- (2) Integrate specific courses on PH into their curricula. Pais Rodrigues *et al.* (2024) propose a pedagogical format using the ScholarRx platform that can serve as a reference for the first two stages; and
- (3) Incorporate PHA as a cross-cutting axis in the philosophical foundations of university programmes. This requires closing existing knowledge gaps regarding the carbon footprint generated by any professional activity and how to reduce it, developing skills centred on sustainable innovation and transforming graduates into socio-cultural actors.

Consequently, university graduates will better understand how to shift the global development landscape, becoming promoters of government agendas worldwide towards a model in which the system of fundamental human values preserves planet Earth.

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