



HUMAN HEALTH IMPACTS OF ECOLOGICAL DEGRADATION: RETHINKING PUBLIC HEALTH IN THE ANTHROPOCENE

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Homo 'sapiens' is transforming the structure and function of Earth's natural systems, including its land cover, rivers, oceans, biogeochemical cycles, and climate system without signs of abatement. There is growing evidence that changes in the state of natural systems will have increasingly numerous impacts on human health, some quite direct and some mediated through complex causal pathways. We urgently need a new branch of environmental health that is focused on characterizing the public health impacts of anthropogenic alterations in the structure and function of Earth's natural systems, as planetary boundaries are encroached upon and breached: these health impacts simply cannot remain in the realm of vague and poorly quantified externalities, given their increasingly global significance. This envisioned new field is inherently accompanied by an important environmental justice / inter-generational equity issue, in that most of the burdens associated with increased degradation of natural systems will be experienced by the poor and by future generations. In short, we urgently need to develop a body of evidence that addresses the public health implications of changes in the state of natural systems. Employing a *science to policy to action agenda*, earnest and perhaps unprecedented levels of interdisciplinary collaboration must be operationalized to influence the substantial global effort to improve the health of poor populations while simultaneously catalyzing the management of natural systems for goods and services, and for conservation.