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EAT-Lancet Commission conflates boundaries and needs, obscuring important trade-offs

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The EAT-Lancet Commission¹ aims to define healthy global diets that avoid unacceptable environmental degradation. It adopts the planetary boundaries concept to define “a safe operating space for humanity”^{2,3}, or more prosaically “global biophysical limits that humanity should operate within to ensure a stable and resilient Earth system”.¹

However, the scientific analysis is obfuscated when two boundaries (climate change and nitrogen cycling) are relaxed to accommodate the pollution that seems unavoidable with a growing and more prosperous population: the “safe operating space” by definition is expanded to accommodate the diets that the report purports to scientifically test. This is circular reasoning.

This conflation of boundaries and needs also obscures political and moral trade-offs that could instead be highlighted: the report’s Figure 6 gives an excellent overview of the relationship between diets and environmental pressures. For example, (1) the climate change boundary could be lowered by about 50% and still be met by adopting the report’s pescatarian, vegetarian, or vegan diets; and (2) not a single scenario meets the environmentally based nitrogen boundary of 62–90 Tg of nitrogen per year.^{1,4}

Redefining the boundaries to accommodate what is “required to feed a global population of about 10 billion people”¹ may reflect the near-universal moral standpoint that world hunger is unacceptable. Scientifically, however, it denies the possibility that a given environmental target may simply be incompatible with a given level of prosperity. When research suggests such incompatibilities, the sensible reaction would be to discuss the ensuing trade-offs, rather than redefining the planetary boundaries.

References

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2 Rockström J, Steffen W, Noone K, *et al.* Planetary Boundaries: Exploring the Safe Operating Space for Humanity. *Ecol Soc* 2009; **14**. DOI:10.5751/ES-03180-140232.

3 Rockström J, Steffen W, Noone K, *et al.* A safe operating space for humanity. *Nature* 2009; **461**: 472–5.

4 de Vries W, Kros J, Kroeze C, Seitzinger SP. Assessing planetary and regional nitrogen boundaries related to food security and adverse environmental impacts. *Curr Opin Environ Sustain* 2013; **5**: 392–402.

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