Trading in fad diets for sustainable diets: Comparison between the Paleo diet and the EAT-Lancet reference diet

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Food choice patterns are shifting globally - driven by dietary trends associated with controlling their weight – in ways that are adversaly affect human wellbeing and the environment. Among the set of popular diets, the Paleo diet has become increasingly popular over recent years, especially among young adults and athletes. Profound sustainable transformations in dietary patterns and food systems are needed to meet the Sustainable Development Goals and transcend Paris Agreement targets for cutting emissions. Efforts have been made by health authorities worlwide to develop dietary guidance and nutritional recommendations. In particular, the EAT-Lancet Commission developed a global planetary health diet, which is predominantly based on high-quality plant-based foods and low consumption levels of animal source foods. Therefore, the purpose of this research was to compare the global EAT-Lancet recommendations with dietary trends, such as the Paleo diet, in terms of carbon footprint and water footprint.
The Life Cycle Assessment methodology was followed to account for the evaluation of the carbon footprint and the water footprint. The daily dietary intake was chosen as the functional unit and the scope was bounded to the cradle-to-consumer phases along the life cycle: i) agricultural or industrial production stage, ii) distribution to wholesale and retaild and iii) distribution from retailers to households.
The carbon footprint value attributed to the Paleo diet was 5.4 kgCO2·person-1·day-1. On the other hand, the carbon footprint of the EAT-Lancet diet was approximately 2.6 times lower (2.1 kgCO2·person-1·day-1). The agricultural or industrial production stage represented the largest share of greenhouse gases emissions in both case studies, covering more than 90% of the emissions. On the other hand, our analysis also reported the average water footprint of the EAT Lancet diet (3057 L·person-1·day-1) and that of the Paleo diet (3499 L·person-1·day-1).
These findings suggest that human dietary trends such as the Paleo diet are harming human and planetary health. Promoting healthy diets within planetary boundaries such as the EAT-Lancet diet is key to achieving international health and environmental targets.
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