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Translating evidence into policy action: which diet-related practices are essential to achieve healthy and sustainable food system transformation?

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Policy-makers have a critical role to play in transforming our food system to enable a sustainable future for our growing global population.^{1,2} Food production and consumption practices must shift to feed nearly 10 billion people by 2050 while respecting planetary boundaries and promoting human health.² This requires a whole-of-system approach, including evidence-based policy to shift diet-related practice at the population level. This research aims to translate existing literature into practical terms for policy-makers by presenting a set of specific healthy and environmentally sustainable diet-related practices (Figure 1).

Currently, our food system is depleting natural resources, contributing greenhouse gas emissions and driving biodiversity loss.³ The United Nations' (UN) Decade of Action on Nutrition commits UN Member States, including Australia and New Zealand, to implement public health policy to create sustainable, resilient food systems for healthy diets.⁴ In 2012, the Food and Agriculture Organization (FAO) defined healthy and sustainable diets (HSD) as those with "low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations".^{5(p7)} The facilitation of HSD has been an emerging area of research. In 2013, broad principles of HSD were identified – avoiding overconsumption, reducing discretionary food intake and eating less animal and more plant-derived foods – and the feasibility of their uptake in the Australian context was explored.^{6,7} In 2019, the 'planetary health diet', largely plant-based with optional inclusion of fish, meat and dairy

foods, was recommended by the EAT-Lancet Commission to nourish global populations within planetary boundaries.² HSD can be facilitated by policy-makers at a national level via food strategies and dietary guidelines.^{1,8} At the local government level, policy-makers can modify the food environment to facilitate waste reduction, urban agriculture and localised retail systems.⁹ Missing from the literature is a clear depiction of desired diet-related practices to support targeted policy-action.

Diet-related practice considers the intersection of diets and food systems, and the activities that an individual engages into source, store, prepare, consume and dispose of the food that makes up their diet. To determine diet-related practices commonly associated with HSD, a review of existing evidence was systematically undertaken. The UN has a strong mandate to protect both human and planetary health, with agencies dedicated to health, climate change, environmental sustainability and food security. UN agencies and high-level committees relevant to HSD were therefore identified from the UN's directory, then their respective websites searched using keywords "healthy", "sustainable", "diet" and "food system".¹⁰ Reports published after the FAO's (2012) landmark definition of HSD were screened, including relevant items within their reference lists. Those which described specific diet-related practices linked to both health and environmental sustainability outcomes were included. The eight resulting reports included six UN Agency authored reports, the EAT-Lancet Commission's peer-reviewed publication and a global assessment of national dietary guidelines.^{2,4,5,8,11-14} Each of these were reviewed, using an iterative process to: i) refine a list of commonly included diet-related practices; and ii) determine the language and evidence-base used to describe each practice. Thirteen diet-related practices were identified and organised into three categories: where to source food, what foods to eat, and considerations when consuming food as part of HSD. An infographic (Figure 1) was then developed by extracting key evidence and applying visual representation to each message.

Policy action to facilitate these thirteen desired practices is urgently required to achieve a transformation of our global food system.^{2,3} Further research, beyond

UN-affiliated publications, is required to distil commonly referenced diet-related practices, and provide a comprehensive review of the literature to support each practice. To shift population diets for present and future generations, policy-makers must invest in evidence-based interventions that promote human health within planetary boundaries.

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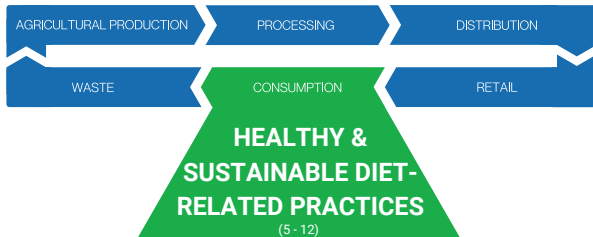
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Figure 1: Desired healthy and sustainable diet-related practices to achieve food system transformation.

To sustain human life on earth for generations to come, we must change the way we interact with food.

<p>Population growth is placing planetary health under pressure</p>  <p>Our global population is expected to reach 9.7 billion people by 2050 (1)</p>	<p>Our current food system is leading to malnutrition in all its forms</p>  <p>1.9 billion adults are overweight or obese (2)</p>  <p>45% deaths of infants linked to undernutrition (2)</p>	<p>Our food system is catalysing climate change & depleting natural resources</p>  <p>Contributes 30% of all GHG emissions (3)</p>  <p>Utilises 70% of available fresh water (4)</p>
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The EAT-Lancet Commission advised that **"nothing less than a Great Food Transformation" is required (5)**. A whole-of-system approach is critical. At the *consumption* phase, healthy and sustainable diet-related practices can drive and support transformation at each phase of the food supply system.



These diet-related practices are inter-connected. We must consider the way food is produced, sourced, prepared, consumed and disposed of to minimise the environmental impact of our diet (13).

<p>Where to source food?</p>  <p>Select food grown using sustainable production practices, valuing & respecting Indigenous knowledges</p>  <p>Strengthen local food systems by connecting with primary producers</p>  <p>Eat seasonally, incorporating native and wild-harvested foods</p>  <p>Eat locally available foods</p>	<p>What to eat?</p>  <p>Avoid over-consumption beyond caloric requirement</p>  <p>Consume no more than recommended animal-derived foods</p>  <p>Limit intake of ultra-processed, nutrient-poor and over-packaged food</p>  <p>Increase intake of plant-based foods</p>  <p>Eat a wide variety of foods to promote biodiversity</p>	<p>How to eat?</p>  <p>Adopt food waste-minimisation strategies</p>  <p>Preference home-made meals and share with others</p>  <p>Consume safe tap water as preferred drink</p>  <p>Breastfeed infants where possible</p>
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How can policy-makers contribute to the Great Food Transformation?

 <p>Prioritise these practices in National food strategies and dietary guidelines</p>	 <p>Modify the local food environment to promote these practices as the easiest way to interact with food</p>	 <p>Embed community participation in decision-making processes to foster food citizenship</p>
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