



MONASH
University



Dietitians
Australia

University College Dublin, Ireland. June 7-8, 2023

Sustainable Food Systems in Nutrition & Dietetics Education

Positioning SFS in Dietetics

Commitments and Roles

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Acknowledgement of Country

I wish to acknowledge the people of the Kulin Nations, on whose land this work was undertaken. I pay my respects to their Elders, past and present.



Cultural Healing by Mandy Nicholson



DA's investment over time

What factors enabled or hindered this journey?

DA's Role Statement for Dietitians working to promote SFS

How was this developed? What has been the impact?

Position Statement on Healthy & Sustainable Diets

How did it come to be? What approach was used to develop and disseminate the paper? What impact has it had so far?

Workforce Capacity Development

How are current and future dietitians being supported to expand their duty of care?

Photo by [Markus Spiske](#) on [Unsplash](#)



Dietitians Australia's investment in planetary health



Photo by [Nikola Jovanovic](#) on [Unsplash](#)



Dietitians Australia



- Dietitians Australia is the leading voice in nutrition and dietetics in Australia
- Their mission is to champion the professional nutrition and dietetic workforce to empower people and communities
- Recognise member achievements and support professional development through grants and scholarships
- SharePlate
- Interest Groups and Leadership Committees



What we do

As Australia's peak body for dietitians, we provide support to more than 8000 members and raise awareness about the importance of nutrition in public health.



Reconciliation

Reconciliation is an integral part of our organisation. Our Reconciliation Action Plan (RAP) formalises our commitment to reconciliation and cultural understanding among our members.



Food & Environment Interest Group



Established in 2009 to:

- ✓ Provide a forum to discuss food and environment issues, such as food sustainability and climate change
- ✓ Share research, evidence-based information, publications and opinions in the area of food and the environment
- ✓ Provide education and networking opportunities for members
- ✓ Work towards the development of a DA position on food and the environment

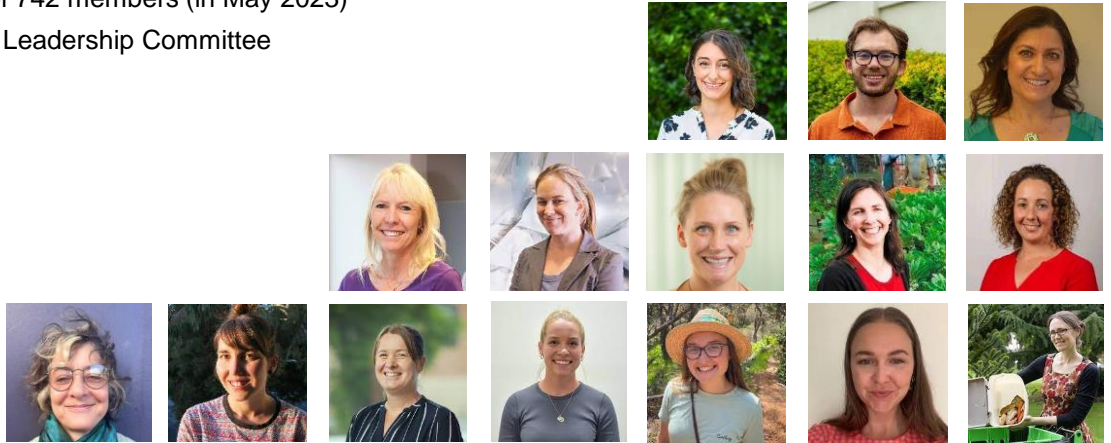


Food & Environment Interest Group



A total of 742 members (in May 2023)

Smaller Leadership Committee



Not pictured here: Emily Kay, Hannah Bres



DA's Investment in Planetary Health



2009

2019

2021

2020-2022

Food & Environment Interest Group

- ✓ Hosted a number of events including 'one at the 2010 conference that was filmed by ABC TV
- ✓ Developed the Eco-Friendly Food Challenge

Role Statement: Food Systems & Environmental Sustainability

- ✓ Due for Review 2023

Joined CAHA as an org member

Competency Standards

- ✓ 6 references to 'Food System'

Code of Conduct

- ✓ Expanded 'Duty of Care'

Position Statement on Healthy & Sustainable Diets

- ✓ Tender process 2020
- ✓ Development 2021
- ✓ Published 2022

Annual Conferences, Webinars and publications in N&D Journal – increasing focus on Planetary Health



Recognising a Dietitian's Broad Duty of Care

7 principles in the Dietitians 'Code of Conduct'



<https://dietitiansaustralia.org.au/working-dietetics/standards-and-scope/code-conduct-dietitians-and-nutritionists>

Domain: Promote health and wellbeing

7. Health and wellbeing

Dietitians promote the health and wellbeing of self and others, improve access to health services and reduce health inequality. Dietitians also advocate for food and nutrition security for all Australians and promote sustainable diets that have a low environmental impact.

- d. participate in efforts to support progress towards sustainable food production, food systems and food and nutrition security for all, where possible.

What factors enabled this journey?



- Progressive CEO, Leadership team and Board of Directors
✓ Responsive to the needs of passionate members
- Platforms to enable members to connect – Interest Groups, Leadership Committees, etc
- Commitment to evidence-based practice (eg. Competency Standards¹)
- Advocacy skills amongst members
✓ International exemplars
- Collaboration with peak bodies
✓ Climate and Health Alliance
✓ Public Health Association of Australia



Factors that continue to hinder progress:

- Legacy, bureaucracy (academia and regulations) & funding

¹ Allen LM and Palermo C (2022) Using document analysis to revise competency frameworks: Perspectives from the revision of competency standards for dietitians. *Front. Med.* 9:900636. doi: 10.3389/fmed.2022.900636

DA's Role Statement on Food Systems and Environmental Sustainability



Unsplash: [Hillshire Farm](#)



Dietitians Australia Role Statement on Food Systems and Environmental Sustainability

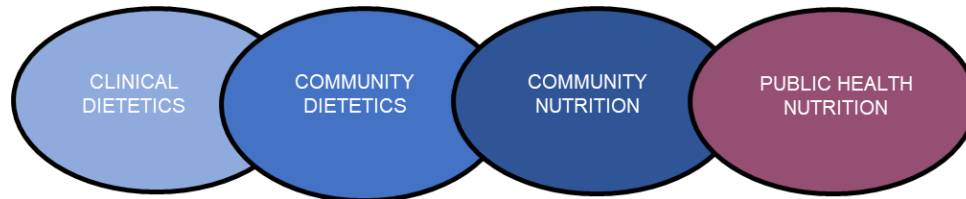


Adopted: Nov 2019
Due for Review: 2023

<https://dietitiansaustralia.org.au/working-dietetics/standards-and-scope/role-statements/food-systems-and-environmental-sustainability-role-statement>



The role of Dietitians in transforming our food system



The role of Dietitians in transforming our food system

Role	Case Examples of Standards of Professional Performance
Clinical Dietitian	<ul style="list-style-type: none"> All units to adopt environmentally friendly practices as part of their annual goals and objectives Addition of sustainability information to patient education materials and patient menus
Food Service Dietitian/Manager	<ul style="list-style-type: none"> Incorporation of food & water systems principles into procedures Determining training needs to build environmental sustainability capacity amongst staff to ensure sustainable practices are adopted Local food procurement policy development, implementation, monitoring Implementation of food waste minimisation strategies
Private Practice Dietitian	<ul style="list-style-type: none"> Promotion of healthy and sustainable diet-related practices within advice for clients – both verbal and written education Incorporation of sustainability practices into business operations

The role of Dietitians in transforming our food system

Role	Case Examples of Standards of Professional Performance
Food Industry Dietitian	<ul style="list-style-type: none"> • Model best practices in environmental sustainability eg. Ethical food procurement policies, food waste and disposal • Creation of programs and consumer educational materials to elevate the employers' credibility concerning environmental sustainability • Incorporation of ethical food systems and environmental sustainability principles into criteria guiding vendor partnerships • Education of staff and consumers
Public Health Dietitian	<ul style="list-style-type: none"> • Advocacy and program development, implementation and evaluation to promote equitable access to healthy and sustainable diets • Collaboration with key stakeholders to address determinants of food-related climate change outcomes and population health

Adapted from: Tagtow, Robien, Bergquist, Bruening, Dierks, Hartman, Robinson-O'Brien, Steinitz, Tahsin, Underwood & Wilkins. **Academy of Nutrition and Dietetics: Standards of Professional Performance for Registered Dietitian Nutritionists** (Competent, Proficient, and Expert) in Sustainable, Resilient, and Healthy Food and Water Systems. *Journal of the Academic of Nutrition and Dietetics*. 2014; 114, p475-488.



The role of Dietitians in transforming our food system

Role	Case Examples of Standards of Professional Performance
Researcher	<ul style="list-style-type: none"> • Source funding and collaborate with other researchers both within dietetics and external to dietetics, to advance the evidence for sustainable food systems and environmental sustainability in dietetic practice
Educator of Dietetics Students	<ul style="list-style-type: none"> • Incorporate environmental sustainability and food systems education into the curriculum across all areas of dietetic practice
Dietetic Program Director	<ul style="list-style-type: none"> • Strengthen the ability of dietitians to promote and implement environmentally sustainable practices

Adapted from: Tagtow, Robien, Bergquist, Bruening, Dierks, Hartman, Robinson-O'Brien, Steinitz, Tahsin, Underwood & Wilkins. **Academy of Nutrition and Dietetics: Standards of Professional Performance for Registered Dietitian Nutritionists** (Competent, Proficient, and Expert) in Sustainable, Resilient, and Healthy Food and Water Systems. *Journal of the Academic of Nutrition and Dietetics*. 2014; 114, p475-488.



How was this developed?

- Food & Environment Interest Group – Leadership Committee



What has been the impact?

- Interest Group Advocacy Efforts
- Sustainable Food Systems Education
- Competency Standards¹

What's next for the Role Statement?

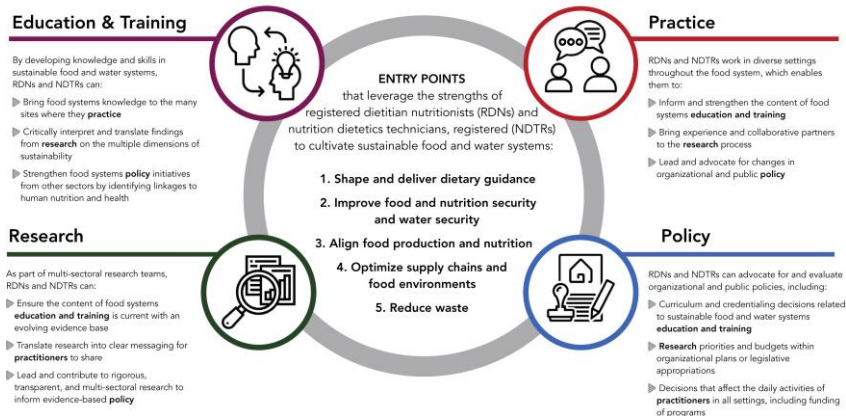
- Due for review 2023 – will draw from emerging literature and International best-practice examples

¹ Allen LM and Palermo C (2022) Using document analysis to revise competency frameworks: Perspectives from the revision of competency standards for dietitians. *Front. Med.* 9:900636. doi: 10.3389/fmed.2022.900636



How and where can dietitians influence food systems?

Cultivating Sustainable Food and Water Systems: A Nutrition-Focused Framework for Action



Spiker ML, Knoblock-Hahn A, Brown K, Giddens J, Hege AS, Sauer K, Enos DM, Steiber A. Cultivating sustainable, resilient, and healthy food and water systems: a nutrition-focused framework for action. *Journal of the Academy of Nutrition and Dietetics*. 2020 Jun 1;120(6):1057-67.



Position Statement on Healthy & Sustainable Diets



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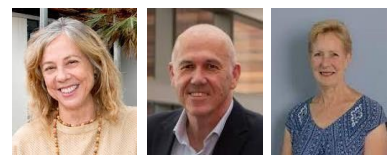


Position Statement on Healthy and Sustainable Diets



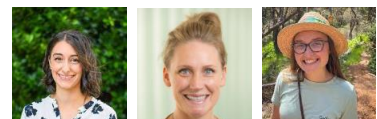
How did it come to be?

- Advocacy efforts – Food & Environment Interest Group
- International exemplars
- \$5000AUD role was advertised to DA members



What approach was used to develop and disseminate the paper?

- Established working group of experts
- Drafted position paper
- Reviewed by Food & Environment Interest Group & DA Board
- Submitted for peer review
- Published in Nutrition & Dietetics Journal
- Position Brief on DA website

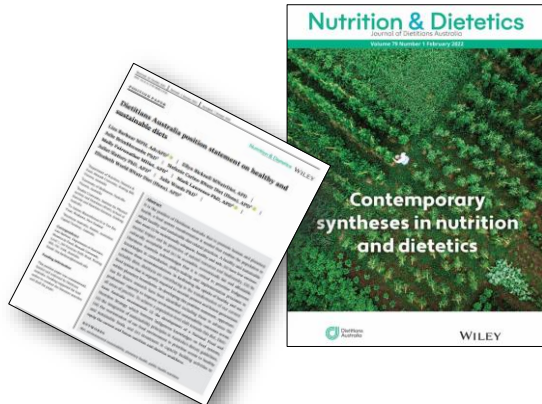


Not pictured: Juliet Slattery



Position Statement on Healthy & Sustainable Diets

Publication in peer-reviewed journal:



Position Brief on DA website:



- 4-page summary:
- ✓ DA's overall position
 - ✓ Policy recommendations
 - ✓ Evidence
 - ✓ References



Barbour, L., Bicknell, E., Brimblecombe, J. et al. Dietitians Australia position statement on healthy and sustainable diets. *Nutrition & Dietetics*. 2022; 79(1): 6- 27. doi:10.1111/1747-0080.12726

<https://dietitiansaustralia.org.au/advocacy-and-policy/position-statements/healthy-and-sustainable-diets-position-statement-and-briefing-paper-2022>



Position Statement on Healthy & Sustainable Diets

Methodology

Exploration of existing literature was guided by the five-stage approach for scoping reviews¹⁻³

Three research questions were answered:

RQ1

What are the characteristics of healthy and sustainable diets?

RQ2

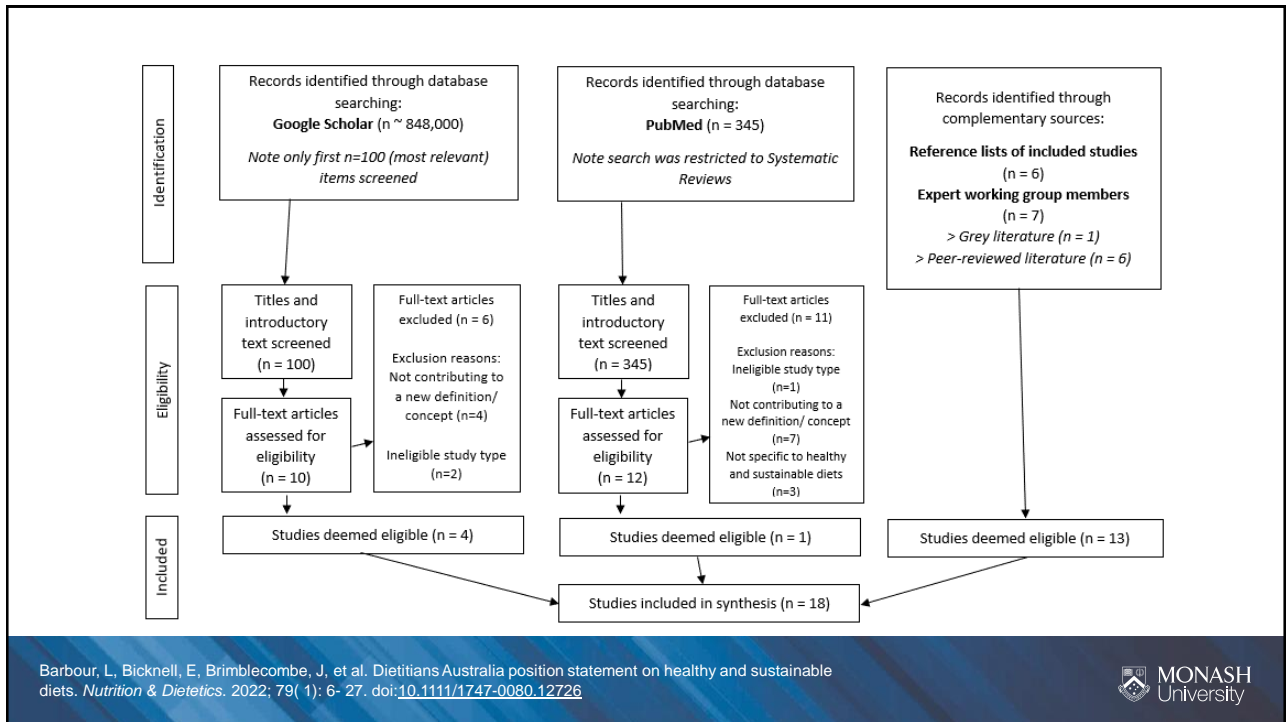
What approaches are being taken by researchers to measure health and environmental sustainability outcomes of population diets?

RQ3

What evidence-based policy options exist to facilitate the uptake of healthy and sustainable diets in Australia?

1. Arksey H, O'Malley L. Scoping studies: towards a methodological framework. *Int J Social Res Methodol*. 2005;8:19-32.
2. Levac D, Colquhoun H, O'Brien KK. Scoping studies: advancing the methodology. *Implement Sci*. 2010;5:69.
3. Colquhoun HL, Levac D, O'Brien KK, et al. Scoping Reviews: Time for Clarity in Definition, Methods, and Reporting. 2014.





Position Statement on Healthy & Sustainable Diets

RQ1

What are the characteristics of healthy and sustainable diets?

18 eligible studies



Timeline of published ideas, definitions and concepts

RQ2

What approaches are being taken by researchers to measure health and environmental sustainability outcomes of population diets?

42 eligible studies



Synthesised and organised according to the 4 elements of a H&S diet as proposed by FAO

RQ3

What evidence-based policy options exist to facilitate the uptake of healthy and sustainable diets in Australia?

61 eligible studies



Tables of specific policy examples from included studies and an overview of policy options organized according to the NOURISHING framework

1. Arksey H, O'Malley L. Scoping studies: towards a methodological framework. *Int J Social Res Methodol*. 2005;8:19-32.
2. Levac D, Colquhoun H, O'Brien KK. Scoping studies: advancing the methodology. *Implement Sci*. 2010;5:69.
3. Colquhoun HL, Levac D, O'Brien KK, et al. Scoping Reviews: Time for Clarity in Definition, Methods, and Reporting. 2014.

Position Statement on Healthy & Sustainable Diets

Policy Recommendations To achieve a population-level shift towards healthy and sustainable diets, Dietitians Australia recommends:



1. The development of a National Food and Nutrition Strategy which honours Indigenous knowledges on food systems
2. The integration of sustainability principles in Australia's dietary guidelines
3. The reorientation of our food environment to prioritise access to healthy and sustainable foods eg. Food labelling scheme, procurement policies
4. Investment in capacity building activities to equip the current and future nutrition and dietetics workforce

It is critical that the opportunity is prioritised for Aboriginal and Torres Strait Islander People to be involved in the further development and translation of these recommendations into practice and policy.

Barbour, L., Bicknell, E., Brimblecombe, J. et al. Dietitians Australia position statement on healthy and sustainable diets. *Nutrition & Dietetics*. 2022; 79(1): 6- 27. doi:[10.1111/1747-0080.12726](https://doi.org/10.1111/1747-0080.12726)



Position Statement on Healthy & Sustainable Diets

What impact has it had so far?

- Dietitians Australia's media releases
- DA's 2022 submission to the NSW Legislative Assembly Committee on Environment and Planning - 16 recommendations to improve food production and supply in NSW
- Informed other position statements:
 - Climate & Health Alliance Australia
 - Public Health Association of Australia
- Current Review of Australia's Dietary Guidelines?



Workforce Capacity Development



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Position Statement on H&S Diets Recommendation:
 “Investment in capacity building activities to equip the current and future nutrition and dietetics workforce.”



Workforce Capacity Development

How are current and future dietitians being supported to expand their duty of care?

Current Workforce



Photo by [Centre for Ageing Better](#) on [Unsplash](#)

Future Workforce



Photo by [Brooke Cagle](#) on [Unsplash](#)



Workforce Capacity Development

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Photo by [Brooke Cagle](#) on [Unsplash](#)



Capacity Development – Current Workforce

Conferences and Webinars



Research & Translation



Capacity Development – Current Workforce

- \$1000USD received from ICDA in September 2022
 - ✓ Together with Sandy Murray (UTas)
- Working Group of 7 members from DA's Food & Environment Interest Group
- Revamping what was the 'Eco Friendly Food Challenge'
- A fun, experiential challenge where participants:
 - ✓ Complete the 12 question quiz to self-reflect on the way they interact with the food system
 - ✓ Select a number of tasks (from over 100) to complete that encourage H&S diet-related practices
 - ✓ Repeat the quiz at the end of the challenge period
- This resource will be piloted with student dietitians in late 2022 and early 2023 then shared for broader use



What are Healthy & Environmentally Sustainable diet-related practices?

These diet-related practices (5-12) 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).

Where to source food?



Select food grown using sustainable production practices, valuing & respecting Indigenous knowledges



Eat locally available foods



Eat seasonally, incorporating native and wild-harvested foods



Strengthen local food systems by connecting with primary producers

What to eat?



Avoid over-consumption beyond caloric requirement



Consume no more than recommended animal-derived foods



Increase intake of plant-based foods



Limit intake of ultra-processed, nutrient-poor and over-packaged food



Eat a wide variety of foods to promote biodiversity

How to eat?



Adopt food waste-minimisation strategies



Preference home-made meals and share with others



Breastfeed infants where possible



Consume safe tap water as preferred drink

Barbour, L.R., Woods, J.L. and Brimblecombe, J.K. (2021), Translating evidence into policy action: which diet-related practices are essential to achieve healthy and sustainable food system transformation?. Australian and New Zealand Journal of Public Health, 45: 83-84. <https://doi.org/10.1111/1753-6405.13050>

Workforce Capacity Development

How are current and future dietitians being supported to expand their duty of care?

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Photo by [Centre for Ageing Better](#) on [Unsplash](#)

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Capacity Development – Future Workforce



- Faculty-wide research in 2019 with educators from 13 health professions (n=163) identified:
 - Strong content knowledge (90.8%)
 - However, only (36.9%) reported confidence to 'explain' and (44.2%) to 'inspire' students
 - Two thirds of participants (67.5%) reported not knowing how best to teach sustainable healthcare education
- Planetary Health Education fellowship 2023 – 2024
 - Whole-of-Faculty approach
 - Co-Designing PHE learning and teaching materials with health professions students
 - Prioritising Indigenous knowledges about how best to facilitate PHE

Gabrielle Brand, Jorja Collins, Gitanjali Bedi, James Bonnamy, Liza Barbour, Chanika Ilangakoon, Rosie Wotherspoon, Margaret Simmons, Misol Kim & Patricia Nayna Schwerdtle (2021) "I teach it because it is the biggest threat to health": Integrating sustainable healthcare into health professions education, *Medical Teacher*, 43:3, 325-333, DOI: 10.1080/0142159X.2020.1844876



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- An audit conducted in 2016 revealed **four out of 19 (21%) of Australian accredited nutrition and dietetics degrees included curricula** that addressed food systems, environmental sustainability and/or climate change
- As healthcare professionals, nutrition and dietetics students must be prepared to address the causes and unprecedented consequences of climate change



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Research Aim

This research aims to explore the existing education opportunities for **nutrition and dietetics** students in Australia to learn about food systems, environmental sustainability and/or climate change.

Stefanie Carino, Julia McCartan & Liza Barbour (2020) The Emerging Landscape for Sustainable Food System Education: Mapping Current Higher Education Opportunities for Australia's Future Food and Nutrition Workforce, *Journal of Hunger & Environmental Nutrition*, 15:2, 273-294, DOI: [10.1080/19320248.2019.1583621](https://doi.org/10.1080/19320248.2019.1583621)



Methods

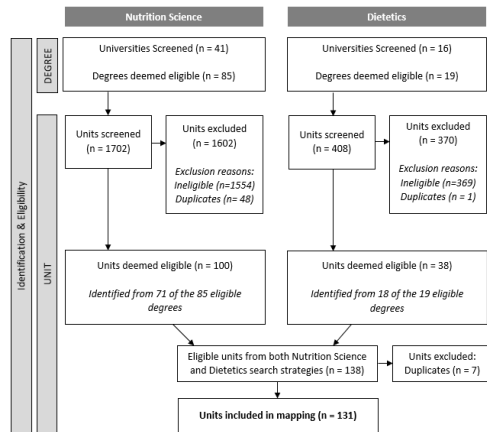
How widespread is planetary health curricula?

Identify eligible degrees and map the relevant units taught within these degrees

Desktop content analysis



Results: How widespread is planetary health curricula?



Coverage of planetary health curricula in Australian nutrition and dietetics degrees

Percentage of degrees with eligible units (Total)	2023	86% (89 out of 104) degrees
Percentage of degrees with eligible units (Dietetics)	2023	95% (18 out of 19) degrees
Percentage of degrees with eligible units (Nutrition)	2023	84% (71 out of 85) degrees

Methods

How widespread is planetary health curricula?

Identify eligible degrees and map the relevant units taught within these degrees

Desktop content analysis

How do educators intend to deliver planetary health education?

Analyse the learning outcomes of relevant units to determine (i) level of cognitive complexity and (ii) subject matter focused on

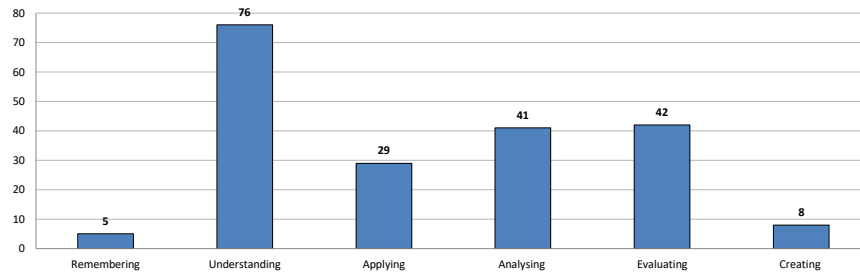
Content analysis
(Bloom's Revised Taxonomy)

Thematic analysis
(Subject Matter)

Results: How do educators intend to deliver planetary health education?

Analysis of the verbs in relevant Learning Outcomes (n = 201)

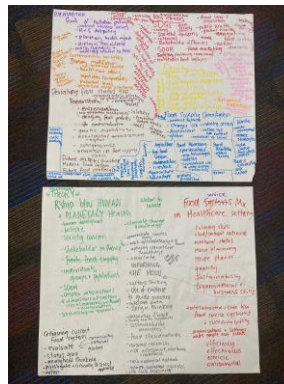
Bloom's revised taxonomy



Results: How do educators intend to deliver planetary health education?

Thematic analysis of the subject content in Learning Outcomes (n = 201)

1. Relevant learning outcomes
2. Demonstrate a sound knowledge and application of food systems and management in a health care setting, including menu
3. Demonstrate a sound knowledge and application of food service systems and management in a health care setting, including
4. Identify key food and nutrition policy documents and guidelines used to promote healthy and sustainable diets and explore
5. Examine current food and nutrition issues and relationships with human health, societal concerns, stakeholder influences and the
6. Identify and explain food service systems and the interconnected relationships between these systems, including sustainability.
7. Review, evaluate and report on the operations, management and quality improvement cycles required to deliver an efficient,
8. Apply knowledge of nutrition, sustainability, health and disease to plan a modified or therapeutic diet including appropriate
9. Apply how nutrition and sustainability, including the Sustainable Development Goals, act as key drivers of health based food
10. Utilise scientific nutritional evidence, food standards, consumer research, design thinking, ideation, innovation frameworks and
11. Utilise a framework to critique the role of science (including genetic modification and nutrigenomics) and technologies (including
12. Describe the components of food and nutrition systems within the context of the United Nations Sustainable Development Goals
13. Identify and explain food service systems and the interconnected relationships between these systems including sustainability
14. Review, evaluate and report on the operation, management and quality improvement cycles required to deliver an efficient,
15. Describe food systems and the nutritional implications of changes to the food supply on individuals, groups and populations
16. Identify and prioritise actions to improve the sustainability of a food service in terms of human, economic and environmental
17. Identify and critique the components of the food system using health, economic and environmental as a lens
18. Develop and apply knowledge and skills to navigate the food environment in order to make healthy, sustainable and equitable
19. Explain the social and environmental determinants of health
20. Describe food supply in Australia and evaluate community, national and global food systems
21. Investigate public health priorities from a holistic, ecological, systems and environmental perspective
22. Describe and evaluate the concept of critical responsibility towards present and future generations
23. Investigate and evaluate complex interactions between economic, social, cultural and environmental dimensions of sustainability
24. Apply analytical and synthetic thinking to a sustainability problem in your chosen discipline
25. Demonstrate a thorough knowledge of the Australian food system and the global and local factors affecting our food supply
26. Describe food processing and preservation techniques and apply this knowledge to nutrition and dietetics
27. Evaluate and discuss innovations in the food supply and the potential application of these to public health nutrition
28. Describe the principles (knowledge) of a safe food supply including monitoring and surveillance and risk management
29. Demonstrate knowledge of Australian food law and regulation and the processes required to adequately inform consumers about
30. Integrate knowledge of a socio-ecological approach and health promotion principles within a public health and community
31. Investigate and critically discuss the Australian food system including the global and local factors affecting our food supply
32. Integrate advanced knowledge of a socio-ecological approach and health promotion principles within public health and
33. Plan, collect and critically analyse food service data and information, applying evidence-based principles of food service
34. Use a systems thinking approach to critically appraise environmental sustainability issues, food legislation, regulations, standards,



Conceptual theory linking human and planetary health
'The how' - Approaches and theory to inform practice
Critiquing the current food system
Opportunities to disrupt business as usual
Food service in organisations and settings where people eat meals
Key factors driving and shaping the food system
Food and public health nutrition policy
Incorporating diverse values and perspectives
Applying an equity and social justice lens
Food supply chain components and practices
Food consumption and dietary practices

Conclusions

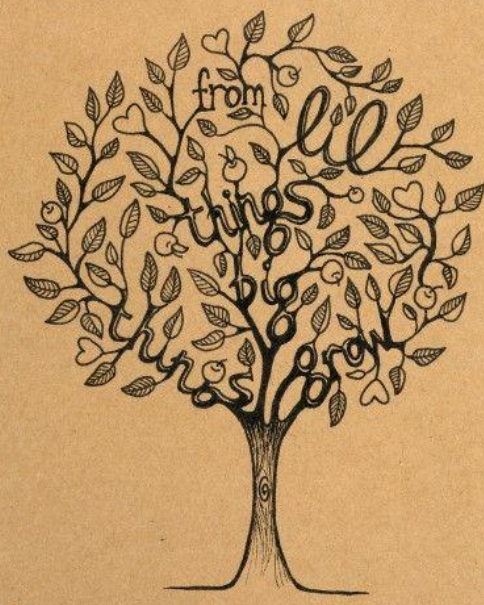
- Since 2016, coverage of planetary health curricula has increased in nutrition and dietetic degrees in Australia from 21% to 86%
 - ✓ Evolution in the National Competency Standards for Dietitians which now include more performance criteria regarding environmental sustainability
- Opportunities exist to prioritise high quality, fit-for-purpose planetary health education – higher order learning outcomes

Concurrent and future research:

- How are N&D educators assessing planetary health curricula?
- What does best-practice Sustainable Food Systems Education look like?
- What are the facilitators and barriers faced by N&D educators?
- How can educators foster transdisciplinary learning between and beyond health professions degrees?



Photo by Gabriella Clare Marino on Unsplash



WPHN CONGRESS 2020
Workshop 1B on Monday 30th March 2020 from 9-10:30am

Equipping nutrition and dietetics students with environmental sustainability & food systems expertise: a showcase of innovative teaching and learning activities

Uzo Barbour (Aus) Dr Rebecca Lindberg (Aus) Dr Clare Pettigrew (UK) Dr Jessica Wegener (Canada) Dr Lisset Carlson (Canada) Dr Hanna Meyer (USA) Dr Sarah Burkhardt (Aus) Sarah Murray (Aus)

Bringing global & local educators together!
 Sign up for this pre-WPHN Congress workshop:
 Workshop 1B on Monday 30th March 2020 from 9-10:30am
 \$45 to register (discounts for students, members, NGOs)
www.wphncongress2020.com

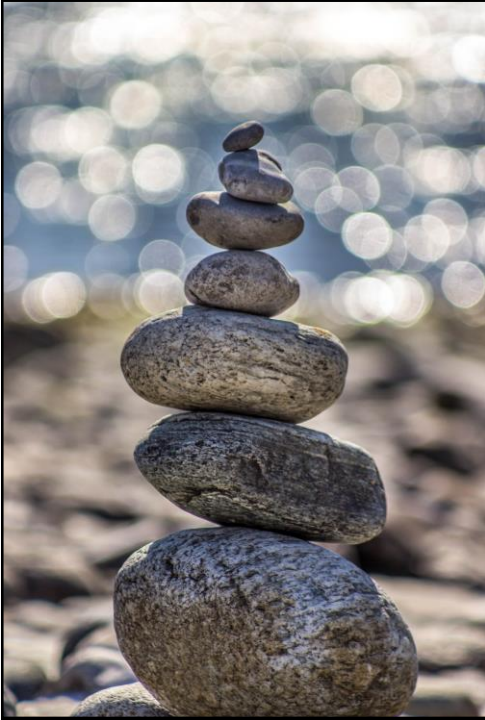


Community of Practice & Research Collaborations
<https://sites.google.com/monash.edu/sfs-education-nutrition>



Where to from here?!





My personal reflections

Progress takes time

- It's hard to be patient when we know that urgent action is needed!

Advocacy skills and mutually beneficial relationships are critical

Collective action to lessen the feeling of overwhelm

Effective leadership from top down and bottom up

- Draw upon fun and engaging approaches to bring others on board

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Thank you!



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Photo from Unsplash: [Henley Design Studio](#)

