

# A 2020 Evaluation of Global Knowledge Networks in the UN Decade of Action on Nutrition (2016-2025): Proceedings of the 6th International Summit on Medical and Public Health Nutrition Education and Research

Breanna Lepre,<sup>1,2</sup> Celia Laur,<sup>1,3</sup> Jørgen Torgerstuen Johnsen,<sup>1</sup> James Bradfield,<sup>1,4</sup> Marjorie Rafaela Lima Do Vale,<sup>1</sup> Lauren Ball,<sup>1,5</sup> Sumantra Ray<sup>1,6,7</sup>

Nutrition is critical to health and economic development. In 2014, approximately 462 million adults worldwide were underweight, while in 2016, over 650 million were obese.<sup>1,2</sup> Similarly, in 2020, an estimated 144 million children under five were stunted, while 38 million were overweight.<sup>3</sup> This coexistence of undernutrition along with overweight, obesity and diet-related chronic disease is referred to as the double burden of malnutrition, an important focus point for intervention and action on an individual, household and population-level.<sup>4</sup> In 2016, the United Nations General Assembly proclaimed 2016-2025 as the UN Decade of Action on Nutrition (Nutrition Decade). The Nutrition Decade is an important opportunity for stakeholders including governments, inter-governmental organizations, civil society, the private sector, academia, and others, to strengthen collaborative efforts towards eradicating hunger and all forms of malnutrition. The Nutrition Decade calls for a paradigm shift, whereby the global community embraces the centrality

of nutrition in social and economic development and the subsequent dire need to prioritise action.

The six key action areas, outlined in the Work Programme of the UN Decade of Action on Nutrition, provide a blueprint for sustained nutrition action and are positioned within the 2030 Agenda for Sustainable Development, particularly Target 2.2, *ending all forms of malnutrition by 2030*.<sup>5</sup> Five years on from when the Nutrition Decade was proclaimed, hunger and malnutrition remain problems of huge scale with diet-related health costs linked to mortality and non-communicable diseases projected to exceed USD 1.3 trillion per year.<sup>2</sup> Although the change to date has been modest, the remaining years of the Nutrition Decade present an unprecedented opportunity for accelerated efforts. Against the backdrop of the pandemic since 2020, key nutrition and inequality related gap areas have been further highlighted and the digital knowledge economy has been strengthened, presenting opportunities to act more precisely, inclusively and with rapid global impact.

## *An Evaluation of Global Knowledge Networks in the UN Decade of Action on Nutrition (2016-2025)*

To further explore the opportunities suggested by the Nutrition Decade, in September 2020, the NNEdPro Global Centre for Nutrition and Health virtually hosted the Sixth International Summit on Medical and Public Health Nutrition Education and Research. The Summit brings together key opinion leaders and change makers from multiple countries, professions, and sectors, all interested in contributing to nutrition and health dialogue. The NNEdPro Global Centre is an award-winning interdisciplinary think-tank, training academy and knowledge network anchored in Cambridge, UK.<sup>6</sup> The

work of NNEdPro focuses on developing adaptable and scalable models for nutrition education and combining clinical and public health knowledge with leadership training to aid and evaluate implementation in education, health care and community settings globally. The inaugural Summit in 2015 was an introduction to the dynamic interfaces between nutrition and health, with 2016 focused on setting priorities, and 2017 on implementing changes in policy and practice for sustained impact.<sup>7-9</sup> The 2018 Summit authorised nutrition as a 'hard science' and inspired the need for high-quality data to inform nutrition policy and practice, as discussed in 2019.<sup>10,11</sup> The 2020 event included live and pre-recorded sessions, with the theme: *An evaluation of Global Knowledge Networks in the UN Decade of Action on Nutrition (2016-2025)*.

Summit objectives included:

- 1) To bring together change makers from multiple countries, professions and sectors all interested in the dynamic interfaces between nutrition and health.
- 2) To discuss strategies and showcase examples for putting nutrition knowledge into practice around the globe.
- 3) To harness the potential of multidisciplinary networks for making large-scale change, including collaboration with government, charity, corporate and third sectors.

Key topics for discussion included: putting research into practice; communication, leadership, and the role of voluntary networks; data-driven action; and nutrition and global challenges. Throughout the presentations, discussions, and submitted abstracts, it was clear that changes to the food and health systems are needed to meet the goals of the Nutrition Decade, and that voluntary networks are one strategy that supports this outcome. From smaller scale networks, such as the Mobile Teaching Kitchens (MTK) model,<sup>12</sup> to the larger NNEdPro Regional Networks, these networks encourage shared learning and collaboration to support the implementation and monitoring of policies and programmes to address malnutrition. The MTK model, which empowers marginalised community members to become culinary health educators, was originally developed by the Regional Network in India, and adaptations of the MTK intervention are planned across the Swiss, Mexico, Italy & The Mediterranean, and the Brazil Regional Networks.<sup>13-17</sup> Networks will learn from each other while making adaptations relevant to their local need, resources, and capacity. Ending malnutrition is a shared responsibility, which requires equitable, resilient,

<sup>1</sup>NNEdPro Global Centre for Nutrition and Health, Cambridge, UK

<sup>2</sup>School of Medical, Indigenous and Health Sciences, University of Wollongong, Wollongong, NSW, Australia

<sup>3</sup>Women's College Hospital Institute for Health System Solutions and Virtual Care, Women's College Hospital, Toronto, Ontario, Canada

<sup>4</sup>Department of Nutrition & Dietetics, King's College Hospital NHS Foundation Trust, UK

<sup>5</sup>Menzies Health Institute Queensland & School of Health Sciences and Social Work, Griffith University, Southport, Qld, Australia

<sup>6</sup>School of Biomedical Sciences, Ulster University at Coleraine, Coleraine, UK

<sup>7</sup>School of Humanities and Social Sciences, University of Cambridge, Cambridge, UK

**Correspondence to** Breanna Lepre and Sumantra Ray, NNEdPro Global Centre for Nutrition and Health, Cambridge, UK; bl778@uowmail.edu.au, s.ray@nnedpro.org.uk

healthy, and more sustainable food and health systems.

### Impact on Food and Health Systems

The 2020 Summit was held against the backdrop of the COVID-19 pandemic, which has impacted every aspect of food and health systems around the world. For example, the unaffordability of eating well is exacerbated by the pandemic and highlights the need to revitalize nutrition commitments and strengthen accountability for such action.<sup>2</sup> There is also a need to consider the impact of trade and investment policies on food systems and maximise action to improve food security and nutrition, and invest responsibly into agriculture and food systems.<sup>22</sup> In Action Area 5, *Safe and supportive environments for nutrition at all ages*, there remains scope to scale-up and further strengthen country level action by improving food offered in public institutions (e.g., school, prison, and hospital settings), considering regulatory approaches to shape food price and availability, and subsequently food choice, and supporting the use of the Voluntary Guidelines on Food Systems and Nutrition of the Committee of World Food Security,<sup>23</sup> as discussed at the Summit. All of these strategies now need to be considered within the context of COVID-19, and the exacerbated inequities.

### Environmental Sustainability

Many points of discussion in the 2020 Summit brought up the environmental impact of food and health system. The food system accounts for more than one-third of global greenhouse gas emissions, and conversely, the present environmental crisis also places additional strain on the food and health-care systems.<sup>18</sup> Diet-related greenhouse gas emissions are estimated to exceed USD 1.7 trillion per year by 2030 based on current food consumption patterns.<sup>18</sup> The resources required to sustain current food systems are vast; food production consumes over 50% of the planets habitable land surface and 70% of freshwater.<sup>19</sup> Health care systems constitute a large sector which requires considerable amounts of energy and resources and produces substantial emissions and waste.<sup>20</sup> For example, in 2012 alone, the European health system produced 24.7 million tonnes of carbon dioxide emissions, the equivalent of the total greenhouse gas emissions of the entire country of Croatia that same year.<sup>21</sup> In the context of the Nutrition Decade, we need increased recognition of the role of agriculture and food systems to promote crop diversification, to create healthy food environments, and to implement measures to ensure food safety standards. There is also a need for increased investments into

agriculture and food systems and actions which address inequities across malnutrition in all its forms, are community-led, and driven by local knowledge exchange. The recognition of the increasingly important role of the environment on food and health systems led to the theme for the 2021 NNEdPro Summit: *Advancing research, policy, and practice to promote resilient and sustainable food and health systems in the Year of Action on Nutrition*.

### Opportunities Through Global Knowledge Networks

Ending malnutrition in the Nutrition Decade is a shared responsibility, which requires food and health systems to be more equitable, resilient, healthy, and sustainable. Presentations and discussions at the 2020 NNEdPro Summit emphasised that remaining years of the Nutrition Decade offer an unprecedented opportunity for accelerated efforts, while considering the substantial impact of the COVID-19 pandemic. Global knowledge networks, as mobile technologies of government in the field of development, underpin opportunities to achieve nutrition impact at scale. Nutrition challenges require strong and sustained political leadership, which must be supported by cohesive policy informed by information and knowledge. Herein lies the value of global knowledge networks, as they facilitate the movement of knowledge across borders with a common goal and may help to achieve the aims of the Nutrition Decade. The 2020 Summit, and similar initiatives, have been catapulted by the pandemic into virtual and digital operations with added insights into low cost avenues for wide geographical coverage and rapid impact across global knowledge networks.

**Acknowledgements** The 2020 Summit Organising Committee: Matheus Abrantes, Melissa Adamski, Luke Buckner, Jørgen Torgerstuen Johnsen, Martin Kohlmeier, Celia Laur, Breanna Lepre, Elaine MacAninch, Kathy Martyn, Sucheta Mitra, Sumantra Ray & Marjorie Lima do Vale.

**Speakers and Moderators** Melissa Adamski, Lord Richard Balfe, Lauren Ball, Jack Bell, Jeffrey Bohn, James Bradfield, Luke Buckner, Mei Yen Chan, Dominic Croombe, Peter Van Dael, Pauline Douglas, Sonigitu Asibong Ekpe, Selvarani Elahi, Ellen Fallows, Jaroslav Guzanic, Fatima Hachem, Alfredo Martinez Hernandez, Jørgen Torgerstuen Johnsen, Kai Sento Kargbo, Martin Kohlmeier, Maria Korre, Andre Laperriere, Lina Mahy, Kathy Martyn, Daniela Martini, Shane McAuliffe, Kirsty Pourshahidi, Kannan Raman, Lord Diljit Rana, Minha Rajput-Ray, Sumantra Ray, Milka Sokolovic, Mercedes Zorilla Tejada, Vikay Kumar Thallam, Claudia Tramontt, Helena Trigreiro, Marjorie Rafaela Lima do Vale, Giles Yeo

**Funding** This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests** None declared.

**Patient consent for publication** Not required.



### OPEN ACCESS

**Open Access** This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

© Author(s) (or their employer(s)) 2022. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.



**To cite** Lepre B, Laur C, Johnsen JT, et al. *BMJ Nutrition, Prevention & Health* 2022;**5**(S1):i-iii. doi:10.1136/bmjnph-2022-nnedprosummit.editorial

*BMJ Nutrition, Prevention & Health* 2022;**5**(S1):i-iii. doi:10.1136/bmjnph-2022-nnedprosummit.editorial

### REFERENCES

- 1 Fact sheets: Obesity and overweight: World Health Organization; 2020. Available from: <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight> (accessed 4 May 2021).
- 2 FAO, IFAD, UNICEF, et al. *The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets*. Rome, Italy, 2020.
- 3 United Nations Children's Fund (UNICEF), the World Health Organization, and the International Bank for Reconstruction and Development/The World Bank. *Levels and trends in child malnutrition: Key Findings of the 2020 Edition of the Joint Child Malnutrition Estimates*. Geneva: World Health Organization, 2020.
- 4 WHO. *The double burden of malnutrition. Policy brief*. Geneva: World Health Organization, 2017.
- 5 UN. *THE 17 GOALS: United Nations (UN); 2021*. Available from: <https://sdgs.un.org/goals> (accessed 4 May 2021).
- 6 Home: NNEdPro Global Centre for Nutrition and Health; 2020 [Available from: <https://www.nnedpro.org.uk/> accessed 7 October 2020.
- 7 Laur C, Ball L, Ahankari A, et al. Proceedings of the inaugural International Summit for Medical Nutrition Education and Research. *Public Health* 2016 doi: <https://doi.org/10.1016/j.puhe.2016.08.023>
- 8 Barnes K, Crowley J, Laur C, et al. Proceedings of the Second International Summit on Medical Nutrition Education and Research. *Public Health* 2016;**140**:68-72. doi: <https://doi.org/10.1016/j.puhe.2016.09.002>
- 9 Crowley J, Laur C, Carter H, et al. Perspectives from the Third International Summit on Medical Nutrition Education

- and Research. *Frontiers in Public Health* 2018;6(93) doi: 10.3389/fpubh.2018.00093
- 10 Barrett E, Brown M, Buckner L, et al. Connecting nutrition as a hard science and international knowledge networks: Proceedings of the Fourth International Summit on Medical and Public Health Nutrition Education and Research. *BMJ Nutrition, Prevention & Health* 2020;0(e000090) doi: 10.1136/bmjnph-2020-000090
  - 11 Laur C, Johnsen JT, Bradfield et al. Closing the gap: data-based decisions in food, nutrition and health systems: proceedings of the Fifth International Summit on Medical and Public Health Nutrition Education and Research. *BMJ Nutrition, Prevention & Health* 2020;0. doi: <http://dx.doi.org/10.1136/bmjnph-2020-000118>
  - 12 Buckner L, Bhat S, Bhar S, et al. P200 The Evaluation of Mobile Teaching Kitchens as a Nutrition Education Tool to Improve Health Outcomes in Underserved Communities. *J Nutr Educ Behav* 2019;51:S122-S23. doi: <https://doi.org/10.1016/j.jneb.2019.05.576>
  - 13 Swiss Network Cambridge: NNEdPro Global Centre for Nutrition and Health; 2021. Available from: <https://www.nnedpro.org.uk/switzerland> (accessed 4 May 2021).
  - 14 Mexico Network Cambridge: NNEdPro Global Centre for Nutrition and Health; 2021. Available from: <https://www.nnedpro.org.uk/mexico> (accessed 4 May 2021).
  - 15 Italy and the Mediterranean Network Cambridge: NNEdPro Global Centre for Nutrition and Health; 2021. Available from: <https://www.nnedpro.org.uk/italy-and-mediterranean> (accessed 4 May 2021).
  - 16 Brazil Network Cambridge: NNEdPro Global Centre for Nutrition and Health; 2021 [Available from: <https://www.nnedpro.org.uk/brazil> accessed 4 May 2021.
  - 17 Mobile Teaching Kitchen (MTK) Cambridge: NNEdPro Global Centre for Nutrition and Health; 2021. Available from: <https://www.nnedpro.org.uk/mtk> (accessed 4 May 2021).
  - 18 Crippa M, Solazzo E, Giuzzardi D, et al. Food systems are responsible for a third of global anthropogenic GHG emissions. *Nature Food* 2021;2:198-209. doi: <https://doi.org/10.1038/s43016-021-00225-9>
  - 19 Ritchie H, Roser M. Environmental impacts of food production 2020. Available from: <https://ourworldindata.org/environmental-impacts-of-food> (accessed 6 May 2021).
  - 20 Environmentally sustainable health systems: a strategic document. Geneva: World Health Organization, 2017.
  - 21 UNFCCC. GHG data from UNFCCC 2021 [Available from: <https://unfccc.int/process-and-meetings/transparency-and-reporting/greenhouse-gas-data/ghg-data-unfccc/ghg-data-from-unfccc> (accessed 13 Oct 2021).
  - 22 UN Decade of Action on Nutrition Secretariat Mid-term review foresight paper., 2020.
  - 23 The CFS voluntary guidelines on food systems and nutrition (VGFSyN): Committee on World Food Security, 2021.