



## Nutrient trade in Oceania

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Human nutrition is a key component of the definitions of both sustainable food systems and sustainable healthy diets, and features prominently in the Sustainable Development Goals. However, progress towards complete nutrition and food security for the entire global population is poor, and the burden of malnutrition and food insecurity is felt in countries of all income levels, including in Oceania. While countries like Australia and New Zealand (NZ) are widely perceived as sources of high-quality food exported overseas due to great surpluses above national requirement, this hides domestic issues. The international nutrition community recognises and are demanding that our food systems must be sustainable, which is not yet the case anywhere in Oceania. Food insecurity at the household level is not uncommon, nor are nutrient deficiencies. It is often presumed that, should the inequitable distribution of food be balanced, these challenges would disappear. However, food supply and trade data show that even at the national and regional levels, insufficient food and nutrient supplies to meet population requirements are the established norm. For example, it has been demonstrated that domestic vegetable production falls short of NZ dietary recommendations, with imports making a negligible difference other than via energy dense crops<sup>(1)</sup>. Likewise, after consideration of trade, NZ has undersupplies of calcium, potassium, vitamins C and E, and dietary fibre compared to population requirements<sup>(2)</sup>. A wealth of data exists quantifying food production, trade, and availability and various scales. Increasingly, researchers are matching these to human requirements, whether at the food or nutrient level, to identify gaps<sup>(3)</sup>. Insights generated from these data-driven approaches are being directed at trade policy, enabling decisions that can realise aspirational goals to reduce food insecurity through international trade. Making this data accessible to all via interactive user interfaces promotes wider engagement, understanding, and dissemination of findings. It also allows stakeholders in various countries to identify their own vulnerabilities, both as a result of current undersupplies, and due to high reliance on trading partners for food and nutrition security. Trade data can also be connected to environmental measures to identify scenarios where trade can be leveraged to the benefit of both nutrition and broader sustainability goals<sup>(4)</sup>. High level, data driven approaches are not a substitute for individual-based studies on nutrition, but are a useful complement to them. With regionally or nationally deficient food and nutrient supplies, complete nutrition for individuals cannot be attained. A holistic, system-wide understanding is necessary for any policy decisions to advance nutrition.

### References

1. Curran-Cournane F & Rush E (2021) *Earth* 2(4), 797–808
2. Sustainable Nutrition Initiative® (2023) DELTA Model®. [www.sustainablenutritioninitiative.com](http://www.sustainablenutritioninitiative.com) (accessed October 2023)
3. Geyik O, Hadjidakou M, Karapinar B *et al.* (2021) *Glob Food Sec* 28, 100490
4. Geyik O, Hadjidakou M & Bryan BA (2023) *Nature Food* 4(1), 61–73