Australian food supply scenarios:
Implications for policy and practice

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Australian Food Supply Scenarios: Implications for policy and practice

- The average Australian diet is neither healthy, nor environmentally sustainable.
- A food systems approach is essential for the development, implementation and evaluation of policies that promote food security and nutrition in an equitable manner.
- Such an approach requires coordinated policy action across multiple sectors and at local, national, regional and international levels.

Introduction

Food security is achieved "… when all people, at all times have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life".[1] Food availability, access, utilisation and stability are the four 'pillars' that underpin food security.[1]

In Australia, food insecurity most often arises due to a lack of consistent access to nutritious food.[2] For instance, findings from Australia's 2011–12 National Nutrition Survey indicate that 3.7 per cent of non-Indigenous people and 22 per cent of the Aboriginal and Torres Strait Islander population reported experiencing food insecurity in terms of not being able to access sufficient food to feed themselves on at least one occasion over the previous 12 months.[3]

In the context of predicted population increases and environmental sustainability challenges, food availability (that is, the supply of healthy food available to the population as a result of domestic food production and though food imports) may be threatened. This could have serious implications for public health nutrition.[4,5]

The aim of our research was to explore policy interventions to protect Australia's food security in the face of increasing environmental sustainability challenges.

This project built upon the 2009–11 'Victorian Food Supply Scenarios' pilot project, funded by VicHealth and conducted by core members of the research team.[6]

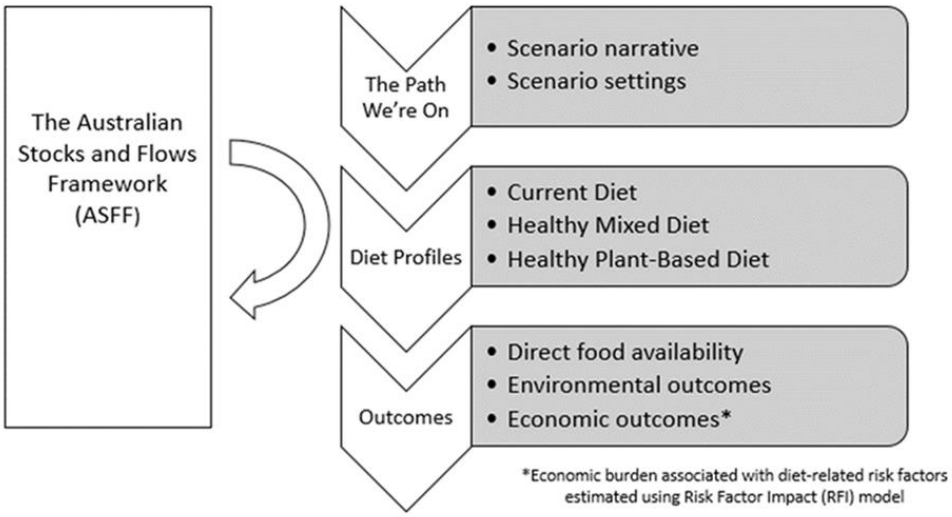
Method

A scenario modelling approach was used to explore potential environmental, economic and food availability impacts associated with Australia's current dietary patterns.

A sophisticated modelling tool known as the Australian Stocks and Flows Framework was used to model multiple interrelated changes in population size and eating behaviours, economic parameters, land use and environmental resource availability.

The current 'average Australian diet' was then compared to two healthier alternatives that were consistent with the recommendations of the Australian Dietary Guidelines – a 'healthy mixed diet' and a 'healthy plant-based diet'.

Figure 1: Research Design



Key findings

Our results indicate that the average Australian diet is neither healthy, nor environmentally sustainable.[7]

If we continue on the policy 'Path we're on':

- Increasing water deficits, land degradation and no reduction in greenhouse gas emissions will threaten Australia's food security
- The economic costs associated with continued consumption of unhealthy diets will exceed $3 billion in 2025
- To meet the nutritional needs of the population, Australia will be reliant on imports of fruit, dairy products, fish and nuts by 2050.[7]

A population-wide shift towards dietary patterns consistent with Australia's dietary guideline recommendations would promote health as well as environmental sustainability.

A food systems approach is essential in the development, implementation and evaluation of policies that promote food security and nutrition.

> "Sustainable food systems can be defined as the complex interconnected web of resources, people and processes that encompass all aspects involved in providing adequate and desirable nourishment for human health while maintaining the ecological integrity of natural resources, as well as supporting socio-cultural and economic factors".[8]

Next steps

The developmental work undertaken as part of this project has enabled other important research to occur, including Foodprint Melbourne.[9]

The next steps could be to:

- create and analyse additional food supply scenarios
- extend the range of dietary patterns that are modelled

- further develop the model calculators for analysis of food systems e.g. sustainable production practices or food processing
- create an achievable scenario that enables minimum health and environmental sustainability standards to be met
- investigate policies to achieve this 'ideal' scenario
- prioritise policy interventions using economic evaluation techniques and taking into account the socio-economic and equity implications of the findings.

Implications for policy research

A food systems approach is essential for investigating healthy, equitable and sustainable dietary patterns.[5,10] Such an approach is complex and resource intensive but necessary if quality outputs are to be achieved.

Gaining sufficient investment in food systems research requires:

- Within the health sector, balancing investment in traditional medical treatment research with investment in progressive social and ecological health promotion research.
- Across all of government, in sectors such as agriculture, finance and education, an increased investment in research to promote a healthy, equitable and sustainable food system.

A fundamental shift in political thinking is critical to secure such investment in research.

Currently, policy decisions are influenced preferentially by economic growth objectives. However, there is a need to recognise that we are living in a world of physical limits with finite environmental resources and achieving food security will not be possible if environmental outcomes are not prioritised.[5,11] Economic objectives will not be achieved without this.

Policy decisions need to be assessed for their long term health, social and environmental implications and not just economic outputs.

Implications for evidence synthesis and translation

Conventional methods and procedures for evidence synthesis and translation have evolved particularly from the evidence-based medicine movement that is well-suited to informing decisions in a clinical context but is problematic in a public health context.[12,13]

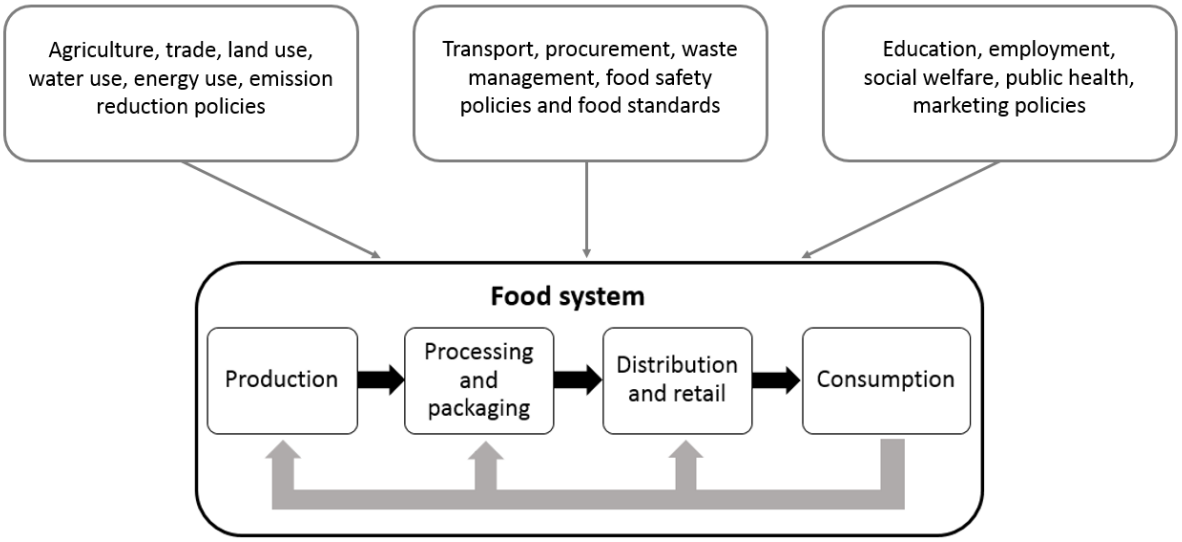
Innovative methods and procedures that are better suited for specifying and measuring the complexities and nuances of public health nutrition challenges are needed for synthesising and translating evidence to inform policies and interventions to promote healthy and sustainable food systems.[14]

Implications for policy planning and implementation

In Australia, political commitment for food and nutrition policy activities is dominated by the health sector and focused on nutrient-oriented approaches.[15] While these approaches have potential to deliver population health outcomes, they have limited impacts on the health and environmental sustainability of food systems and the availability, accessibility and affordability of food, a fundamental driver of population health into the future.

A food systems approach is essential to tackle the social, political and environmental determinants of non-communicable diseases and food insecurity and in an equitable manner.[10, 14] Such an approach requires coordinated policy action across multiple sectors and at local, national, regional and international levels.[16, 17]

Figure 2: Policies that can promote population health and environmental sustainability using a food systems approach. Adapted from *Formulating policy activities to promote healthy and sustainable diets*. [4]



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