

### Australian Academy of Science submission on the *National Food Security Strategy*

Australia's food system is at a critical juncture and faces several challenges. Although a major exporter of bulk foods, the system is not delivering food equitably for the Australian population, with one in eight households experiencing food insecurity.<sup>1</sup>

Food production, processing, and regulation are fragmented across multiple agencies, with research funding similarly dispersed and lacking a clear national strategy. Investment needs to shift research emphasis from specific commodities to the full production system and through to food consumption patterns that enable nourishing diets.

Declining aid funding from several major donors threatens food security in the Indo-Pacific region. Australia's role in providing support to our neighbours in building food sufficiency is more important than ever.

The recent [National Climate Risk Assessment](#) has shown that by 2050, the climate risk to the primary industries and food system will be very high due to rising temperatures and an increase in extreme weather events. There is declining agricultural productivity in Australia and internationally, exacerbated by climate change and pressure to reduce inputs (e.g. fertilisers, weed, pest and disease control chemicals). Research and innovation provide the knowledge and solutions to address these challenges.

The National Food Security Strategy provides an opportunity for Australia to be recognised for a food and agriculture system that is **resilient, productive, and sustainable**, and that ensures:

- **Dignified access** for all Australians to safe, nutritious, affordable, and culturally appropriate food.
- **Sustainable and innovative agriculture** that protects soil, water, and biodiversity while supporting economic prosperity and livelihoods.
- **Integrated food and nutrition security** as a foundation of national health, environmental stewardship, and regional stability.
- **Evidence-informed policy coherence** across agriculture, health, environment, and trade, informed by strong science and reliable data.

Nutrition security, equity, and environmental sustainability must be embedded in setting priorities in the National Food Security Strategy. Without this, the strategy risks focusing only on food production and trade while neglecting the health, wellbeing, and equity outcomes it is meant to deliver.

The Academy recommends:

- Strengthening the framework by explicitly including nutrition equity as a principle.
- A long-term horizon of at least 10 years for the strategy, with clear short- and medium-term targets.
- Including the actions in the body of this submission to address the strategy's challenges (pages 3-4).
- Recognising Australia's engagement and responsibilities in the Indo-Pacific region.

[What other principles should government, industry and community prioritise to support the development of the strategy and why are these important?](#)

The Academy supports the discussion paper's principles and recommends extending them by considering the below additions, and adding a clear commitment to **nutrition equity**:

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<sup>1</sup> Australian Bureau of Statistics. (2023). *Food insecurity*. ABS. <https://www.abs.gov.au/statistics/health/food-and-nutrition/food-insecurity/2023>.

- **Whole-of-system:** Food security must deliver healthy diets and sustainable production. In development of the strategy, the proposed National Food Council must coordinate responsibilities across portfolios to include not only agriculture and economics, but also the health of Australians and the environment.
- **Collaborative:** The Academy agrees collaboration is essential and that collaboration must go beyond government. Collaboration requires active First Nations leadership, and participation and representation covering the cultural diversity of Australians. Incorporating co-design with those with lived experience will ensure the strategy is meaningful and effective. Research, industry, producers, community organisations, and all tiers of government should share ownership. Ideally, the food security issues facing our neighbours in the Indo-Pacific region should also be included in the priority setting.
- **Ambitious and forward-looking:** The strategy should establish science advice mechanisms to provide the best available evidence to government and the public, counter misinformation, anticipate challenges and support long-term planning on food security.
- **Outcomes-based and practical:** Tangible outcomes should include affordability, accessibility, environmental impacts, improved diet quality (disaggregated by income, geography, and cultural group) and its impact on health, reduced food insecurity, resilient supply chains (e.g. to climate change, geopolitical impacts on international trade), sustainable farming systems, and strong rural and regional economies. Robust **monitoring and evaluation** systems (led by ABS and AIHW) will ensure outcomes are apparent, identify inequities and track change with transparent public reporting.
- **Nutrition equity:** Ensuring access to safe, nutritious, affordable, and culturally appropriate food across socioeconomic status, regional, and remote areas should be a guiding principle.

What timeframe should the strategy work towards – short (1 to 2 years), medium (5 to 10 years) or long (10-plus years) term, and why?

A multi-layered timeframe is needed, with achievable short, medium and long-term targets. Long-term planning is essential to embed structural change, such as climate resilience and equity in agricultural and nutrition policy. Systems change takes time to deliver population outcomes. Nutrition equity outcomes should be embedded as explicit milestones at each stage, not treated as secondary benefits.

The following sections addressing questions five and six provide an indication of the actions and goals that could be achieved for each timeframe.

Are there examples of current or planned initiatives by you or your organisation to improve food security in your sector?

The strategy should build on existing plans, initiatives, and investments, including:

- Australia's international obligations under the United Nations (UN) and the Food and Agriculture Organization (FAO).
- The Academy's [Nourishing Australia: A Decadal Plan for the Science of Nutrition \(2019–2030\)](#) and its [mid-term review](#) (2024). The mid-term review notes the importance of planning with Aboriginal and Torres Strait Islander knowledge holders, and respecting their knowledge of food, nutrition, and wellbeing.
- Australian Research Data Commons investment of \$3.6 million in big-data approaches to food and nutrition monitoring.

Do the proposed key priority areas and whole-of-system considerations adequately represent the actions needed for an effective food security strategy? If not, what is missing?

The Academy recommends strengthening the framework by:

- Explicitly embedding **human wellbeing and nutrition security** as a priority both in Australia and in the Indo-Pacific region.

- **Equity and sustainability** should be listed as core priority areas, not peripheral considerations, to ensure long-term resilience. Likewise, nutrition should be explicitly named as a priority action area, rather than left implied under general categories such as “people” or “health.” **Nutrition equity** ensures the most disadvantaged groups benefit from interventions.

### What actions could the strategy take to address challenges under each key priority area?

The Academy recommends the following actions to address challenges under each key priority area:

- *Resilient supply chains:*
  - Invest in local and regional food systems to reduce reliance on long manifold supply chains and strengthen resilience (e.g. investing in regional cold-chain infrastructure, processing, and storage facilities) (medium-term goal).
  - Map vulnerabilities in cold chain, transport, and labour reliance, especially for fresh produce. Fund adaptive logistics (flexible transport routes, decentralised storage hubs) so shocks do not paralyse supply.
  - Examine the impact of the Pacific Australia Labour Mobility (PALM) scheme on workforce, food systems, food production, and food security in the Pacific.
- *Productivity, innovation and economic growth:*
  - Invest in whole-system agricultural R&D (medium-term goal). Extend R&D beyond commodity production to integrated food systems research.
  - Consider the role and adoption of artificial intelligence in food security.
  - Prioritise investment in processing innovations (e.g. high-pressure processing) that improve bioavailability and shelf life without ultra-refining.
  - Encourage digital traceability systems that include nutrition and sustainability indicators.
- *Competition and cost of living:*
  - Progressing Australian Competition and Consumer Commission (ACCC) reforms to supermarkets (short-term goal). Regulate supermarket pricing and promotion to protect affordability of nutritious food and incentivise retailers to provide healthy food options in underserved areas.
  - Support small and medium sized enterprises (SMEs), co-operatives, and social supermarkets to diversify food retail.

### What actions could the strategy take to address challenges under these whole-of-system considerations?

The strategy should establish stronger coordination mechanisms across the food system addressing fragmentation. Collaboration across sectors will build partnerships between health, agriculture, education, and social services to ensure coherent action, and facilitate cross-implementation of innovative solutions between diverse segments of the food system. Policy coherence is needed to align food security actions with poverty reduction, social protection, and climate adaptation policies.

The Academy recommends the following actions to address challenges under the whole-of-system considerations:

- *Climate change and sustainability:*
  - Support farmer transition to regenerative practices and protect peri-urban farmland. Incentivise sustainable and regenerative farming practices that safeguard soil, water, and biodiversity.
  - Reduce food waste at production and retail levels through prevention strategies, not only redistribution.
  - Align food security actions with environmental goals, ensuring climate resilience does not come at the cost of affordability or equity.
  - Link climate adaptation funding and nutrition outcomes (e.g. breeding crops for both drought resilience and micronutrient retention).
- *People:*

- Provide immediate relief measures such as expanding food relief services, subsidies, and school food programs are needed (short-term goal).
- Expand universal or targeted school meal programs (medium-term goal).
- Introduce subsidies or vouchers for fresh produce and other core foods, with targeted support for low-income households.
- Provide income support to ensure all households can afford healthy diets.
- Recognising local and regional food systems (e.g. food hubs, co-ops, social supermarkets) as key to dignified access and resilience.
- Providing education to uplift food and nutrition literacy from childhood through to older age. Integrate food systems education into school curricula (from farm to nutrient absorption).
- Strengthen relationships between research, government, and Aboriginal and Torres Strait Islander knowledge holders, who have sustainably used native foods for centuries. This would advance Priority 3 of [Australia's National Science and Research Priorities](#) and support Priority 5 by developing new opportunities to alleviate food insecurity.
- Support culturally appropriate foods through procurement and community-led initiatives. For example, supporting production of Pacific crops (e.g. taro, yams, island cabbage) through access to land and fisheries.
- Invest in workforce training for community organisations and health professionals to deliver nutrition support in equitable and culturally safe ways.
- Establish cross-sector “translation teams” (e.g. comprising of farmers, nutritionists, processors and policy experts) to co-design interventions.
- Explicit recognition of how food strategies sustain employment, especially in rural and regional areas.
- Adequate public and stakeholder communication will be essential for buy in and implementation.
- *Health and nutrition:*
  - Demonstrate measurable gains in diet quality and nutrition equity (long-term target).
  - Restrict unhealthy food marketing to children.
- *Trade and market access:*
  - Trade policies that support nutritional health are critical so that other government agencies are involved beyond agriculture. Trade policy should not only support economic growth but also elevate standards of nutrition security, animal welfare, and food safety for Australia and its partners.
  - Ensure export strategies consider the “nutrition footprint” of what is exported, not just volume and value.
  - Strengthen bilateral and regional agreements that stabilise food flows to partners in the Indo-Pacific while ensuring Australia’s domestic resilience.
- *National and regional security:*
  - Reduce dependence on imported processed foods (long-term goal). Currently, the import of foods associated with a negative impact on health predominates. Production of foods that support health should be prioritised with import as needed.
  - Support systems-level research to address productivity decline, climate change adaptation, and food sufficiency in the Indo-Pacific.
  - Strengthen the science-policy nexus in the Indo-Pacific region. Robust policy for food systems relies on strong science advice mechanisms.
  - Strengthen Australia’s contribution to Indo-Pacific food sufficiency and food security partnerships (long-term goal). Australia has a responsibility to support these nations in developing their own production capabilities, in trade, and preserving their food sovereignty. This is particularly important for smaller nations, those more vulnerable to the impacts of climate change, and for recovery after crises.
  - Integrate food and nutrition security as a national security consideration and in risk assessments.

Through its National Committees for Science, the Australian Academy of Science (the Academy) has sought perspectives from members of the National Committee for Nutrition (NCN) and the National Committee for Agriculture & Food (NCAF) in preparing this submission. Together, the Committees bring coordinated expertise across the food and nutrition science spectrum. The Academy has a proven ability to convene expertise on this topic through the 2024 symposium [\*Food futures: Nourishing a nation\*](#).

To discuss or clarify any aspect of this submission, please contact Lauren Sullivan, Manager Policy at [science.policy@science.org.au](mailto:science.policy@science.org.au).