

The Crawford Fund Annual Conference

**Progress and Prospects
for Climate-Resilient
Agrifood Systems:
Actionable
Recommendations
for Policymakers and
Practitioners**

11-12 August 2025

Parliament House, Canberra,
Australia, and online



Achieving Universal Food Security in an Adversely Changing Climate

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Keynote Address at Crawford Fund Annual Conference

12 August 2025

IMAGINE A WORLD WITHOUT HUNGER



Photo by Tomoyoshi Oshikiri (Nikkei Asia)

WHY UNIVERSAL FOOD SECURITY?

- Food security is a human right (1948, 1966)
- Access to “adequate, safe, *and* nutritious food” for “all people at all times” (1996)
- SDG 2: End Hunger “No one will be left behind” (2015)

Universal Food Security: A world where **every** person enjoys a **healthy** diet derived from **sustainable** and **resilient** food systems

How are we doing?

Healthy Diets Scorecard

- 673 million people hungry (8.2%)*
- 150 million children under 5 years are stunted (23.2%)*
- 43 million children under 5 years are wasted (6.6%)*
- >2 billion people suffer micronutrient deficiencies
- 2.5-3 billion people are overweight; 1/3 of them are obese
- 2.6 billion people (32%) cannot afford a healthy diet*

*updated from SOFI, 2025

About 4 billion people are consuming a less-than-healthy diet

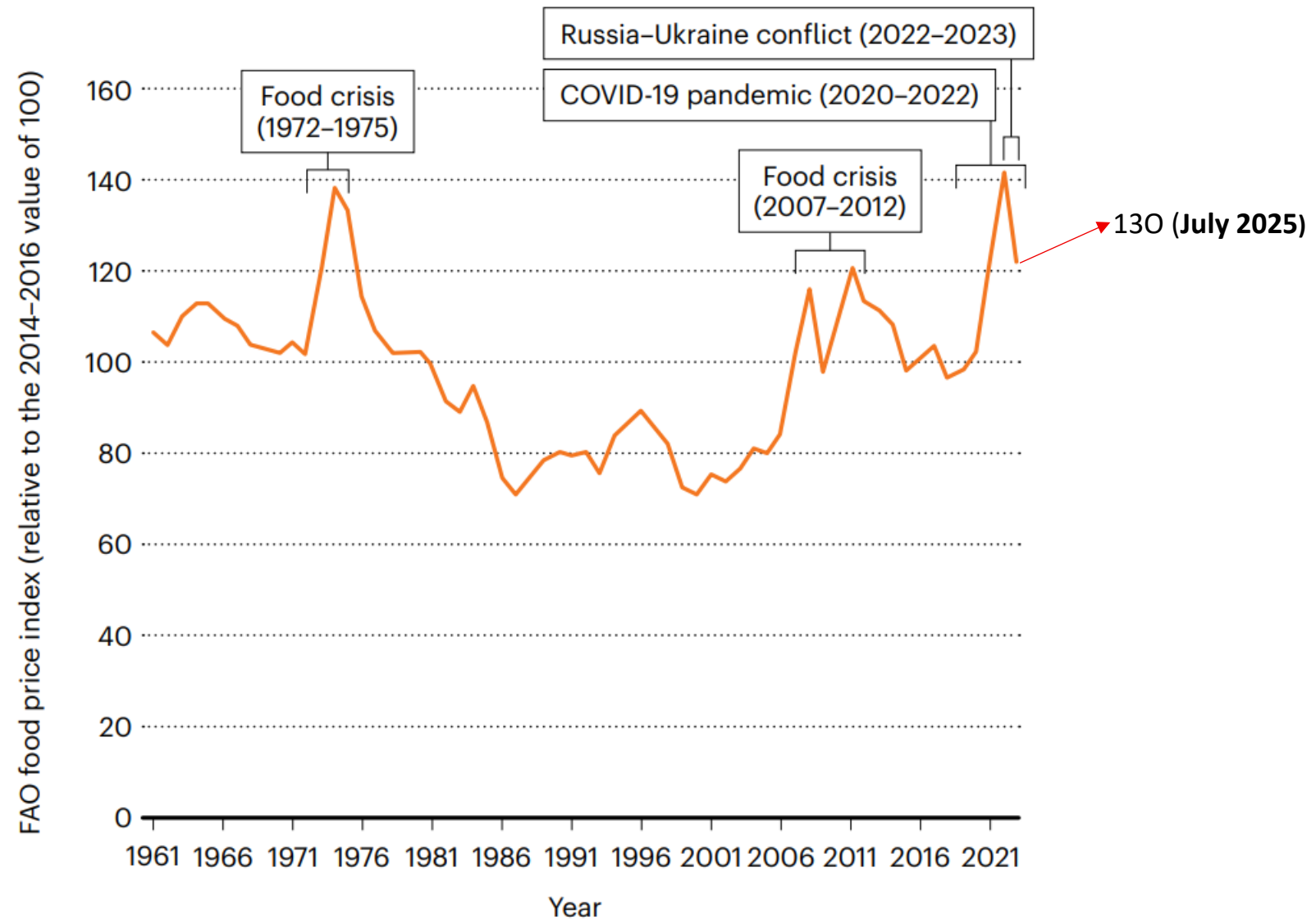


Fig. 1 | The FAO Food Price Index using real prices, 1961 to mid-2023.

Credit: [World Food Situation FAO Food Price Index](#).

ADB Support for Food Security to Reach \$40 Billion by 2030



ADB's commitment to enhancing food security in Asia and the Pacific aims to support sustainable agricultural practices and improve access to nutritious food for millions of people across the region.

News Release | 04 May 2025

<https://www.adb.org/news/adb-support-food-security-reach-40-billion-2030>

Indonesia kicks off ambitious \$45b free meal plan

By Natasya Salim, Najma Sambul and Indonesia correspondent Bill Birtles


World Politics

Tue 7 Jan



School students are among the first recipients of the free meals. (ABC News: Bill Birtles)

Source: <https://www.abc.net.au/news/2025-01-08/indonesia-starts-free-meal-program/104794432>



...to create healthy, regenerative, and secure systems that protect Pacific identities, ensure sustainable livelihoods, and build resilience for future generations.

A bold new compass:

What the 2050 Strategy for Pacific Agriculture and Forestry means for the region

By Natasha Begum

<https://www.spc.int/updates/blog/dynamic-story/2025/06/a-bold-new-compass-what-the-2050-strategy-for-pacific>

Alarm Bells are Ringing

- **Chinese President Xi Jinping** described agriculture as a “national security issue of extreme importance” (Dec 2022).
- **ASEAN** leaders issued a declaration on food security (Sept 2023).
- **G20: Brazil** launches Global Alliance Against Hunger and Poverty (November 2024): 102 countries plus other organizations
- **UNFCCC COP28** recognized agriculture and food (Nov/Dec 2023); **COP30** (Nov 2025) will advance this nexus of food and climate.
- **UNFSS+4**: UN SG calls for “accelerated action to transform the world’s food systems”

“FOOD SECURITY” AT A COST

Humans are an Invasive Species

- Deforestation and forest degradation
- Land degradation (erosion and nutrient depletion)
- Unsustainable water extraction
- Soil, water, and air pollution
- Biodiversity loss (terrestrial and aquatic)
- Greenhouse gas emissions: 1/3 from food systems

Food Systems are Casualties of and Contributors to Climate Change

>>> Adaptation

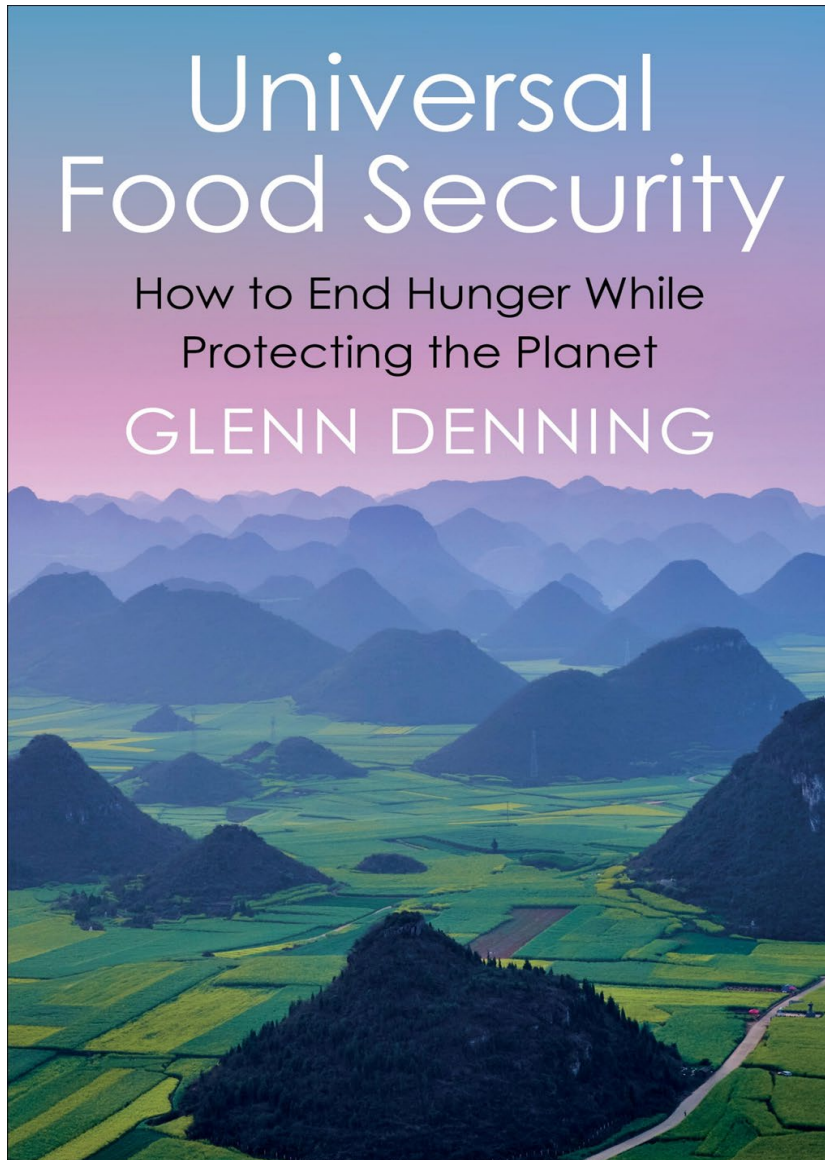
>>> Mitigation



Context in Summary

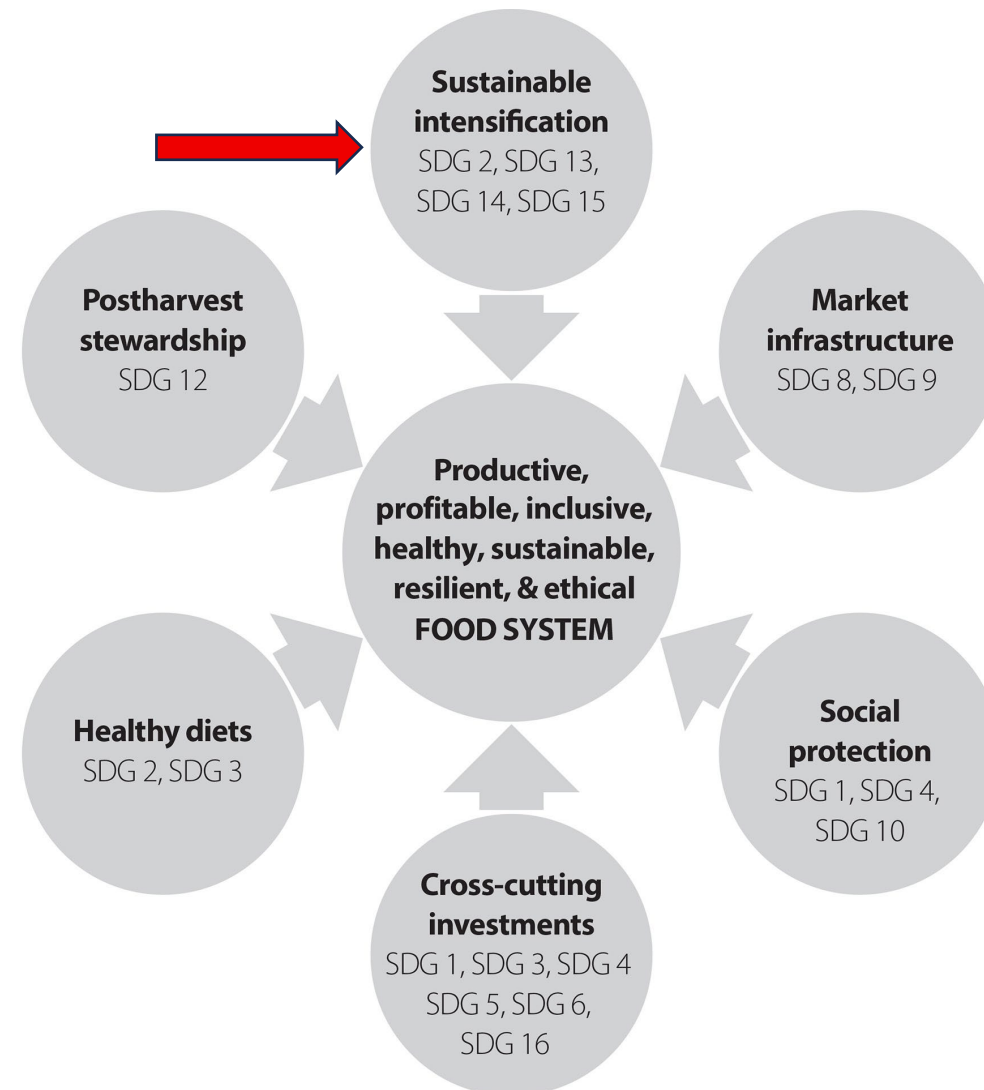
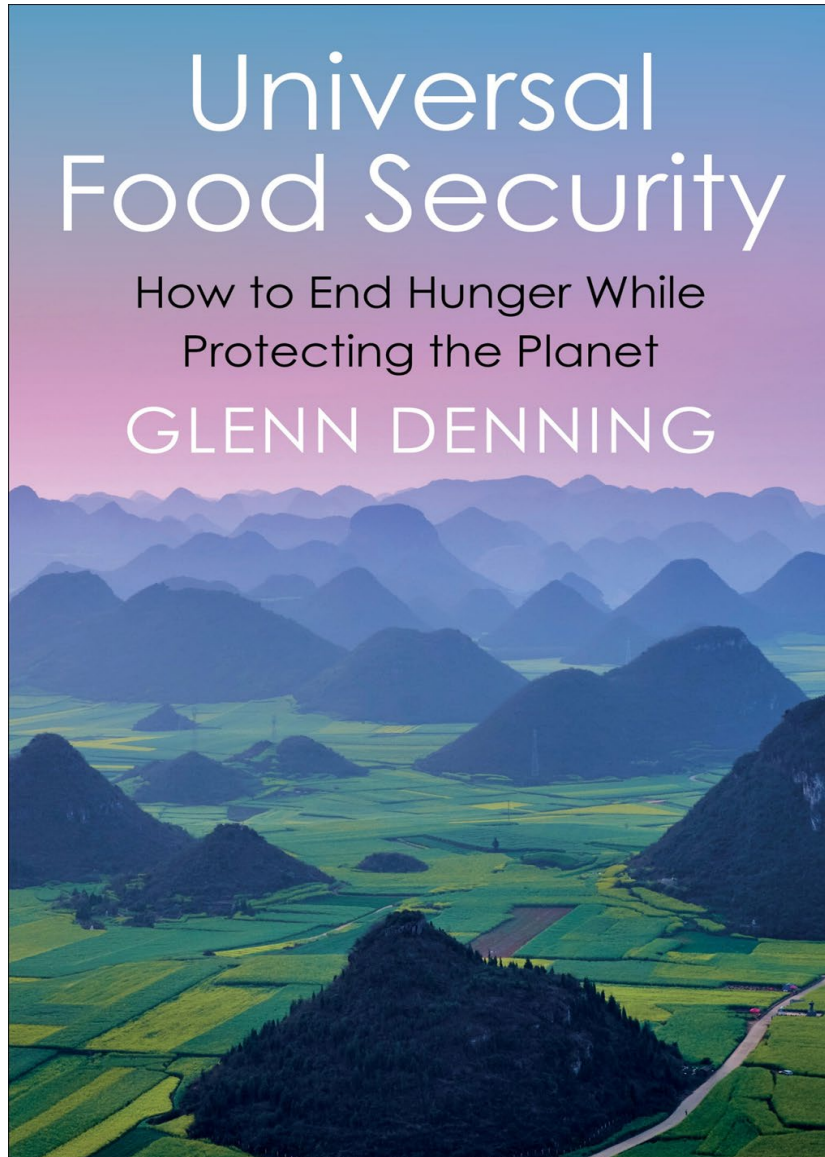
- Food systems failing to deliver Universal Food Security.
- Food systems must adapt to an adversely changing climate while reducing their environmental footprint.
- Our regional neighbours are seeking *solutions*: technologies, policies and institutions for food systems transformation

How do we achieve Universal Food Security?



- Search for clarity on best practice
- Reliance on peer-reviewed literature and expert opinion
- “Science, context, needs, and rights—not ideology—must shape our decisions on policies and practices”

Food Systems Transformation Strategy: The Big 5 Investments



Key investment areas and related Sustainable Development Goals for transforming the global food system. Source: Denning (2023), p. 179.

SUSTAINABLE INTENSIFICATION

- >> Increase output on existing farms
- >> Maintain output but reduce environmental footprint
- >> Restore abandoned and unproductive lands
- >> Abandon annual cropping in the most degraded lands
- >> Protect remaining natural ecosystems

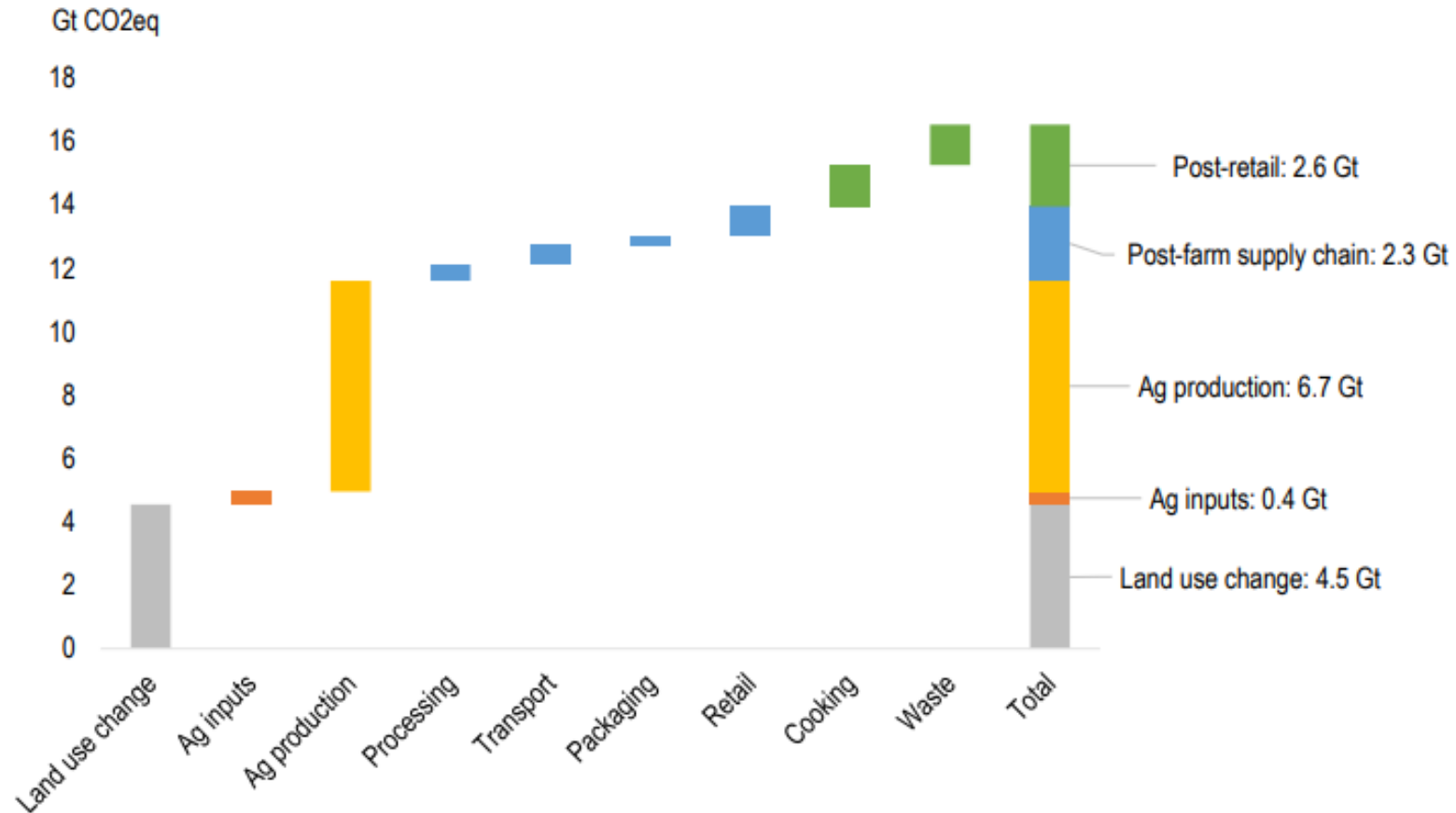
Net result: more food with a reduced environmental footprint

Source: New Scientist

<https://www.newscientist.com/article/2341812-intensive-farming-of-cleared-land-could-save-rest-of-amazon-rainforest/>

Figure 2.1. Global food systems GHG emissions by supply chain stage, 2019

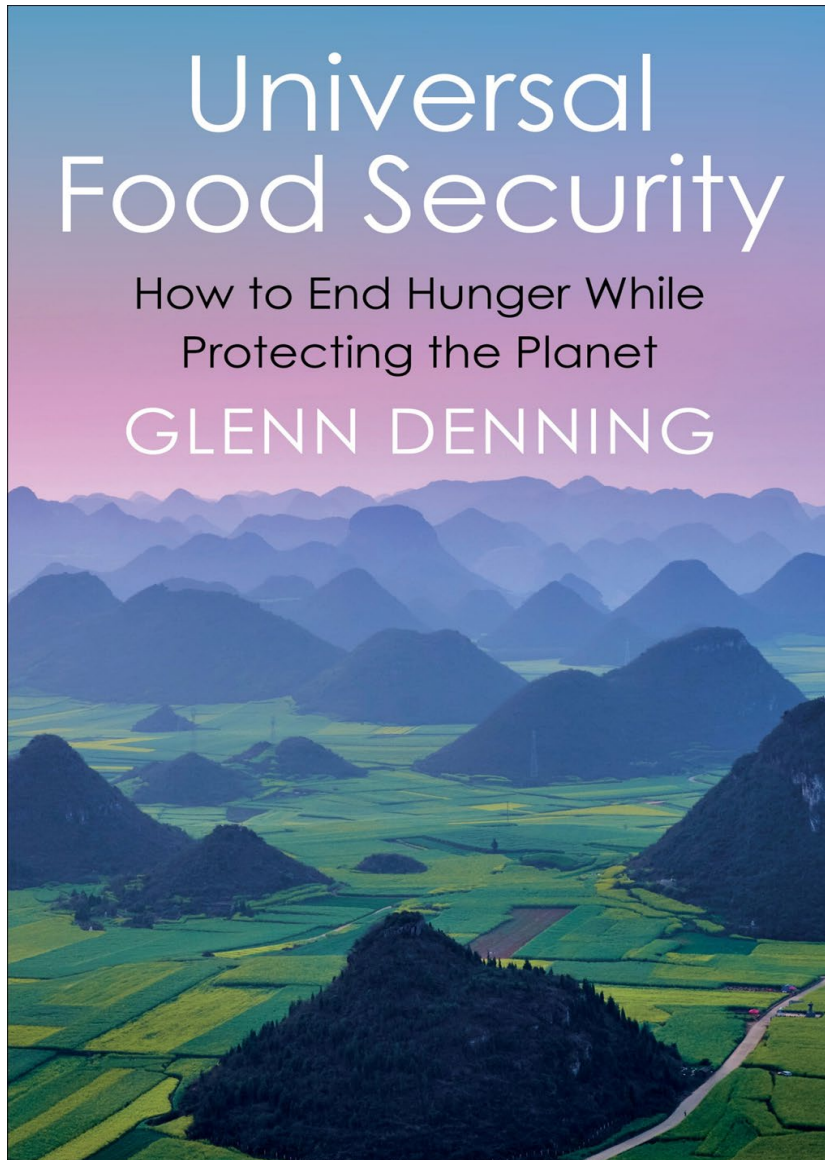
Gt CO₂eq



Note: 'Land' includes emissions from net forest conversion, drained organic soils, and fires. "Ag inputs" here refers to emissions related to the production of agricultural inputs; emissions related to their use are included in "Ag production".

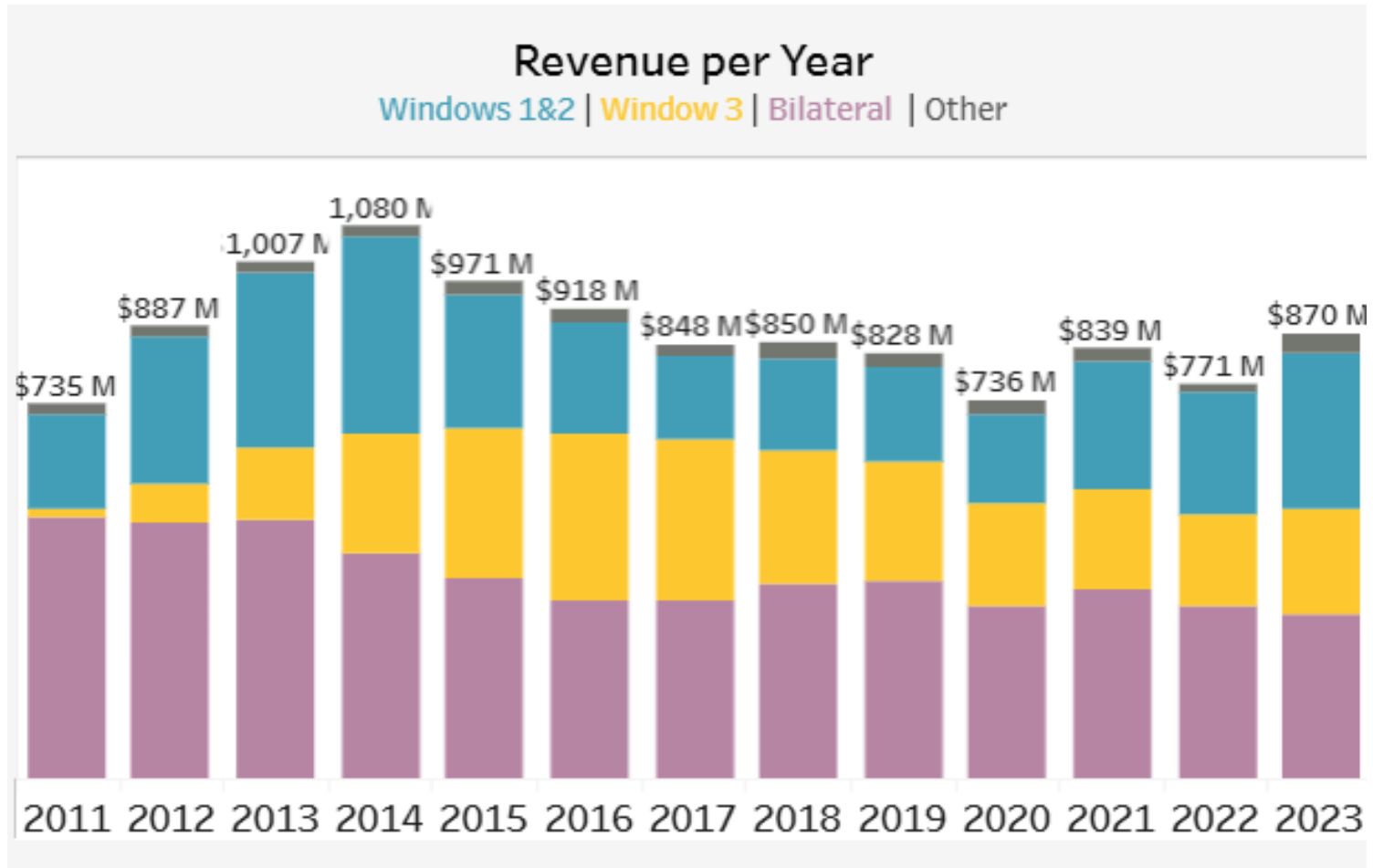
Source: Based on Tubiello et al. (2021).

Key Global Conclusions



- Universal Food Security is achievable
- An integrated cross-sectoral, multi-institutional, multi-level approach is needed
- Current institutions (national and international) not fit for purpose
- We are underinvesting in R & D

CGIAR funding, 2011-2023 (US\$)



Source: CGIAR website <https://www.cgiar.org/food-security-impact/finance-reports/dashboard/overview/>

Is Australia Grasping the Opportunity to Lead?

- Historical track record of improving agricultural productivity in a hostile environments at home
- Decades of bilateral ODA engagement in agriculture and food security in the Indo-Pacific region
- World class universities and other research institutions undertaking education, research, and outreach on agriculture and food systems
- ACIAR unique model of partnership in R & D

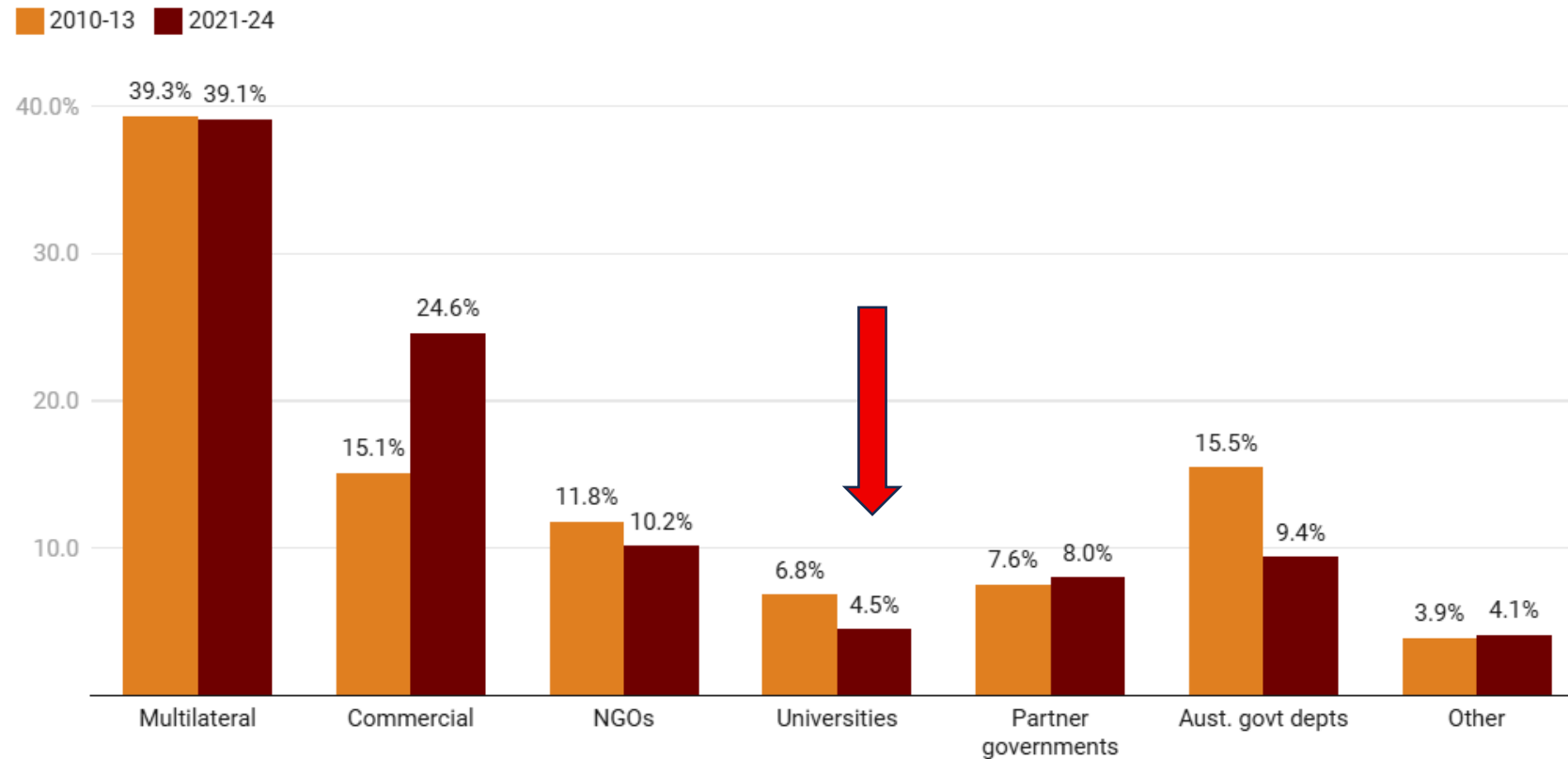
DFAT ODA Sector Flows

Sector	2025-26 Budget Estimate \$m
Governance	1,210.2
Economic Infrastructure and Services	821.1
Humanitarian	709.0
Multisector and General Development Support	704.5
Health	646.6
Education	572.4
Agriculture, Trade and other Production Sectors	433.5
Grand Total	5,097.3



Source: DFAT <https://www.dfat.gov.au/about-us/corporate/portfolio-budget-statements/australias-official-development-assistance-budget-summary-2025-26>

Share of the aid program allocated to different delivery partners, 2010 and 2024



Three-year averages are used to reduce volatility (2010-11 to 2012-13 and 2021-22 to 2023-24).

Source: DFAT statistical summaries. • [Get the data](#) • [Download image](#) • Created with [Datawrapper](#)

Source: Howes (2025) 2025 Australian aid update. <https://devpolicy.org/2025-australian-aid-update>

Australian ODA delivered by other government departments



Departments	ODA delivered directly from appropriations \$m	ODA delivered in partnership with DFAT \$m	Total OD \$m
Agriculture, Fisheries and Forestry	17.3	3.5	20.7
Australian Centre for International Agricultural Research	118.9	9.2	128.1
Australian Federal Police	46.2	7.5	53.7
Employment and Workplace Relations	8.9	-	8.9
Commonwealth Scientific and Industrial Research Organisation	-	9.8	9.8
Export Finance Australia*	131.5	-	131.5
Health	16.5	3.7	20.2
Treasury	9.5	3.4	12.8
States and Territories	0.2	5.9	6.1
Other	13.0	50.0	63.0
Total ODA delivered by other government departments	361.9	92.8	454.8

ACTIONABLE RECOMMENDATIONS:

What could Australia do better?

- Advance Australia as the “go-to” regional leader on food security
- Increase the profile and priority of agriculture and food security in DFAT’s ODA portfolio
- Support the G20 Global Alliance of Ending Hunger and Poverty
- Rejoin the International Fund for Agricultural Development (IFAD)
- Expand and enhance regional partnerships led by ACIAR in partnership with national governments and Multilateral Development Banks (MDBs)
- Strengthen university-to-university cooperation: revisit the “AAUCS” model
- Step up support to the Crawford Fund as an advocate for innovation, investment and impact in agriculture and food security

Prof M.S. Swaminathan
(1925-2023)

“If synergy can be created among scientific know-how, political do-how, and farmers participation, it should be possible to achieve the goal of overcoming chronic and hidden hunger...”

