Submission No 59

FOOD PRODUCTION AND SUPPLY IN NSW

Organisation: Australian Food Sovereignty Alliance

Date Received: 28 February 2022

Australian Food Sovereignty Alliance

Response to the Inquiry into Food Production and Supply

NSW Legislative Assembly Committee on Environment and Planning

28 February 2022

Georgie Mulcahy, Tammi Jonas, Penny Kothe, Amy Pagett,
La Vergne Lehmann, Madeleine Toohey

We thank the committee for initiating the inquiry into food production and supply in NSW. AFSA welcomes the opportunity to provide a written submission, as well as all further opportunities to participate in this inquiry. We hope the Legislative Assembly Committee will facilitate robust and meaningful stakeholder engagement across all aspects of the agricultural and food sector, prioritising the voices of First Peoples, rights holders and those with lived experience of food production and supply.

About the Australian Food Sovereignty Alliance

The Australian Food Sovereignty Alliance (AFSA) is a farmer-led civil society organisation of people working towards socially-just and ecologically-sound food and agriculture systems. The democratic participation of First Peoples, small-scale food producers and local communities in decision-making processes is integral to these efforts.

AFSA provides a balanced voice to represent small-scale food producers and local communities' interests at all levels of government. We connect small-scale food producers for farmer-to-farmer knowledge sharing, assist local, state and the federal government in instituting scale-appropriate and consistent regulations and standards, and advocate for fair access for small-scale food producers to local value chain infrastructure and markets.

We are part of a robust global network of civil society organisations involved in food sovereignty and food security policy development and advocacy. We are members of the International Planning Committee for Food Sovereignty (IPC), La Via Campesina (the global movement of peasant farmers), and Urgenci (the International Network for Community-Supported Agriculture). We also support the Australasian representative on the Civil Society and Indigenous Peoples' Mechanism (CSM), which relates to the UN Committee on World Food Security (CFS).

Our vision is to enable regenerative and agroecological farms to thrive. This has taken on an added salience in the face of the increasing impacts of the climate crisis and the ongoing COVID-19 pandemic. Australians care more than ever about the way their food is produced and how and where they can access it, with a growing awareness of its social, environmental, and economic impacts. Nutritious food produced locally in socially-just, ethical and ecologically-sound ways is increasingly in demand. Governments must facilitate and encourage the emergence and viability of agroecology and regenerative agriculture embedded in localised food systems with short and direct supply chains, thereby protecting the environment and human and animal health. Inextricable to this vision is the need to honestly and truthfully account for the land's needs. As such, AFSA works to increase understanding of and appreciation for Aboriginal and Torres Strait Islander Peoples' connection to and care for Country and the ongoing impacts of colonisation and development on Country. We aim to put First Peoples' knowledge first as best practice for healing Country and sustaining life, and as an organisation are committed to decolonising the food and agriculture sector.

We work extensively with primary food producers and eaters across every state and territory in Australia. The National Committee has consisted of academics from the University of Melbourne, RMIT, Deakin University, University of Tasmania, University of Sydney, QUT and UWA. We have also had representation on the national committee by farmers from every state, and local advocates and campaigners such as Open Food Network, Food Connect, Friends of the Earth, Regrarians, Fair Food Brisbane, and the Permaculture Network.

Key recommendations/Executive Summary

Since we first published the People's Food Plan in 2013, AFSA has continued to gather democratically to listen to the views of farmers and allies across the country and around the world to continue to deepen and strengthen our positions on what constitutes the most socially just and ecologically sound food and agriculture systems.

AFSA suggest the following principles should form the framework for the NSW approach to food production and supply and this is explored further throughout our submission:

- **Custodianship** - Recognise and value First Peoples and agroecological farmers as land custodians with a long term view
- **Health and well-being are primary** - Optimise physical and psychological health for all Australians
- **Equity and social justice** - Food is a basic human right; everyone is entitled to nutritious and culturally-appropriate food produced and distributed in ethical and ecologically-sound ways; farmers and First Peoples have a right to decent and dignified livelihoods (UNDROP & UNDRIP)
- **Connectedness, transparency and openness** - Know our food, where it comes from, who produces it, and how; all aspects of the food system, from seed and soil to shops, markets and plates, are interconnected, and it should be seen as a whole, with citizens being able to 'see' this whole and make fully informed decisions - there should be a resurgence of value chain infrastructure in regional communities
- **Cooperation** - Better communication and collaboration amongst producers, businesses, eaters, planners and policy-makers rather than the ethic of competition
- **Diversity** - Of agro-ecosystems and food economies; of farming sizes and systems; of fauna and flora; of diets and cultures
- **Quality not quantity** - Let food – good, safe, fresh, fair food - be our medicine.
- **Local, local, local** - Local food systems, not exports, build communities and tread more lightly on the environment
- **Democracy and participation** - Empower people and communities to shape food systems; ownership and responsibility across the whole food system is more democratic
- **Innovation** - New models, ideas, designs, and experimentation must be welcomed, however, not all innovation is technological, there is much in the way of farming and human innovation that does not involve technology per se
- **Urban and peri-urban agriculture** - Support the farming and utilisation of urban land for food production; prioritise green belts at the edges of major cities for sustainable food production over other competing or conflicting uses
- **Resilience** - Our food and farming systems must be flexible and adaptable; and able to cope with many different scenarios, including external shocks such extreme weather events, climate change, and global pandemics

- **Genuine sustainability** - Agriculture that is in co-production with nature in agroecological systems, understanding and respecting natural limits; enhancing soil fertility, conserving water, building circular bioeconomies that minimise waste and synthetic inputs
- **Ecological economics** - An economy that values and supports the diversity of life; and which internalises the true social and environmental costs of our food systems

RECOMMENDATIONS

Food Systems Governance

- The creation of a **state-wide, integrated Food System and Food Security Plan that addresses sustainability, health, equity, and economic development in an integrated way** in close collaboration with First Peoples, farmers and farm and food workers, fisherfolk, and communities.
- A **'food in all policies'** approach where food systems and food sovereignty are integrated into all relevant areas of government policy, with a coordinated approach developed on existing NSW government policies..
- Processes of legislative and policy development concerned with the food system should be protected from inappropriate influence by large, corporate actors in the food and agriculture sectors.

Consideration of Indigenou Food & Land Management Practices

- Apply a rights-based framework to Indigenous food and land management, and across the food system more broadly, by fulfilling the obligations outlined in the Nagoya protocol and the UN Declaration on the Rights of Indigenous Peoples (uphold the rights assured by the UNDRIP)
- Support the First Nations Bushfood and Botanical Alliance statement
- Learn from other jurisdictions e.g. Victorian Traditional Owner Native Foods and Botanical Strategy[1] to develop an aligned strategy in NSW
- Self-determination for First Peoples to provide unfettered access and management of Country - including both public and private lands
- Invest in increased understanding of First Peoples' knowledges and land management

Improving Food Security & Equitable Access to Food

- Fulfil the obligations of the UN Covenant on Economic, Social and Cultural Rights (1975) to ensure all people have the Right to Food, by implementing recommendations of the World Health Organisation and the UN Special Rapporteur on the Right to Food
- Adhere to human rights based declarations, including the UN Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP) & the UN Declaration on the

[1] https://www.fvtoc.com.au/native-foods-and-botanicals

Rights of Indigenous Peoples (UNDRIP) to address food security and equitable access to food

- Institute broad-based, accessible and direct financial support for individuals and households continuing to be affected by the COVID-19 pandemic in the short- and mid-term, as well as working towards improving social protection for individuals and households experiencing disadvantage resulting in food insecurity in the longer term
- Enable food production and supply aligned with the principles of food sovereignty, for example:
    - Provide financial support and public lands for community gardens, especially in areas designated as 'food deserts'
    - Support social enterprises that provide nutritious and culturally appropriate food to people experiencing food insecurity by subsidising procurement from small-scale food producers
    - Enact policies for public procurement of nutritious, culturally appropriate, ethical and ecologically-sound food from small-scale food producers
    - Ensure people and communities are engaged to participate in, make decisions about, and control their food systems
- Provide food literacy programs for both adults and children
- Develop measures to support regional food sources in the social sector and in schools and hospitals. For example, communal food gardens and orchards should be an integral part of all new residential developments.
- Invest in developing local government place-based solutions that improve access to healthy affordable food for food insecure individuals. Individuals who have experienced food insecurity participation are integral to this process, in order to develop sustainable and socially inclusive programs that support and empower individuals to access healthy foods[2]
- The Inquiry should explicitly consider both the quantity and nutritional quality of food that is available, accessed, and consumed by NSW residents
- Provide funding and resources to ensure Aboriginal Community Controlled Organisations (ACCOs) can be effectively engaged in both long-term planning and short-term crisis responses to food and water security

Managing the Impact of Climate Change

- Promote and support Indigenous fire management to restore biodiversity and health of Country
- Measure quality of agricultural systems on landscape function, provision of ecosystem services including carbon sequestration and landscape rehydration, and protection and promotion of biodiversity at the genetic, species, and ecosystem levels
- Support innovation through research and development, and farmer-to-farmer knowledge sharing to develop and share new models, ideas and designs
- Promote and finance research into agroecological food production and co-design and co-produce educational resources in partnership with small-scale farmers

[2] (Crawford et al. 2015)

- Support a risk- and scale-appropriate regulatory framework to enable small-scale and agroecological production
- Ensure industrialised food and fibre production is appropriately regulated to reduce the environmental impacts of monoculture production, land clearing and the use of veterinary and agri-chemicals.

Preserving Productive Land and Water Resources

- Promote and ensure government learns from the efforts of leaders in landscape rehydration (e.g. Peter Andrews and the Mulloon Institute). *AFSA supports the NSW Government proposal to allow farmers to restore streams on their property through landscape rehydration techniques, without the need for council approval*
- Develop planning legislation, capacity building (led by farmers) and provide financial resources for landholders to work to restore natural flows
- Reform the Murray Darling Water trading scheme so farmers can access and are paying a fair price for water, while eliminating water trading
- Support grassroots initiatives such as the Mildura Community Water Bank (MCWB)[3] to ensure equitable access for small-scale agriculture, especially that of vulnerable populations such as refugee and migrant communities
- Develop mechanism to financially account for loss of soil, carbon, and water through industrialised food and agricultural systems by building this cost into food prices through taxation
- Support the farming and utilisation of urban land for food production; prioritise green belts at the edges of major cities for sustainable food production over other competing or conflicting uses
- Map all agricultural land, and protect it from mining and housing development
- Identify and define 'Food Lands' and legislate that they must be used such as, as is the case in France
- Integrate food system thinking into planning frameworks, policies and implementation (look to examples in Canada[4], Brazil[5], and Ecuador[6])
- Strengthen efforts to identify 'Food Sheds' by consulting with shires and taking into consideration research by UTS, SPUN, and Food Futures Sydney in relation to peri-urban planning.
- Enable zoning for smaller, localised food production and associated processing and distribution infrastructure with targeted reforms of SEPPs
- Implement Food-sensitive planning and urban design (FSPUD)

[3] https://www.mcwb.org.au/
[4] https://foodsecurecanada.org/people-food-policy
[5] https://www.inter-reseaux.org/wp-content/uploads/Note_FaimZe_ro_Sept2012_EN_vp.pdf
[6] https://www.tni.org/files/download/50_giunta_2013_0.pdf

Limiting the Impact Food Production has on the Environment, including Overfishing

- Improve the monitoring of recognised threats to biodiversity for food and agriculture.
- Develop financial mechanisms to account for loss of soil, carbon and water from industrialised food and agriculture systems and build this cost into production through taxation
- 'Reduce pollution from all sources to levels that are not harmful to biodiversity and ecosystem functions and human health, including by reducing nutrients lost ot the environment by at least half, and pesticides by at least two thirds and eliminating the discharge of plastic waste'[7]
- Implement policies that support diversified, sustainable, equitable markets that enhance connections between producers and eaters
- Provide public facilities to host farmers' markets, food and seed fairs and festivals for agroecological and other diversified sustainable local producers
- Facilitate the registration of agroecological and other sustainable food producers with trade and food-safety authorities that accommodates their size and production capacity
- Support viable farmer associations that share knowledge and create strong networks to leverage the inputs needed (e.g. waste stream feed, cover crop seed) and processing infrastructure needed (e.g. abattoirs, boning rooms, grain mills, dairy processing)
- AFSA supports the recent introduction of a Harvest Strategy policy and guidelines by DPI in NSW which now provides a comprehensive framework to prevent overfishing. It aims to help support conservation and ecologically sustainable development of fisheries resources and further the objectives of the Fisheries Management Act 1994[8].
- Recognise the rights of First Peoples in harvesting fish and other traditional foods, and immediately stop penalising them for these activities (such as on the south coast of NSW).

Addressing Complex Challenges to Food Production, including Declining Pollinator Species and Productive Fertilisers

- Introduce a NSW Healthy Soils Act (such as the New Mexico Healthy Soils Act).
- Provide further resources for chemical residue monitoring in fresh and processed foods produced within and imported into Australia
- Develop a national food contaminants register (for genetically modified foods and chemical/ pharmaceutical residues)
- Labelling requirements to enable eaters to identify use of synthetic inputs in food production
- Increase regulation to limit GMOs
- Implement One Health approaches to livestock production to limit the risks of zoonotic disease and anti-microbial resistance

[7] CBD Global Biodiversity Framework, Draft 1, Target 7
[8] https://www.dpi.nsw.gov.au/fishing/harvest-strategies/policy-and-guidelines

Consideration of Workforce Challenges and Skill Development

- Review access to agricultural land, with viable pathways for individuals and businesses onto arable land, to establish local food systems that prosper. This is linked with our above recommendation about 'Food Lands' with reference to the French model of protecting agricultural land for those who have studied agriculture and purchase it to farm.
- "The UN Declaration on Rights Peasants and Other People Working in Rural Areas (UNDROP), in Article 15.4, states, "peasants and other people working in rural areas have the right to determine their own food and agriculture systems, recognised by many States and regions as the right to food sovereignty. This includes the right to participate in decision-making processes on food and agriculture policy and the right to healthy and adequate food produced through ecologically sound and sustainable methods that respect their cultures."
- Food and agricultural workforce conditions need to uphold human rights declarations including UNDROP
- Ensure the implementation, monitoring and compliance of recent Fair Work changes guaranteeing a minimum wage for all food and agricultural works[9]
- Urgent need for local processing facilities

Reducing Food Waste and Destruction

- Support innovative models for distribution and supply of food to shorten and decentralise supply chains, and reconnect producers and consumers (E.g. community-supported agriculture, food hubs, farmers markets, on-farm sales and farmgate stalls)
- Remove aesthetic food standards from contracts between producers and retailers
- Enact legislation to prohibit the disposal of food and organic matter in landfill by the end of 2023
- Financially support the development of community-led and local circular economies e.g. community composting, FOGO collections in all local-government areas
- Invest in consumer education e.g. food storage, best before vs use by dates, seasonality to reduce food waste
- Implement the NSW Plastics Policy to reduce single use and unnecessary packaging
- Expand the Love Food Communities program beyond the current 4 location focus to the entire NSW community

Developing Technologies to Bring Food Production into Cities

- Strengthen efforts to identify 'Food Sheds' by consulting with shires and taking into consideration research by UTS, SPUN, and Food Futures Sydney in relation to peri-urban planning.

[9]https://www.theguardian.com/australia-news/2021/nov/04/australian-farm-workers-entitled-to-minimum-wage-in-major-industry-shake-up?fbclid=IwAR14R5-4BXBS38PU2AEKDGwxyPJFRugdFsG4PgUvpn22I2ViSHp03aXT6eU

- Enable zoning for smaller, localised food production and associated processing and distribution infrastructure in peri-urban areas with targeted reforms of SEPPs
- Implement Food-sensitive planning and urban design (FSPUD)
- Invest in supply chain infrastructure in regional communities
- Support the farming and utilisation of urban, open and underutilised spaces by introducing appropriate SEPP's for Councils to adopt urban agriculture policies and support new and existing activities

Development and Growth of the Food Industry (raw or processed) as an Export

- Remove export growth from government objectives, these objectives should relate to the growth of agroecological farming systems and improvements in our soil, water, air and domestic food security
- Develop grants for on-farm and cooperatively owned processing infrastructure such as abattoirs, dairy processing, grain mills, and more (e.g. Artisanal Agriculture grants in Victoria)
- In the development of grant opportunities in food and agriculture, remove export requirements for funding eligibility
- Conduct an independent review of all FTAs, and of all their impacts – social, environmental and economic - is long overdue, and the Australian people should have the opportunity to debate its findings and recommendations
- Develop policy options in conjunction with the Australian Fair Trade and Investment Network (AFTINET) - a national network of community organisations and many individuals concerned about trade and investment policy
- Support fair, transparent and cooperative trade

Implications for Quality Control and Labelling of Processed / Manufactured Food

- Independently funded research into dietary guidelines and the exclusion of industry funded studies from dietary guideline reviews
- Strengthening of Junk Food advertising, taxation and labelling requirements
- Work with communities and FSANZ to improve transparency of Junk Food Labelling
- Disallow all types of nutrient, ingredient, and health claims and restricting the marketing and availability of all ultra-processed products
- Require all organisations that receive funding from the NSW Government to restrict all promotion (including sponsorship) related to unhealthy food and beverages as a condition of funding
- Strengthen fast food menu-labelling requirements with regard to nutrition in consultation with local communities
- Labelling regulations should focus on additives/chemical/GMO inputs throughout the chain - so that consumers can easily identify what chemicals have been used in manufacture

- Education on ‘best before’ dates to reduce food waste.

Concentration of Power in the Food System

- Tackle the corporate control of the food system:
    - prohibit concentration of ownership to no more than 5% of any sector
- Establish a supermarket ombudsman with strong enforcement powers as a first step to tackling the abuse of market power by the supermarket duopoly against suppliers and shoppers
- Carry out an independent, comprehensive national review of competition law and policy to address duopoly and oligopoly power across the food system

Background

Framing of the Inquiry

This inquiry focuses on food production and supply, as well as additional concepts of food security. We urge the Committee to situate the inquiry within a broader 'food systems' lens, with the goal of achieving food sovereignty.

The **food system** can be defined as "[t]he web of actors, processes and interactions involved in growing, processing, distributing, consuming and disposing of foods, from the provision of inputs and farmer training, to product packaging and manufacturing, to waste recycling"[10]. The food system is shaped by a series of underlying drivers, including: (i) biophysical and environmental factors such as natural resource and ecosystem services, as well as climate change; (ii) innovation, technology and infrastructure; (iii) political and economic factors such as foreign investment, trade, and globalisation; (iv) sociocultural factors such as culture, traditions and women's empowerment; and (v) demographic factors such as population growth, urbanisation and migration[11]. Three core elements of food systems are the **food supply chain**[12], **food environments**[13], and **consumer behaviour**[14].

A food systems lens highlights the multiple activities and actors within the food system that can be targeted for government intervention (e.g., food production, distribution, retail, and consumption), as well as the need to tackle the full range of drivers of unsustainable, unhealthy, and inequitable food systems, including those that lie outside the food system itself.[15] It draws attention to need to consider the interconnections between the issues this inquiry is concerned with, including food security, managing the impact of climate change on the food system, and limiting the impact the food system has on the environment, and the need to address these issues in a synergistic way – rather than in departmental or policy "silos"[16].

AFSA asserts that **food sovereignty** is more ambitious and holistic than food security, and should be the overarching goal of all legislation, policies and projects across the food system, including food

[10] (IPENS 2015, 3)
[11] (HLPE 2015, 24)
[12] the activities and actors involved in food production, storage, distribution, processing, packaging, and selling. A range of public and private actors are involved in food supply chains, and their decision making affects the type, quantity, price and nutritional quality and safety of the food produced, processed, and made available for sale (HLPE 2015, 24)
[13] "the physical, economic, political, and socio-cultural context in which consumers engage with the food system to make their decisions about acquiring, preparing, and consuming food" (HLPE (2015), 25)
[14] involving the selection, purchase, preparation, cooking, and eating of food is influenced by individual and interpersonal factors such as taste preferences, values, convenience, and traditions, but is also shaped by food environments and the accessibility of healthy, affordable, and sustainable food, as well as broader social, economic, and cultural factors (HLPE 2015, 31)
[15] (Hawkes, Parsons & Wells 2019, 7).
[16] (Hawkes, Parsons & Wells 2019, 7)

production and supply in NSW. La Via Campesina - the global movement of smallholders - defines food sovereignty as:

> '*the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. It puts the aspirations and needs of those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations.*[17]

Food sovereignty lies in the following **principles**:

- Food is a human need and a basic right, rather than a commodity
- Food systems should be democratically constructed, responding to diverse social, cultural and environmental conditions
- Food systems should be based on a strong commitment to social justice: for farmers, food system workers, and the most vulnerable members of our society who experience food insecurity
- Resilient food systems require long-term environmental sustainability, where agriculture transitions away from dependence on fossil fuel and chemical inputs; and towards renewable energy and regenerative soil fertility
- Resilient and sustainable food systems will be more localised and regionalised
- Trade in food and agricultural products can enhance economic and social well-being but should be conducted on the basis of international solidarity, respecting and not undermining the food sovereignty ambitions of other peoples and countries[18]

The potential of agroecology[19] in contributing to food sovereignty can be seen in the experience of the Pro Huerta movement in Argentina. Since 1990, this nationwide movement in a country of 41 million people, has, through a 700-strong network of professional advisors and technicians, together with 19,000 volunteers, helped build in excess of 600,000 market gardens and 140,000 small-scale farms, addressing pressing food security needs of millions of poor Argentinians, as well as strengthening local economies.

Policy and governance context

Food production and supply is a whole of government issue and is currently governed by policy, legislation and regulations across a number of NSW government departments.

[17] https://viacampesina.org/en/food-sovereignty-a-manifesto-for-the-future-of-our-planet-la-via-campesina/
[18] Patel, R. (2009). What does food sovereignty look like? Journal of Peasant Studies, 36(3), 663-671.
[19] Agroecology is defined as 'a scientifically and experientially justified practice of agriculture that is sensitive to the ecosystems in which it is situated and that fosters the democratic participation of all peoples in the food system.' It owes much of its theoretical underpinnings to Indigenous Peoples, and still its predominant practitioners are Indigenous Peoples and peasant smallholders the world over.

A review of high-level strategic and policy documents from NSW government departments including Treasury, Department of Primary Industries, Department of Planning, Department of Health and Department of Regional NSW highlights the following key points:

- There are no whole of government policies that collectively address food production, supply, consumption and waste
- There is a lack of focus on food and agriculture sectors as key industries of the future (*NSW 2040 Economic Blueprint (2019)*)
- There is a strong focus on food as an export, in place of other key outcomes including food security, reducing food waste, ecological sustainability and health (*Agriculture Industry Action Plan 2014 and NSW 2040 Economic Blueprint (2019)*)
- There is a lack of connection between food and health
- There is an improved recognition of the needs of rural and regional communities, including guaranteeing critical water for regional towns, however a focus on extractive industries still remains (*20 Year Economic Vision for Regional NSW, 2018 - Vision Refresh 2020*)
- The *NSW DPI Strategic Plan 2019-2023* has an unacceptably narrow focus on growth, maximisation of output and productivity with no focus or objectives related to climate change, food security, water security, waste management and ecological sustainability. This is highlighted by some of the 'key measures of success', for example:
    - % increase in gross value and volume of agricultural production by hectare
    - 10% increase in production per ML of irrigation water by 2015
    - % increase in hectares of new plantation forest (public and private)
- The NSW Food Authority has a limited mandate for food safety, and fails to address the nutritional quality of food production and supply
- There are promising elements of the *Minister's Planning Principles A Plan for Sustainable Development* released in December 2021, including "connecting with Country" and "addressing climate change"
- The NSW *Planning and Environment Act* 1987 does not include food or health as an objective, limiting the extent to which local governments can consider issues such as nutrition or food security in their own planning activities.[20] For example, local governments cannot refuse development consent to new fast-food restaurants seeking to open in an appropriately zoned area, and are limited in the extent to which they can diversify the mix of food retail outlets based on food access or nutrition concerns.[21] This means they are unable to address the issue of 'food swamps': geographical areas characterised by a high density of fast-food restaurants and other unhealthy food retail outlets, and a relatively low density of healthy food retail outlets (such as supermarkets), most often located in areas of low socioeconomic advantage.[22]

[20] Christine Slade, Claudia Baldwin and Trevor Budge, 'Urban Planning Roles in Responding to Food Security Needs' (2016) 7(1) *Journal of Agriculture, Food Systems, and Community Development* 33–48; Maureen Murphy, Hannah Badland, Helen Jordan, Mohammad Javad Koohsari and Billie Giles-Corti, 'Local Food Environments, Suburban Development, and BMI: A Mixed Methods Study' (2018) 15(7) *International Journal of Environmental Research and Public Health*, 1392. Available from: doi:10.3390/ijerph15071392.
[21] Slade, Baldwin and Budge, above n 4.
[22] Cindy Needham, Gary Sacks, Liliana Orellana, Ella Robinson, Steven Allender and Claudia Strugnell, 'A Systematic Review of the Australian Food Retail Environment: Characteristics, Variation by Geographic Area,

Food Planning

"We need to devise a food plan that looks at the Country as a whole and determines our population projections of how much food is necessary to sustain ourselves into the future and how diverse our food systems should be - in what it produces, in who produces it and where they live. This plan would identify and protect the best food production land and intertwine with the national reserve system that maps conservation areas across the country. It would identify high-value conservation areas and prime agricultural land as no-go zones for development like housing and mining." [23]

Recommendations

AFSA recommends the Committee and the NSW Government implement the following to address food system governance:

- The creation of a **state-wide, integrated Food System and Food Security Plan that addresses sustainability, health, equity, and economic development in an integrated way** (see Victorian Food Security and Food Systems Working Group 2022).
- The proposed Food System and Food Security Plan should set (time-bound) objectives and targets at the state level and evaluate progress against them. It should also empower local governments and communities to set local objectives and targets on priority food system issues, and then work toward their achievement. This plan (and other state government programs and activities on the food system) should be implemented and overseen by a new, whole-of-government **Food Systems Committee**, and be accompanied by dedicated, significant funding, including for local government food system policies and programs. This new policy framework should also support and align with relevant policies and initiatives at the federal level. A **'food in all policies'** approach where food systems and food sovereignty are integrated into all relevant areas of government policy, with a coordinated approach developed on existing NSW government policies on food production, distribution, sale, marketing, and consumption. This approach would be based on a holistic understanding of where our food comes from, who produces it, and how, as well as the interconnections between agricultural inputs, food production, processing, distribution, retail, marketing, and consumption. This requires better communication and collaboration between producers, processors, food and agri-businesses, consumers, planning, and policy makers at all levels of government.
- New policies on the food system should be informed by a rights-based approach. There is scope for considering how a rights-based approach could be woven into relevant legislation, policies, and programs, including those on education, food procurement, and measures to limit how the lobbying, marketing and selling practices of large, transnational food companies affect public health. This approach could be informed by international guidance

Socioeconomic Position and Associations with Diet and Obesity' (2020) 21(2) *Obesity Reviews*, e12941. Available from: doi.org/10.1111/obr.12941.

[23] Chan, Gabrielle. 2021. Why you should give a f*ck about farming

from the World Health Organisation and the UN Special Rapporteur on the Right to Food, and on the Right to Health.

- Following from the approach outlined above, a helpful starting point for the Inquiry would be to map the NSW Government laws, regulations, and policies that address the food system, including those that are directly concerned with food (such as the *Food Act* 1993 (NSW), as well as those that have an impact on the healthiness, sustainability, and equity of the food system, such as laws and policies on urban planning, agriculture, and housing. This would help to identify opportunities for the creation of new legislative and policy mechanisms that address the issues raised by the inquiry, as well for legislative and policy amendment and harmonisation.
- Processes of legislative and policy development concerned with the food system should be protected from inappropriate influence by large, corporate actors in the food and agriculture sectors. This could include, for example, adopting recommendations for limiting industry influence and improving transparency in food system policy making (on which NSW has done little to date) (The Australian Prevention Partnership Centre, Deakin University and INFORMAS 2019). Approaches could include:
    - Introducing real-time declarations of political donations
    - Modifying the government lobby register to require more detailed reporting, including details of specific lobbying activities; and
    - Adding food manufacturers (and associated entities) to the list of prohibited political donors

Consideration of Indigenous food and land management practices

Key issues

Custodial Ethic

It is AFSA's position that Indigenous knowledges and food and land management practices should be **prioritised, embraced and incorporated in a substantive sense** into all proposed policy reforms for food production and supply in NSW.

Aboriginal and Torres Strait Islander Peoples recognise that 'the land is the Law' from which everyone and everything is derived, which creates a 'custodial ethic' where everyone has an obligation of **care for Country** and all that it supports. Food production and consumption therefore become centred on an ethic towards caring for the land in a holistic sense. Waste is not a concept that is shared with Indigenous knowledges. The import of capitalist modes of production has created over-production, needless waste and harmful effects on the environment through excessive resource use. These have become unjustifiable in the context of climate change as highlighted in the IPCC's report.

A part of the urgent need for truth-telling of the impacts of colonisation on land, water and biodiversity in Australia is the story of our food systems. It is a catch-all, in that all relate to the production of food. The need to value, recognise and adopt Indigenous land and water management practice is therefore manifest.

"Valuing the earth and the raw materials it provides for us is central to conservative economics. What is smart about eliminating the resource? Every product we use must be stamped with our determination that our great-grandchildren can enjoy them in the future. This means our care must be extended to soil, water, food and the products we have created from the resources of the earth."[24]

Amongst the issues facing First Peoples, of particular concern from the food sovereignty perspective is the impact of biodiversity decline on traditional food gathering. Biodiversity decline is the loss of variety in living systems. Decline can be measured through a number of characteristics: it can be decline in the number and range of species in a particular region, the loss of genetic diversity within populations of individual species, or more broadly, the loss and simplification of ecosystems.[25]

[24] Gammage, B. Pascoe, B. 2021 *Country. Future Fire, Future Farming.*
[25] AFSA, 2013, People's Food Plan

Biodiversity

Australia has experienced the largest documented decline in biodiversity of any continent over the past 200 years. Even with the existence of the *Environment Protection and Biodiversity Conservation Act (1999)*, more than 50 species of Australian animals have been listed as extinct, including 27 mammal species, 23 bird species, and four frog species. The number of known extinct Australian plants is 48. Australia's rate of species decline continues to be among the world's highest, and is the highest in the OECD[26].

Biodiversity is safeguarded where Indigenous practices of land management are prioritised and Indigenous peoples are the main or equal decision-makers in managing the land. The example of fire has gained attention in recent years, particularly since the Black Summer bushfires of 2019-2020. "Fire is a necessary practice for hunting, but the practice also protected certain plant and animal habitats and kept the country sweet. Flowering plants are seasonal reminders for First Peoples to know what needs to be done to manage the land; and this information is passed down to the next generation". While underway in many parts of the country, Djaara peoples through the Dja Dja Wurrung Clans Aboriginal Corporation and their land management branch 'Djandak' are seeing the positive ecological and health benefits of practising dhelkunya dja / making Country healthy through cultural burns.[27]

The UN provides evidence that, globally, Indigenous Peoples and local communities are the best custodians of biodiversity. This is well-founded in literature regarding food production, and is a key organising principle of agroecology and the food sovereignty movement.

Agroecology

Agroecology is defined as 'a scientifically and experientially justified practice of agriculture that is sensitive to the ecosystems in which it is situated and that fosters the democratic participation of all peoples in the food system.' It owes much of its theoretical underpinnings to Indigenous Peoples, and still its predominant practitioners are Indigenous Peoples and peasant smallholders the world over. Many of agroecology's advocates make a strong case for relying on Indigenous knowledges of their land and systems to produce sufficient food sustainably. Agroecology fundamentally aims to promote the deep ecological, social, and economic knowledge of First Peoples, peasants, and other small-scale food producers and custodians of Land. It puts decision-making power back in the hands of Indigenous Peoples and peasants and local communities.

It is with these organising principles that AFSA promotes the need to not only consider Indigenous food and land management practices, but deeply engage with capacity to support healthy,

[26] AFSA, 2013, People's Food Plan
[27] See https://www.abc.net.au/news/2020-05-30/destined-for-failure-unless-indigenous-cultural-burns-done/12302412.

diversified and culturally appropriate diets, and contribute to food security and nutrition while maintaining the health of ecosystems.[28]

This is not to say that Indigenous food and land management practices will be a panacea for all the damaging practices in the current food production and supply in NSW. However, it is critical to acknowledge that colonisation and disruption of Indigenous food and land management practices occurred in a coeval manner, and Indigenous peoples have been forced into the margins and denied access to traditional cultural practices, leading to a sharp, steady, and ongoing decline in the health of the diets of Aboriginal and Torres Strait Islander Peoples.

First Peoples First

There are a number of key issues associated with European settlement in Australia that have compromised Aboriginal dietary health. Biodiversity loss and hunting rights In Australia, the impacts of colonisation meant severe disruption to the health, diets and well being of Aboriginal people. Food sovereignty was taken away from Aboriginal people over the last 230 years. However, rights to land and food sovereignty for Indigenous peoples are now on the agenda of the fair food movement, here and globally.

In 2009, researchers at the Menzies School of Health found that they have the first medical evidence that Indigenous Australians living and working on their traditional homelands are significantly less likely to develop diabetes and chronic kidney and heart disease. This research was conducted as part of the Healthy Country, Healthy People study monitoring over 300 volunteers living in remote Arnhem Land Community in the Northern Territory over four years.

Rather than supporting Aboriginal and Torres Strait Islanders to have access to their traditional hunting and gathering practices, the current food system in regional and remote areas across Australia sees food trucked and flown in from interstate markets and sold via retail outlets at vastly unaffordable prices.

Legal Recognition

It is important that any consideration of Indigenous food and land management practices should be coupled with a **rights-based framework that upholds the principles enshrined in the Nagoya protocol** (ensuring free and prior consent before the use of traditional knowledges or genetic materials, and sharing of benefits from the use of either), and the UN Declaration on the Rights of Indigenous Peoples (UNDRIP).

Article 26 of UNDRIP states that “Indigenous peoples have the right to the lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired.” It directs states to give legal recognition to these territories. AFSA asserts that the NSW Government has not recognised these rights in several cases where First Peoples have been barred from accessing their

[28] https://www.fao.org/agroecology/knowledge/10-elements/culture-food-traditions/en/

traditional lands, marine and terrestrial waters for sustenance and livelihood. For example, in the case of the Yuin Peoples ongoing battles to dive for abalone on the south coast of NSW.[29]

The First Nations Bushfood and Botanical Alliance Australia issued a Statement in 2019 asserting sovereignty over native foods and the right to participate in decision making:

> As custodians of our Country, we must take a leadership role. We must be included in any development of our native plants and animals in the bushfood, botanical, agricultural and medicinal and therapeutic industries. We believe that our effective participation in the industry, its growth and development has the power to bring social, cultural, economic and environmental benefits for all. Our leadership, bringing our Knowledge systems and values, will make a strong contribution to food security and a sustainable future for country and people – as it has for generations before us.[30]

We don't need to adopt all Aboriginal methods, but in this time of water, soil and farm-income crisis, it would seem a prudent management approach to consider the condition of the country at the time of invasion.

Let us now share some inspiring examples of smallholders in Australia who are embracing the custodial ethic to care for Country and all on it.

Nguuruu Farm is a diverse biodynamic farm of 220 acres on Ngunnawal land in the southern tablelands of NSW, with heritage breed Belted Galloway cattle, and rare breed Silver Grey Dorking chickens and eggs, fruits and vegetables. Murray and Michelle have fostered a relationship of respect and trust with local Ngambri, Wallabalooa and Wiradjuri man Paul Girrawah House, which has developed into an ongoing partnership conceived through the lens of *Yindyamarra*, a Wiradjuri term meaning respect for all things. Part of this partnership includes the giving (or returning) of a portion of the farm (approximately 30 of their 220 acres) to Paul and his family to care for and use however they want, under whatever time frame they deem appropriate, with any derived revenue remaining with Paul and his family. Paul plans to run a cultural tour business on the farm focusing on sharing cultural artefacts, such as tree scarring, and on country ceremony. He is also considering an agro-forestry experiment in the creation of original timbers for traditional implements. A commercial crop of myrnong (yam daisies) is also part of the plan.

In turn, Murray describes how the partnership has gifted him with a very different way of relating to the land; a new 'do-no-harm-lens' -through which to slow down and connect to what he calls the 'heartbeat of the place'. His focus now is much more oriented to what the land needs, which is ascertained by slowing right down and spending time just observing. 'Those things, if you make time, are pretty powerful. Without Paul we were rushing around like madmen doing things, and we were missing a lot,' Murray commented.

[29] https://www.abc.net.au/news/2021-09-15/native-title-fishing-raises-issues-over-land-use/100452546
[30] https://www.fnbbaa.com.au/bushfood-symposium-statement-firstn

They are engaging in a relationalism intrinsic to much Aboriginal political ordering, a way of knowing and being where the very land is the Law, and one's relationship to it is based on a mutualism that creates an ethical impulse to care for Country and everything on it. Embracing these ways of knowing is a critical and much-needed step in the right direction for agriculture in Australia.

Belvedere Farm is on 20 acres of Jinibara Country, in the hinterland of Queensland's Sunshine Coast, run by Nick & Brydie Holliday. Belvedere run pastured cattle, pigs, and layer chickens for eggs in highly mobile systems, as well as some vegetables grown in the fertile soils left behind the livestock.

For Nick, reciprocity extends between the land and him and to its Original Custodians, and he has 'repatriated' one acre of land on his title to Jinibara songman BJ and his wife Libby. Nick speaks passionately about how he believes that non-indigenous farmers repatriating land should not dictate to First Peoples how they inhabit it.

> They practise culture, but also just a bit of a retreat… we dispossessed them… not for us to say how they want to use Country… They've got their own bit of land. They're not farmers, but they are growing food there – native raspberries, mostly food trees, bunya nut… and they just want it to be a place to practise culture. It's hard to put in words what you get out of this.

He goes on to observe:

> When Jinibara people speak, Country hears them, it doesn't hear us. I feel I benefit from being a peripheral part of their connection to Country… 'getting right with Country' – if you're not decolonising, not involved in acts of solidarity… then I don't think you can be right with Country. Decolonising yourself is such an ongoing job.

Recommendations

AFSA recommends the Committee and the NSW Government:

- Apply a rights based framework to Indigenous food and land management, and across the food system more broadly, by fulfilling the obligations outlines in the Nagoya protocol and the UN Declaration on the Rights of Indigenous Peoples (UNDRIP)
- Support the First Nations Bushfood and Botanical Alliance Australia Statement[31] and ensure First Peoples are the leaders of policy and decision making in relation to food and land management
- Enact legislation to ensure First Peoples' knowledge is acknowledged and compensated in the Bush Food industry in line with the Nagoya Protocol[32]
- Learn from other jurisdictions e.g. Victorian Traditional Owner Native Foods and Botanical Strategy[33] to develop an aligned strategy in NSW

[31] https://www.fnbbaa.com.au/bushfood-symposium-statement-firstn
[32] https://www.cbd.int/abs/
[33] https://www.fvtoc.com.au/native-foods-and-botanicals

- Self-determination for First Peoples to provide unfettered access and management of Country - starting with all public lands:
    - Embed First Peoples' food, land and fire management practices in all Indigenous Land Use Agreements and National Parks, above and beyond Native Title determinations
    - Increase funding and training opportunities for First Peoples rangers and custodians to care for Country
    - Conduct culturally appropriate consultation and include First Peoples' input in the development of land and water resource management and planning
- Self-determination for First Peoples to provide unfettered access to Country - increase access to private lands:
    - Support partnerships between First Peoples and private landholders to give access to Country for social, cultural and economic purposes
    - Enact legislation to compel landholders to 'Pay the Rent[34]' directly to Indigenous led organisations in appropriate Country.
- Invest in increasing understanding of First Peoples knowledges and land management by:
    - Providing funding for horizontal knowledge exchanges between First Peoples and farmers
    - Provide funding for all Australians to undertake First Peoples cultural education
    - Indigenous Country names to be identified on Land Taxes

[34] https://paytherent.net.au/

Improving food security and equitable access to food

Key issues

Food insecurity in NSW

According to the 2021 Foodbank Hunger Report: 1 in 6 adults in NSW are severely insecure (meaning they often have to reduce their food intake). Over 371,000 children in NSW and ACT have gone hungry in the last year, 43% of parents facing food insecurity say their children go an entire day without eating at least once a week.

The rate of food insecurity in NSW has increased throughout the COVID-19 pandemic[35]. Research based on lived experience and community feedback in Aboriginal communities across NSW found "in some rural and remote areas, local shops are pushing up their prices, and people are left with no choice but to buy cheaper (and often less healthy) options to feed their families. Increase in government payments has resulted in the one and only shop in the community providing food, jamming their prices up." Furthermore, there has been an increase in food insecurity in cities and urban areas, evident[36] by an increase in demand for food relief. Australians aged 18 -25 years comprise 65% of Australians experiencing food insecurity, as the COVID-19 pandemic has disproportionately impacted individuals who typically work casual part-time jobs, which will have long term repercussion on their employment and career prospects[37]..

In the UK, with the lockdown pressure piling up, supermarkets and delivery giants like Ocado and Amazon Fresh quickly became overwhelmed. Even popular UK vegetable box suppliers, such as Farmdrop and Riverford, had to introduce online queues and wait-list new customers. Meanwhile, hyperlocal and alternative food projects adapted faster and were able to close the gaps in the unravelling globalised food system. In just two months, over 500 British veg box providers, with waiting lists ranging from 160 to 6,700 customers, delivered 3.5 million boxes of fresh produce to homes – more than double their usual sales.[38]

Whilst the following is from a UK study, Australia is in a similar position. "Supermarkets are very efficient at providing a lot of food for a lot of people but they have their vulnerabilities," says Moya Kneafsey, professor in food and local development at Coventry University. In Britain, for example,

35 https://www.mja.com.au/system/files/issues/214_05/mja250948.pdf

36 Craven & Meyer 2020, 'The impact of COVID-19 on food insecurity in the Greater Sydney and Illawarra Region' https://righttofood.org.au/wp-content/uploads/2020/10/The-impact-of-COVID-19-on-food-insecurity-in-Greater-Sydney-and-Illawarra-region-September-2020.pdf

37 (Foodbank Australia & McCrindle Research 2020; McKay & Lindberg 2019)

38 https://www.bbc.com/future/bespoke/follow-the-food/how-covid-19-is-changing-food-shopping.html

only 17% of fruit and half of vegetables are grown locally – the rest comes from cheap international trade, as supermarkets promote year-round availability. "Covid-19 begs the question – will the imports we rely on be dependable in the future? Even if supply is OK at the moment, will it be affected by the long-term impact of the virus in producer countries and in the transport sector?"

The average storage capacity of a supermarket is only one day's worth of fresh products, says Jan Willem van der Schans, senior researcher of new business models at Wageningen University and Research. This supply chain needs a buffer…[39]

Right to Food

Australia is a laggard in constitutionally recognising the Right to Food. As a signatory to the United Nations (UN) Covenant on Economic, Social and Cultural Rights (1975), Australia is required to take proactive steps to ensure food security, through 'respecting, protecting and fulfilling' the right to food.[40] [41] The Right to Food is well-established globally, aided by the special mechanisms of the UN, which has been appointing Special Rapporteurs on the Right to Food for over three decades.[42.]

AFSA asserts food production and supply and the intended social, economic and environmental outcomes should be based on a human rights framework. The ability to achieve food sovereignty requires people to have access to fresh, ethical and ecologically-sound, localised food production, distributed through short and decentralised supply chains. States including South Africa, Kenya, Switzerland, Bolivia, Ecuador, Mexico and Brazil have made constitutional provisions guaranteeing the right to food, albeit with varying success.[43]

Brazil has a long-standing 'food-as-a-right' policy, and in Belo Horizonte (a city of 2.7 million people) a city agency was created to oversee dozens of innovations, weaving together interests of farmers and consumers to assure that every citizen had the right to food.[44]

> *Within six years, initiatives such as the Bolsa Família cash transfer scheme for low-income families, free meals in every public school, and support to small-scale family farming had reduced the number of people facing food insecurity from 50 million to 30*

[39] https://www.bbc.com/future/bespoke/follow-the-food/how-covid-19-is-changing-food-shopping.html

40 Article 2 of the International Covenant on Economic, Social and Cultural Rights (ICESCR).

41 United Nations Human Rights Office of the High Commissioner, Special Rapporteur on the Right to Food, <http://www.ohchr.org/EN/Issues/Food/Pages/FoodIndex.aspx>.

42 Food and Agriculture Organization (2012b), Right to Food Timeline, Legal Office, Food and Agriculture Organization of the United Nations, archived from the original on 6 June 2012. <https://www.webcitation.org/68Cm7UmiN>

[43] Alana Mann, 11 April 2016, What does the human right to food mean for Australians living in food poverty?, Opinion, <https://sydney.edu.au/news-opinion/news/2016/04/11/-the-right-to-food---and-how-1-2-million-australians-miss-out.html>

[44] Chappell, J. 2018. *Begininng to End Hunger*. UC Press.

million. Many of the programmes implemented under Zero Hunger were pioneered in the 1990s in the Brazilian city of Belo Horizonte.

Health

We must recognise that food insecurity and hunger are not synonymous. There are links between food insecurity and both under- and over-nutrition. Food insecurity is associated with poorer physical and mental health and wellbeing, and includes a higher risk of elevated levels of stress, anxiety and depression, smoking and alcohol consumption, weight gain and malnutrition[45].

This is often due to food insecure individuals consuming poor diets including low cost energy-dense foods (high in fat and sugar), lower amounts of fruits, vegetables and wholegrains, meals dominated by carbohydrates, and they are more likely to ration, reduce portion size or skip meals.[46]

An ongoing state of food insecurity can result in chronic diseases in later life including: diabetes, heart disease, kidney disease, hypertension, obesity, nutritional deficiencies including iron deficiency anaemia and poor mental health[47]. These conditions diminish community participation and contribute to a burden on the health system and higher health care expenditure[48]

Education

Australian adults and children are disconnected from where their food is grown and produced, education is a key component of improving access to healthy and appropriate food. Experiential learning is based on 'learning from life experience', rather than using didactic or theoretically based teaching methods. In the USA, farm visits are a primary mode of experiential school-based nutrition learning provided through the federally funded USDA Farm to School grant programme, with high uptake of this programme. The USDA Farm to School programmes include garden education, local procurement for school foods and experiential learning activities in agriculture, food, health or nutrition.[49]

Recommendations

AFSA recommends the NSW Government:

[45] (Bruening et al. 2017; Larson, Laska & Neumark-Sztainer 2020; Martinez et al. 2019)
[46] (Gallegos, Ramsey & Ong 2014; Hughes et al. 2011; Larson, Laska & Neumark-Sztainer 2020; McKay & Lindberg 2019; Whatnall, Hutchesson & Patterson 2019).
[47] (Crawford et al. 2015; Larson, Laska & Neumark-Sztainer 2020; McKay & Lindberg 2019; Willis 2021; Yii, Palermo & Kleve 2020)
[48] (Farahbakhsh et al. 2017; Gallegos, Ramsey & Ong 2014; Martinez et al. 2019; Rewa, Devine & Godrich 2020).
[49] USDA. United States Department of Agriculture, Food and Nutrition Service. Farm to School Program: Fact sheet: Research Shows Farm to School Works. US Department of Agriculture; 2016 Available from: http://www.fns.usda.gov/sites/default/files/f2s/FactSheet_Research_Shows_F2S_Works.pdf

- Fulfil the obligations of the UN Covenant on Economic, Social and Cultural Rights (1975) to ensure all people have the Right to Food, by implementing recommendations of the World Health Organisation and the UN Special Rapporteur on the Right to Food
- Adhere to human rights based declarations, including the UN Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP) & the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) to address food security and equitable access to food
- Institute broad-based, accessible and direct financial support for individuals and households continuing to be affected by the COVID-19 pandemic in the short- and mid-term, as well as working towards improving social protection for individuals and households experiencing disadvantage resulting in food insecurity in the longer term
- Enable food production and supply aligned with the principles of food sovereignty, for example:
    - Provide financial support and public lands for community gardens, especially in areas designated as 'food deserts'
    - Support social enterprises that provide nutritious and culturally appropriate food to people experiencing food insecurity by subsidising procurement from small-scale food producers
    - Enact policies for public procurement of nutritious, culturally appropriate, ethical and ecologically-sound food from small-scale food producers
    - Ensure people and communities are engaged to participate in, make decisions about, and control their food systems
- Provide food literacy programs for both adults and children
- Develop measures to support regional food sources in the social sector and in schools and hospitals. For example, communal food gardens and orchards should be an integral part of all new residential developments.
- Establish a "NSW Food Security Council" that includes all relevant government departments, First Peoples, farmers, food workers and community members with the remit of lowering rates of food insecurity in NSW .
    - Key areas the NSW Food Security Council could address include requiring local government to create public health plans addressing insecurity[50]. Specifically, the NSW Public Health Act 2010 does not require local government to create public health plans, unlike Victoria, South Australian and Western Australia, this limits local government's financial and technical capacity to address this serious social and public health issue[51]. The NSW Food Security Council could also ensure social service providers, for example services for people experiencing homelessness, are provided with a quality framework, monitoring or training to include food and nutrition in their service provisions[52].
- Invest in developing local government place-based solutions that improve access to healthy affordable food for food insecure individuals. Local governments' closeness to their

[50] (Reeve et al. 2020; Rewa, Devine & Godrich 2020)
[51] (Reeve et al. 2020; Rewa, Devine & Godrich 2020)
[52] (Crawford et al. 2015)

communities gives them a unique ability to lead a place-based approach that involves local food security partnerships and supporting existing community programs[53]. Individuals who have experienced food insecurity participation are integral to this process, in order to develop sustainable and socially inclusive programs that support and empower individuals to access healthy foods[54]

- The Inquiry should explicitly consider both the quantity and nutritional quality of food that is available, accessed, and consumed by NSW residents when examining matters related to improving food security and equitable access to food, as well as how food environments support adequate, nutritious, and sustainable diets
- Provide funding and resources to ensure Aboriginal Community Controlled Organisations (ACCOs) can be effectively engaged in both long-term planning and short-term crisis responses to food and water security

[53] (Crawford et al. 2015; Reeve et al. 2020)
[54] (Crawford et al. 2015)

Managing the impact of climate change

Key issues

Transformation

There are growing calls from across the political spectrum to transform the current food system in response to climate change. Since Britain's colonisation of Australia in the late eighteenth century, settler values of productivity and improvement have transformed Aboriginal and Torres Strait Islander Country into a landscape devastated by agricultural and mineral extraction. Industrial farming practices have led to deforestation, soil erosion and degradation, biodiversity loss, flooding, increased salinity, degraded water catchments, and poor river health, which has in turn caused the death of millions of fish, and the loss of access to potable water for some rural communities. The policies of recent decades favour competition and export, and have enabled large-scale corporate agribusinesses to thrive at the expense of family farms, rural communities, animal welfare, and the environment. Both a cause and a victim of climate change, industrial agriculture was a major contributor to Australia's unprecedented heatwaves and bushfires in early 2020, which incinerated 12.6 million hectares and over a billion animals.[55]

"Farming both contributes to and is endangered by the biggest existential threats of our time: climate change, water shortages, soil loss, energy production, natural disasters, zoonotic diseases, population displacement and geopolitical trade wars. That means we need governments to get the policy settings right. Yet no Australian political party is doing serious thinking about how to knit together food, farming and environmental policies to continue feeding the population whilst mitigating climate change and biodiversity loss".[56]

With the challenges of farming a dry and arid land with fragile soils, Australian farmers have often been at the forefront of innovative farming practices. Many farmers have the local knowledge necessary to care for Country while earning a fair livelihood, and they already act as stewards for future generations. At the same time, changing global, political and economic conditions have locked many farmers into a 'treadmill of production' requiring ever-increasing agricultural inputs such as chemical pesticides and fertilisers even as prices paid to farmers decline.

Farmers wanting to diversify and become more sustainable, both environmentally and financially, are faced with numerous obstacles and regulatory burdens, as this comment from AFSA's research makes clear: "Every additional enterprise we would like to add to our farm brings with it another layer of paperwork and compliance cost. Fruit and veg are the only part not affected. If you want cattle, laying hens, pigs, dairy, or heaven forbid do your own processing, each incur another layer of paperwork and cost. Incidentally, the total cost for a small operation is essentially the same as for a large corporate, which makes it very difficult for small operators to compete." (written submission, Organic Farmer, Queensland)

[55] (Werner and Lyons 2020)
[56] Chan, Gabrielle. 2021. Why you should give a f*ck about farming

Agroecology

An alternative to industrial agriculture, agroecological farming is the application of ecology to the design and management of sustainable agroecosystems. Agroecological farmers favour long-term strategies that are flexible and can be adjusted and re-evaluated over time. They aim to diversify production on farm, which creates resilience ecologically, and for farmers and eaters in the face of climate change, but also for shifting market prices. At the core of agroecology is the idea that the type of farming undertaken must be appropriate for that particular environment.

This farming philosophy has been gaining an increasing following globally as farmers are seeking out more sustainable farming methods. The concept is endorsed and promoted by the Food & Agriculture Organisation of the UN (FAO)[57] as a means to feed growing populations sustainably. 400 of the world's leading agricultural scientists, and the UN Special Rapporteur on the Right to Food have identified agroecology as an important way forward for global agriculture.

The following 10 Elements of Agroecology[58] emanated from the FAO regional seminars on agroecology and are interlinked and interdependent:

- diversity
- synergies
- efficiency
- resilience
- recycling
- co-creation and sharing of knowledge
- human and social values
- culture and food traditions
- responsible governance
- circular and solidarity economy

Agroecology does not propose a 'one-size fits all' approach or model, but rather requires site-specific understandings of particular farms and bio-regions in order to assess whether or not particular technologies or inputs are or are not appropriate, given the goals of farm productivity and resource conservation.

Many Australian farmers are already implementing agroecological principles and practices, which include:

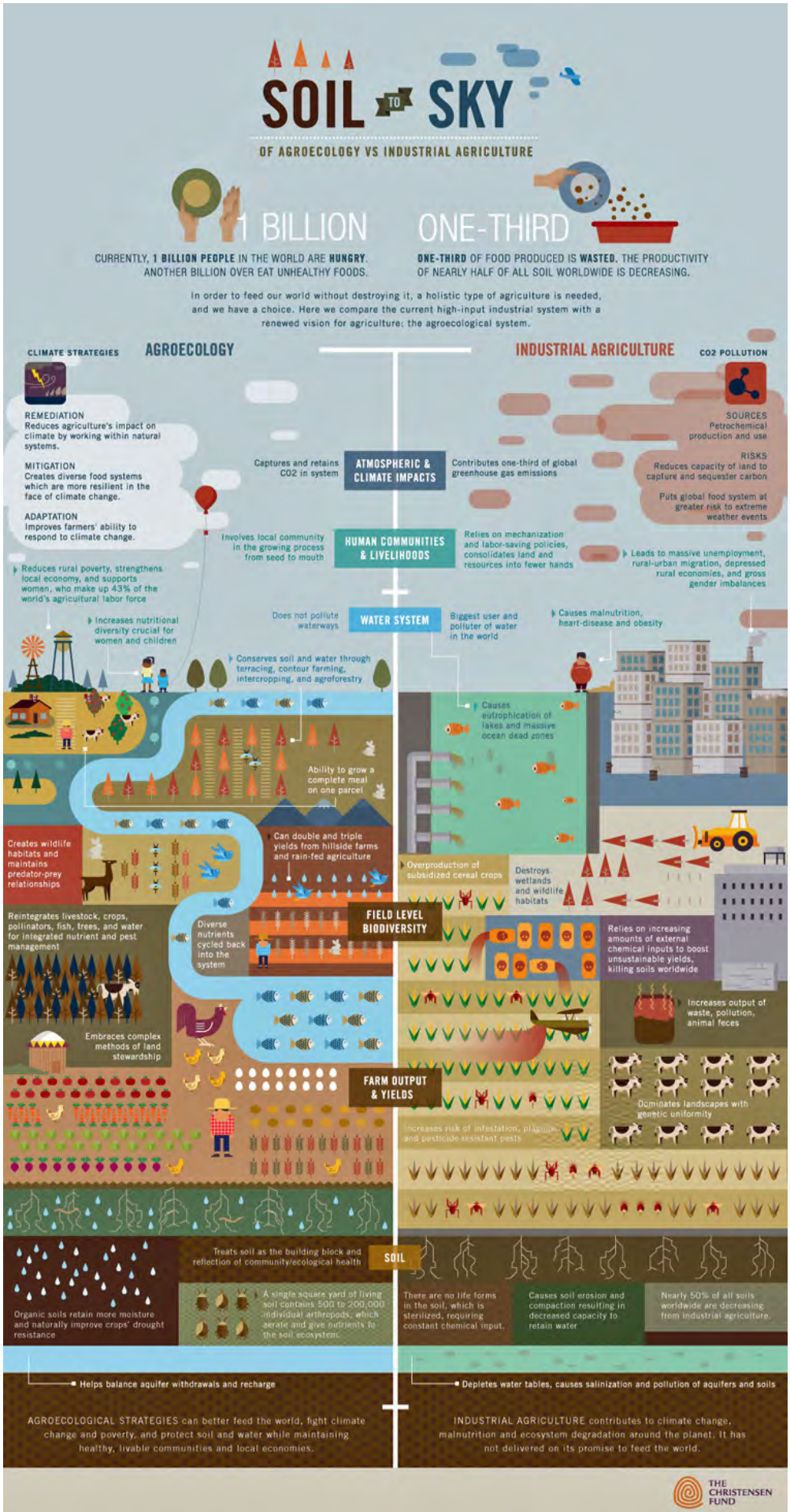
- maintenance of water, nutrient, carbon and energy flows within the farm;
- integration of crops and livestock;
- diversification of crops and livestock species; and
- a focus on interactions and productivity throughout the agricultural system, rather than a focus on individual species.

[57] https://www.fao.org/agroecology/home/en/
[58] https://www.fao.org/3/i9037en/i9037en.pdf

Millions of farmers and Indigenous Peoples around the world are already producing food in ways that build on the principles of agroecology. In an enabling policy context, agroecology has proven to achieve robust gains across a range of benefits including biodiversity and climate resilience. A growing number of agencies, research institutions, governments, and donors are adopting policies and developing tools to scale up and scale out agroecology.

That said, agroecology as a term is still relatively unfamiliar in the Australian context[59], and its potential needs to be promoted and embraced.The below infographic compares the industrialised food system with agroecology. It is the work of the Christensen Fund, a San Francisco-based private foundation focused on programs supporting biocultural diversity.

[59] For a greater understanding of how agroecology differs from regenerative agriculture, see AFSA's post: https://afsa.org.au/blog/2021/06/28/13699/


SOIL TO SKY
OF AGROECOLOGY VS INDUSTRIAL AGRICULTURE
1 BILLION
CURRENTLY, 1 BILLION PEOPLE IN THE WORLD ARE HUNGRY. ANOTHER BILLION OVER EAT UNHEALTHY FOODS.
ONE-THIRD
ONE-THIRD OF FOOD PRODUCED IS WASTED. THE PRODUCTIVITY OF NEARLY HALF OF ALL SOIL WORLDWIDE IS DECREASING.
In order to feed our world without destroying it, a holistic type of agriculture is needed, and we have a choice. Here we compare the current high-input industrial system with a renewed vision for agriculture: the agroecological system.
CLIMATE STRATEGIES
AGROECOLOGY
INDUSTRIAL AGRICULTURE
CO2 POLLUTION
REMEDIATION
Reduces agriculture's impact on climate by working within natural systems.
MITIGATION
Creates diverse food systems which are more resilient in the face of climate change.
ADAPTATION
Improves farmers' ability to respond to climate change.
SOURCES
Petrochemical production and use
RISKS
Reduces capacity of land to capture and sequester carbon
Puts global food system at greater risk to extreme weather events
Captures and retains CO2 in system
ATMOSPHERIC & CLIMATE IMPACTS
Contributes one-third of global greenhouse gas emissions
Involves local community in the growing process from seed to mouth
HUMAN COMMUNITIES & LIVELIHOODS
Relies on mechanization and labor-saving policies, consolidates land and resources into fewer hands
Leads to massive unemployment, rural-urban migration, depressed rural economies, and gross gender imbalances
Reduces rural poverty, strengthens local economy, and supports women, who make up 43% of the world's agricultural labor force
Increases nutritional diversity crucial for women and children
Does not pollute waterways
WATER SYSTEM
Biggest user and polluter of water in the world
Causes malnutrition, heart-disease and obesity
Conserves soil and water through terracing, contour farming, intercropping, and agroforestry
Causes eutrophication of lakes and massive ocean dead zones
Ability to grow a complete meal on one parcel
Creates wildlife habitats and maintains predator-prey relationships
Can double and triple yields from hillside farms and rain-fed agriculture
Overproduction of subsidized cereal crops
Destroys wetlands and wildlife habitats
FIELD LEVEL BIODIVERSITY
Reintegrates livestock, crops, pollinators, fish, trees, and water for integrated nutrient and pest management
Diverse nutrients cycled back into the system
Relies on increasing amounts of external chemical inputs to boost unsustainable yields, killing soils worldwide
Increases output of waste, pollution, animal feces
Embraces complex methods of land stewardship
FARM OUTPUT & YIELDS
Dominates landscapes with genetic uniformity
Increases risk of infestation, plagues and pesticide-resistant pests
Treats soil as the building block and reflection of community/ecological health
SOIL
Organic soils retain more moisture and naturally improve crops' drought resistance
A single square yard of living soil contains 500 to 200,000 individual arthropods, which aerate and give nutrients to the soil ecosystem.
There are no life forms in the soil, which is sterilized, requiring constant chemical input.
Causes soil erosion and compaction resulting in decreased capacity to retain water
Nearly 50% of all soils worldwide are decreasing from industrial agriculture.
Helps balance aquifer withdrawals and recharge
Depletes water tables, causes salinization and pollution of aquifers and soils
AGROECOLOGICAL STRATEGIES can better feed the world, fight climate change and poverty, and protect soil and water while maintaining healthy, livable communities and local economies.
INDUSTRIAL AGRICULTURE contributes to climate change, malnutrition and ecosystem degradation around the planet. It has not delivered on its promise to feed the world.
THE CHRISTENSEN FUND

There are economic, political, and cultural lock-ins that limit the ability of Australian farmers to shift to agroecology. At the same time, there are what academic Alastair Iles proposes are enablers. At its core, Iles asserts:

> *Geographical and environmental conditions have made – and are making – it hard for farmers to adopt agroecological practices. Strong beliefs among scientists, industry, and government elites in the power of science and technology to overcome climate constraints are leading to agroecology being ignored.*[60]

He proposes that some of the implications of neoliberal agriculture policies for agroecology in Australia include:

- weak farmer resources for adopting agroecological practices;
- demoralised and eroding rural communities; and
- investment in export support instead of environmental support

In turn, *enabling* dynamics for an agroecological transition include:

- crises;
- coalescing social organisation;
- effective agroecological practices;
- external allies; and
- favourable policies.

All of the above enablers are currently coalescing in Australia under:

- a global pandemic;
- strengthening global and national food sovereignty movements;
- the emergence of agroecology schools such as those run by the Australian Food Sovereignty Alliance (AFSA); and
- increasingly supportive state governments offering targeted support for small-scale farmers.

While there is very good work being done using place-based approaches of farmers working to sequester carbon in soils and trees, the best agroecological farming in the world cannot cope with the levels of emissions released by fossil fuel extraction.

A major criteria of any reform should not be reduced to current productivity and capability of soils, but focused on the potential for farming systems that sequester carbon dioxide as a way to stabilise soil carbon. Regenerative practices, as advocated by the likes of AFSA, Young Farmers Connect, Open Food Network, Charles Massy (farmer and author of *Call of the Reed Warbler*), and Paul Hawken (author of *Drawdown*) amongst many others, can make a significant contribution to climate change solutions while improving agricultural productivity.

[60] Iles, A. 2020. 'Can Australia transition to an agroecological future?' AGROECOLOGY AND SUSTAINABLE FOOD SYSTEMS https://doi.org/10.1080/21683565.2020.1780537

Localising Solutions

When speaking of climate change mitigation, decentralised, localised food systems have lower environmental footprints and greater resilience. Place-based solutions are local solutions. They solve problems in the places where they occur – hopefully before they occur. By shortening supply chains, we reduce emissions and increase resilience in the face of climate change and the rise of pandemics. A growing number of collectivised farmers are onto this – they are building infrastructure and taking control back into community hands – but there are several policy barriers to this work to re-localise food and agriculture systems.

We emphasise the need for localised support for food production industries such as abattoirs, grain mills, and on-farm and cooperative-managed dairy and meat processing facilities. While securing small-scale, low stock density farming in NSW, state planning regulations should also support mobile infrastructures, which in turn will improve direct sales of produce to communities (e.g. via Community-Supported Agriculture and farmers' markets). The lack of access to abattoirs impacts not just animal welfare, but also prohibits new farming ventures from getting started in the first place. Large industrial abattoirs with a focus on export are increasingly moving away from accepting small private kills. Where farmers lose opportunities to process and distribute their produce, it becomes increasingly difficult to provide local food to rural and regional communities. In the more remote parts of Australia where many livestock are grown, mobile abattoirs offer a feasible alternative to process livestock without prohibitive distance and cost to producers.

Industry Support

For financial support to be effective in supporting agroecology, a large portion of it needs to be comprised of small to mid-scale grants through food producer organisations and civil society organisations who are close to the ground. Agroecology explicitly enhances bottom-up processes of development and food system transformation based on the needs, knowledge, priorities and agency of people and nature, rooted in territories. Funding for agroecology should be underpinned by a principle of co-governance where donors are accountable to the most affected.

In Australia, federal government policy over several decades means that public investment in agricultural research and development is declining. Funding for state agricultural departments, the CSIRO and universities is decreasing, forcing those institutions to partner up with private companies, which means that research is biased towards technologies that have the potential to generate profits for agri-business corporations. Government-funded extension services, which support farmers to innovate and adapt, have been dismantled. If Australia is to make a wholesale shift toward a low carbon, sustainable farming future, and within the current and future resource limits (water, oil, arable land) new methods are required. Investment in researching sustainable food production methods is urgent; and extension services need to be reinstated to pass on new innovations to farmers and to support the farming community to adapt to changing conditions.

Recommendations

- Promote and support Indigenous fire management to restore biodiversity and health of Country
- Measure quality of agricultural systems on landscape function, provision of ecosystem services including carbon sequestration and landscape rehydration, and protection and promotion of biodiversity at the genetic, species, and ecosystem levels
- Support innovation through research and development, and horizontal knowledge sharing to develop and share new models, ideas and designs:
    - Agroecological farming systems
    - First Peoples-to-farmer knowledge sharing
    - Farmer-to-farmer knowledge sharing
- Promote and finance research into agroecological food production and co-design and co-produce educational resources in partnership with small-scale farmers
- Support a risk- and scale-appropriate regulatory framework to enable small-scale and agroecological production
- Ensure industrialised food and fibre production is appropriately regulated due to the environmental impacts of monoculture production, land clearing and the use of veterinary and agri-chemicals

Preserving productive land and water resources

Loss of agricultural land and water resources across the state will have permanent and irreversible negative impacts on the ability of NSW to produce and supply food to its citizens.

Key issues

Water

Historically, water has been held in the soil and landscape, which has decreased over time due to the introduction of colonial agriculture systems, including sheep and cattle, and a disregard for First Peoples' land management practices.

Natural sequence farming, developed by Peter Andrews OAM, is based on the principle of reintroducing natural landscape patterns and processes as they would have existed in Australia prior to European settlement. This included:

- reintroduction of a natural valley flow pattern, reconnecting the stream to its flood plain, which would reintroduce a more natural hydrological and fertility cycle to that landscape, and
- that through a managed succession of the vegetation (mostly weeds initially), the natural fluvial pattern could be 'regrown', so that nutrients and biomass harvested on the flood plain could be redistributed throughout the property and obviously through the stock[61]

There is an imbalance of water access licences for export crops, fodder and fibre, which needs to be rebalanced to ensure greater prioritisation for nutritious and culturally appropriate food sold domestically to nourish Australian communities. Grassroots initiatives such as the Mildura Community Water Bank (MCWB)[62] should be promoted and subsidised to ensure equitable access for small-scale agriculture, especially that of vulnerable populations such as refugees and migrant communities.

Natural resources are not capital that should be traded - the current model of trading water access licences on the Murray Darling Basin negatively impacts First Peoples and cultural outcomes, and small-scale food producers. The Murray Darling Basin's capacity to provide water to all its communities is at risk. While the process of formulating the MDBP was long and fraught with governance issues, the four affected states (QLD, NSW, VIC & SA) agreed to implement it in 2012 for the health of the river and its many and diverse communities and uses. However, it appears that lobbying from Big Ag – in particular the cotton industry, which by its own admission uses a staggering 26% of all Australian agricultural irrigation water *and then exports 99% of their product* – resulted in the proposed amendment to take 70GL out of the system further upstream instead of retaining this resource downstream as environmental flows. Withdrawing more water upstream against community sentiment is deeply flawed and a rejection of the tenets of water sovereignty

[61] https://www.peterandrewsoam.com/about.html
[62] https://www.mcwb.org.au/

because it's allowing commercial use to quite literally ship our scarce water resources overseas for profit.

When we export cotton, rice, beef, wine – any agricultural product – *we are exporting our water*.

We need a return to the fundamental principles of water security and sovereignty. All peoples have a right to clean, safe water – water should be distributed and used equally and on a sustainable basis. Water should not be privatised, commodified, and sold back to people – we all need water to survive – it is a public good. As with agroecology and regenerative agriculture, which seek to leave the land healthier than we found it, NSW must do more than sustain its sickly river systems. We must regenerate them to ensure we have a future where everyone has access to clean, safe, nourishing and delicious food and water.

Land

We are losing our agricultural land to urban sprawl, housing development and extractive industries, including mining in the Sydney Catchment Area. If we are to continue to grow food, these lands must be identified and held for agricultural (specifically food production) use.

'Employment Lands' are defined in NSW Government[63] and we believe the same could be done for 'Food Lands' to specifically define areas in NSW dedicated to our food production and therefore security. The NSW Government conducts thorough geospatial mapping exercises to identify "prime agricultural land" or 'Strategic Agricultural Land'. AFSA encourages the Government to further protect these selected areas, to expand them beyond notions of 'prime' to all agricultural lands, and to strengthen its efforts to identify 'Food Lands'.

Previous UTS and SPUN research has essentially mapped where current and potential food producing areas are located around Sydney. In the range of scenarios modelled, the first assessed what would happen if Sydney's agriculture was not protected and the proposed population growth under the Metro Strategy occurred in an unconstrained way. If the urban sprawl scenario continues uninterrupted, Sydney stands to lose approximately 60% of its total food production by 2031. Vegetables, meat and eggs will be hardest hit: 92% of Sydney's current fresh vegetable production could be lost, 91% of meat and 89% of eggs.[64]

This project found that this is directly caused by the current planning system, which tends not to prioritise agriculture as a land use, meaning urban sprawl into peri-urban areas is permitted. The scenario was based on Sydney's metropolitan strategy, A Plan for Growing Sydney, which allocates new population growth to each local government area, and concentrates urban growth around North West and South West Growth Centres. Consequently, loss of fresh food production is greatest in Wollondilly, Liverpool, Penrith and Hawkesbury areas.

63 https://www.planning.nsw.gov.au/Research-and-Demography/Employment-Lands-Development-Monitor

64 https://www.uts.edu.au/isf/explore-research/projects/peri-urban-farming-key-sydneys-food-future

As a consequence of this loss of agricultural land to urban expansion, coupled with 1.6 million extra mouths to feed, food production in the basin would only be able to feed 6% of Sydney instead of the current 20%.

In a second scenario, the UTS project assessed what would happen if urban development occurred on existing urban land or 'lower priority' agricultural land. Somewhat surprisingly, this scenario does not result in much protection of Sydney's agricultural land. That is, the loss of agricultural land is only marginally less than the urban sprawl scenario with no protection. This is because there is no Class 1 agricultural land in the Sydney Basin, resulting in very little preservation of existing agricultural production, and hence losses are significant. This means Sydney will still face the same vulnerabilities as the Urban Sprawl scenario.

The third scenario prioritised agriculture, and predicted the result of the proposed population growth under the Metro Strategy if it occurred in a constrained way, such that current urban development could intensify to high density, but not expand onto existing agricultural land. This scenario essentially protects the current agricultural base, in terms of production. If we choose a pattern of urban development that involves densification – that is, utilising the existing urban areas better, growing up instead of out, we could continue to produce around half a million tonnes of food a year. Although importantly, as a proportion of Sydney's growing food demand, food production declines, to only meet 14% of Sydney's demand. This raises the question of whether protecting the current agricultural base is therefore sufficient, or if we need to increase agricultural productivity too? Sydney is less resilient than Melbourne (and the national average) in terms of the proportion of the city population it can feed.

Planning

The pressures of a growing population must be dealt with in the residential suite of zones, not in Primary Production, Rural Landscape, and Primary Production in Small Lots zones. 88% of NSW Farmers responding to our survey are located in RU1 and RU2 zones. This is especially critical in the face of the negative impacts of climate change on Australia's capacity to grow food on the limited arable land available, most of which is concentrated around cities. If the Government continues to allow inappropriate encroachment and urban growth into viable farm land, future generations will become food insecure. A food secure and food sovereign future depends on appropriate planning controls that preserve farmland in perpetuity.[65]

The University of Melbourne's *Foodprint Melbourne* report highlights that Melbourne's "foodbowl" is an important building block in a resilient and sustainable food future for the city. The report summarises project findings about what grows in Melbourne's foodbowl and what it takes to feed

65 Maps created by Sydney Food Futures (2015-2016): https://www.uts.edu.au/research-and-teaching/our-research/institute-sustainable-futures/news/future-sydneys-food-bowl Accessed via: http://www.sydneyfoodfutures.net/

the city, and it outlines the economic value generated by Melbourne's foodbowl. The report highlights that:

- The loss of Melbourne's foodbowl is not inevitable as the city grows if growth on the city fringe can be limited to existing growth corridors and strong targets are set for urban infill and increased urban density; and
- Melbourne can plan for a resilient city foodbowl that provides healthy food for a growing population, promotes a vibrant regional food economy and acts as a buffer against future food system shocks.

Peri-urban areas have been targeted as future growth spots, which endangers precious prime agricultural land previously reserved for food production. The increased restriction of rural activities in the Sydney Catchment Water Area has also triggered issues among NSW's small producers, for the impacts of rural development in these areas has been bundled into one collective issue rather than one to be managed based on intensity of the culpable industries.

Further erosion of strategic farmland and agricultural precincts will mean the vision of Sydney as a 'food bowl' will be lost and development will continue to cause dislocation of the agricultural communities of Greater Sydney.

The NSW Government must recognise the need to reduce risky, high-density livestock systems while incentivising small-scale production across the strategic areas. Higher-density systems attract and exacerbate land-use conflicts between urban and rural land users. This has been demonstrated by an abundant number of tribunal matters relating to the impacts of high-density agriculture on community amenity. Structurally different to high-density farming, small-scale, regenerative and agroecological practices reduce land-use conflict while increasing agricultural production in food sovereign ways.

The Primary Production Zones must maintain the objectives to preserve land for agricultural use, as the pressures of development for non-agricultural uses are being felt in peri-urban areas that have not been responsibly managed to date, and have forced farming further and further from major cities and regional cities.

Farmland and community land trusts can be used to preserve agricultural land into the future, preventing development for other purposes that might threaten community and national food security and local food sovereignty. A farmland trust is a 'private, non-profit organisation that preserves farms' and arable land. Farmland trusts are registered legal entities, which may or may not have charitable status, depending on the jurisdiction in which they are incorporated. They also vary in scale, with some operating at local level, others regionally or nationally. Typically the ownership structure of smaller-scale farmland trusts provides for a wide degree of community participation.

There are many well-developed and successful models of such trusts in North America and the United Kingdom, which provide examples for Australia, such as the Vancouver Agricultural Land Reserve, the Fordhall Farm, the American Farmland Trust, the Agrarian Trust, and the Kindling

Trust. A thorough review of farmland trusts operating in Canada, the United States and the United Kingdom was published in 2010 by the Land Conservancy of British Columbia and Farm Folk City Folk, and another covering North America was published by the American Farmland Trust.[66]

Food-sensitive planning and urban design (FSPUD)

FSPUD aims to help local and state government planners create multidimensional and multi-functional food systems that enhance human and environmental well-being. FSPUD sets out ten mutually-reinforcing principles to underpin the development of sustainable, resilient and fair food systems.

1. Support secure and equitable access to the Food necessary for a healthy and fulfilling life.
2. Make healthy and sustainable Food choices easy and convenient choices.
3. Encourage use of spaces and places to meet many diverse needs, reconciling Food production and exchange with housing, enjoyment of open spaces and recreational areas, urban cooling, skills and jobs, socialising and community celebration.
4. Provide opportunities for those who wish to participate in growing, exchanging, cooking and sharing Food.
5. Identify and invest in the safe use and re-use of urban resources (soil, water, nutrients, 'waste') that can support viable and sustainable Food production.
6. Protect and / or enhance urban and surrounding ecosystems and increase biodiversity (including, but not limited to, bees, open-pollinating fruit trees, native vegetation).
7. Ensure decisions reflect the long-term value and broader community benefits of access to productive land and experienced producers.
8. Encourage investment and innovation, through secure tenure and supportive operating environments for both community and commercial Food enterprises.
9. Increase resilience, by designing to keep options open for future use of space and resources.
10. Acknowledge and support diversity and sovereignty (the right to have informed choices)

Natural Resources

Despite changes in attitudes and practices, we are still experiencing a net loss of native vegetation throughout Australia. And while soil loss is occurring at a lesser rate now, it is still faster than the rate at which soil is formed which means that soil-based agriculture is not sustainable in the long term, water quality cannot be restored to that found before European settlement and a net loss of biodiversity is continuing.[67]

Primary industries and the NSW community face a rapidly changing, interconnected and interdependent world that is fiercely competitive, full of uncertainty and contains major challenges including: plateauing productivity; emerging biosecurity threats; uncertain energy, water and food security; climate change; and, habitat decline. These challenges are occurring in an environment of

[66] https://www.landcan.org/pdfs/LT_Report_Finalx_with_attachments.pdf
[67] http://www.australiancollaboration.com.au/pdf/FactSheets/Land-degradation-FactSheet.pdf

increasing pressure on government expenditure. The scale of these challenges necessitates a strategic focus on research.[68]

'We tax tobacco and alcohol to bring about social change and to provide resources for government policy, but when we ask the mining industry to acknowledge the advantages they enjoy from having access to the national estate, all hell breaks loose.'[69] This also relates to the agrichemical industry and appropriate taxation on chemicals detrimental to the health of our planet.

Recommendations

- Promote and ensure government learns from the efforts of leaders in landscape rehydration (e.g. Peter Andrews and the Mulloon Institute). *AFSA supports the NSW Government proposal to allow farmers to restore streams on their property through landscape rehydration techniques, without the need for council approval*
- Develop planning legislation, capacity building (led by farmers) and provide financial resources for landholders to work to restore natural flows
- Reform the Murray Darling Water trading scheme so farmers can access and are paying a fair price for water, while eliminating water trading
- Support grassroots initiatives such as the Mildura Community Water Bank (MCWB)[70] to ensure equitable access for small-scale agriculture, especially that of vulnerable populations such as refugee and migrant communities
- Develop mechanism to financially account for loss of soil, carbon, and water through industrialised food and agricultural systems by building this cost into food prices through taxation
- Support the farming and utilisation of urban land for food production; prioritise green belts at the edges of major cities for sustainable food production over other competing or conflicting uses
- Map all agricultural land, and protect it from mining and housing development
- Identify and define 'Food Lands' and legislate that they must be used such as, as is the case in France
- Integrate food system thinking into planning frameworks, policies and implementation (look to examples in Canada[71], Brazil[72], and Ecuador[73])
- Strengthen efforts to identify 'Food Sheds' by consulting with shires and taking into consideration research by UTS, SPUN, and Food Futures Sydney in relation to peri-urban planning.
- Enable zoning for smaller, localised food production and associated processing and distribution infrastructure with targeted reforms of SEPPs

---

68 https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0005/1259411/Long-term-science-strategy.pdf

69 Gammage, B. Pascoe, B. 2021 *Country. Future Fire, Future Farming.*

70 https://www.mcwb.org.au/

71 https://foodsecurecanada.org/people-food-policy

72 https://www.inter-reseaux.org/wp-content/uploads/Note_FaimZe_ro_Sept2012_EN_vp.pdf

73 https://www.tni.org/files/download/50_giunta_2013_0.pdf

- Implement Food-sensitive planning and urban design (FSPUD)

Limiting the impact food production has on the environment, including overfishing

Key issues

Agribusiness

Australian agricultural policies that favour competition and export have enabled large-scale corporate agribusinesses to thrive at the expense of family farms, rural communities, animal welfare, and the environment, with Australia among the top seven countries worldwide responsible for 60% of the world's biodiversity loss between 1996 and 2008. The intensive production of a constantly narrowing range of species and breeds of animals and plants common in uniformity-loving capitalist agriculture is leading to greater risks in our food system. This focus on scale, intensification, and export has contributed to climate change, the rise of pandemics of zoonotic diseases such as coronavirus, and avian and porcine flus, as well as plagues of insects and rodents. In the case of zoonoses like coronavirus, one of the most significant risks is from intensive livestock production.

The High Level Panel of Experts on Food Security and Nutrition (HLPE) has called for a radical transformation of our food systems at different scales, asserting that '*there is already enough evidence to act. The short-term costs of action may seem high, but the cost of inaction is likely to be much higher, carrying with it a legacy affecting future generations.*'[74]

> This transformation is not easy to bring about because a considerable inertia, manifest in policies, corporate structures, education systems, consumer habits and investment in research, favours the currently dominant model of agriculture and food systems improvement in which environmental and social externalities are not fully considered and, therefore, not appropriately factored into decisions influencing the development of food systems meeting expectations for sustainability. (p.93)

There are other downsides of overly relying on supermarket chains. Their products use a narrow range of ingredients based on crops and varieties that grow the fastest or are the most efficient to produce in large quantities. Industrial agriculture causes environmental degradation and relies on monocultures which are susceptible to disease. And the whole system tends to support low wages and temporary jobs[75].

The NSW Government has a responsibility to its communities and ecosystems to act decisively to stop the most harmful practices of industrial food and fibre production, processing, and distribution.

[74] https://www.fao.org/3/ca5602en/ca5602en.pdf
[75] https://www.bbc.com/future/bespoke/follow-the-food/how-covid-19-is-changing-food-shopping.html

Land Degradation

Land degradation is a global issue for a number of reasons but most significantly because productive land is one of several resources where a reducing supply threatens our capacity to feed a growing world population estimated to be over 9 billion by 2050. In his book *Coming Famine*, Julian Cribb points out that of the 1.5 billion hectares of global farmland, a quarter is affected by serious degradation, up from 15% two decades ago.

In Australia, about two thirds of agricultural land is degraded. The major types of land degradation are soil erosion, soil salinity, soil acidity and soil contamination. The predominant cause of land degradation in Australia has been the permanent removal of native vegetation particularly in the wheat/sheep and higher rainfall zones - about 13% has been removed in the 230 years since colonisation. While dramatic vegetation changes occurred during the 40,000 years or more of Indigenous occupation due to climate variations and to a lesser extent the Aboriginal use of fire, no permanent loss of vegetation occurred due to human intervention.

Broadscale mechanical removal of vegetation allowed cropping and the establishment of introduced pasture species. Past cropping practices usually involved long fallows, frequent cultivations for weed control and stubble burning resulting in soil structure decline. These are ideal conditions for soil erosion to occur, especially in periods of drought, Often, widely adopted practices that promised significant productivity gains have been found to bring with them perverse outcomes such as rising water tables and soil acidity because an understanding of existing ecosystems was lacking.

> *We are using balance sheets that only show part of the picture. One large part of the assets has always been left off the accounts of the food producer. The natural assets. The natural capital. We are not accounting for our spending in the natural world.*[76]

Agricultural Transitions

Those involved in the primary industries sector play a crucial role in managing the State's natural resources with more than 70% of the State's land surface managed by producers and a significant portion of the State's aquatic and marine environments influenced by primary industries. In fact, the State's primary industries are heavily reliant on maintenance of high quality soil and water resources.

Fortunately, there have been significant changes in farming methods with new methods now being used that have increased our capacity to produce agricultural products with reduced impacts on landscapes. Minimum or no tillage (when conducted spray free), reduced use of pesticides and herbicides, holistic planned grazing, intercropping, pasture cropping, use of green manures, agroforestry, and crop-livestock integration are some of the methodological changes that have occurred. Vegetation clearance and retention legislation and policies have had a significant

[76] Chan, Gabrielle, 2021. Why you should give a f*ck about farming.

influence on slowing land degradation throughout Australia. Change in the way land should be used and managed has been promoted by national, state, and local strategies and numerous landholder and community programs, but with funding only slowly increasing over the past two decades.

Despite changes in attitudes and practices, we are still experiencing a net loss of native vegetation throughout Australia. And while soil loss is occurring at a lesser rate now, it is still faster than the rate at which soil is formed which means that soil-based agriculture is not sustainable in the long term, water quality cannot be restored to that found before European settlement and a net loss of biodiversity is continuing.

Primary industries and the NSW community face a rapidly changing, interconnected and interdependent world that is fiercely competitive, full of uncertainty and contains major challenges including: plateauing productivity, biodiversity loss, emerging biosecurity threats, uncertain energy, water and food security, climate change, bushfire threats, global pandemics, and habitat decline. These challenges are occurring in an environment of increasing pressure on government expenditure. The scale of these challenges necessitates a strategic focus on research.[77]

Agroecology

An explicit embracing of agroecology as a science, a set of practices, and a social movement that fosters the democratic participation of farmers in the food system is increasing in Australia alongside the growth of the regenerative agriculture movement. While the agroecological and regenerative farmers are all working to recuperate ecosystems from centuries of colonial damage, the agroecology movement more common amongst new smallholders is underpinned by notions of social and economic justice as well – putting solidarity with First Peoples first, and solidarity economies that reject corporate power and capitalism next.

Agroecological transitions commonly begin with simple substitution of organic inputs for synthetic fertiliser[78]. With better policy, financial, and social support, these simple changes can progress to more genuinely transformative actions such as already outlined in our discussion of agroecology[79].

AFSA president Tammi Jonas describes their agroecological farm as follows:

> *Our cattle are moved daily in a holistic planned grazing model around paddocks throughout which we have planted thousands of native and exotic trees for shade, fodder, carbon sequestration, and beauty. The pigs are moved regularly as well through a series of paddocks with mobile housing and feed troughs to spread their impact, as we seek to maintain at least 90% groundcover throughout the year.*
>
> *Livestock are fed so-called 'waste' – surplus, damaged, or unwanted produce from other food and agriculture systems in Victoria, creating a net ecological benefit by diverting many tonnes*

77 http://www.australiancollaboration.com.au/pdf/FactSheets/Land-degradation-FactSheet.pdf

78 Gliessman 2007

79 HLPE 2019

of organic waste from landfill, and exiting the fossil-fuel-intensive model of segregating feed production from livestock farming. Water is pumped around the farm using old piston pumps converted to solar with salvaged materials from the local tip. 95% of our produce is sold via community-supported agriculture (CSA) to 80 household members in monthly deliveries of mixed cuts and smallgoods, and the rest through our farm gate shop.

Approaches like 'climate-smart agriculture' or 'nature-based solutions' address just some aspects of the crisis in the food system and largely re-entrench the inequity and ecological degeneration that is so characteristic of today's food system. In contrast, agroecology explicitly enhances bottom-up processes of development and food system transformation based on the needs, knowledge, priorities and agency of people and nature, rooted in territories[80].

Fisheries

Seafood demand in Australia (especially in NSW) far exceeds sustainable fisheries production from its nutrient-poor waters. Australia relies on imports for 75% of domestic seafood consumption.

Our misuse of resources is not limited to the soil. The orange roughy, a fish discovered by commercial fisheries in the 1980's, was all but eliminated by overfishing in only a few years. The fish can live to be 140 years of age. They congregate for breeding in great columns in the Southern Ocean and when commercial fishers discovered this phenomenon, they plundered the columns again and again. This didn't just interrupt the breeding but drought the species to the point of obliteration.[81]

Bycatch, the incidental capture and destruction of untargeted[82] fish and seabirds in fishing nets, is something we should not tolerate. Some nets have been improved so that bycatch is reduced, but it is still unsustainable, as evidenced by NSW losing 30 per cent of its reef fish stocks in the past ten years. If that is repeated in the next decade, our fish stocks may be on an ever-downward spiral.

We must demand that we don't catch unwanted fish in the pursuit of the small number of desirable species. The industry must participate in this science but before beginning must agree that our current methods are part of the problem.[83]

Over-fishing remains a concern in Australian waters in spite of some decrease with the rise of aquaculture systems. The Global Fishing Index study, involving more than 500 fisheries from around the world, has ranked Australia's sustainable fishing capability as 24.9 out of 100.[84]

Aquaculture is also not the answer. The increase of intensive aquaculture systems has come at a serious price to Australian and global marine and terrestrial waters. Concentration of nutrient from

[80] https://www.actionaidusa.org/wp-content/uploads/2021/12/Shifting-Funding-to-Agroecology.pdf
[81] Gammage, B. Pascoe, B. 2021 *Country. Future Fire, Future Farming.*
[82] Gammage, B. Pascoe, B. 2021 *Country. Future Fire, Future Farming.*
[83] Gammage, B. Pascoe, B. 2021 *Country. Future Fire, Future Farming.*
84 https://www.minderoo.org/global-fishing-index/

fish feed and effluent leads to algal blooms with cascading effects of coral die-offs and decreased oxygen in waterways, sometimes with massive fish kills as a result.

AFSA supports the recent introduction of a Harvest Strategy policy and guidelines by DPI in NSW which now provides a comprehensive framework to prevent overfishing. It aims to help support conservation and ecologically sustainable development of fisheries resources and further the objectives of the Fisheries Management Act 1994[85].

Indigenous Food and Knowledges

Bill Gammage and Bruce Pascoe encourage us to learn from Indigenous methods of land management and bring back the native plants that evolved in these ancient soils, including perennials that don't need fertilisers and pesticides or extra water to flourish. They urge us to practise a form of farming that truly responds to the ebb and flow of Country and is powered by old ideas to reinvigorate ancient conversations about the human connection to nature.[86]

In the past, humans were never in a position to destroy the earth. Now we are, and our folly is explained away as collateral damage of our system of society and economy. The earth is not our collateral, we are hers.[87]

Recommendations

- Improve the monitoring of recognised threats to biodiversity for food and agriculture (habitat destruction, pollution, inappropriate use of agricultural inputs, overharvesting, pests, diseases and invasive alien species), and strengthen efforts to reduce their negative impacts[88]
- Develop financial mechanisms to account for loss of soil, carbon, and water from industrialised food and agricultural systems and build this cost into food prices through taxation
- 'Reduce pollution from all sources to levels that are not harmful to biodiversity and ecosystem functions and human health, including by reducing nutrients lost ot the environment by at least half, and pesticides by at least two thirds and eliminating the discharge of plastic waste'[89]
- Implement policies that support diversified, sustainable, equitable markets that enhance connections between producers and eaters
- Provide public facilities to host farmers' markets, food and seed fairs and festivals for agroecological and other diversified sustainable local producers
- Facilitate the registration of agroecological and other sustainable food producers with trade and food-safety authorities that accommodates their size and production capacity

[85] https://www.dpi.nsw.gov.au/fishing/harvest-strategies/policy-and-guidelines
[86] Gammage, B. Pascoe, B. 2021 *Country. Future Fire, Future Farming.*
[87] Gammage, B. Pascoe, B. 2021 *Country. Future Fire, Future Farming.*
[88] FAO, 2019. *State of the World's Biodiversity for Food & Agriculture*
[89] CBD Global Biodiversity Framework, Draft 1, Target 7

- Support viable farmer associations that share knowledge and create strong networks to leverage the inputs needed (e.g. waste stream feed, cover crop seed) and processing infrastructure needed (e.g. abattoirs, boning rooms, grain mills, dairy processing)
- AFSA supports the recent introduction of a Harvest Strategy policy and guidelines by DPI in NSW which now provides a comprehensive framework to prevent overfishing. It aims to help support conservation and ecologically sustainable development of fisheries resources and further the objectives of the Fisheries Management Act 1994[90].
- Recognise the rights of First Peoples in harvesting fish and other traditional foods, and immediately stop penalising them for these activities (such as on the south coast of NSW).

[90] https://www.dpi.nsw.gov.au/fishing/harvest-strategies/policy-and-guidelines

Addressing complex challenges to food production including declining pollinating species and productive fertilisers

Key issues

Soil

The 2012 appointment of Australia's first Soil Advocate (the late Sir Michael Jeffery) marked a shift in the federal government's acknowledgement of the importance of healthy soils for healthy agro-ecosystems and food security. Soils for Life supports innovative farmers and land managers who demonstrate 'high performance in regenerative landscape management'.[91]

The introduction of carbon credits and more recently, biodiversity credits, also signifies the increasing value governments are placing on soil and biodiversity. Unfortunately, the creation of tradable credits actually serves to lock in forms of economic valuing and rationalising that ultimately undermine the integrity of intact and healthy ecosystems. Carbon mining and destruction can continue in many places only to be purchased as credits from other sources to achieve 'net zero' losses that fail to protect the Australian environment holistically. Many of these carbon credits are also granted to projects where the carbon will eventually be lost, such as in pine plantations harvested within 40 years.

The American state of New Mexico introduced a Healthy Soil Act to support farmers and other land stewards to protect and nourish their land. It established 5 Soil Stewardship Principles:

1. Keep soil covered
2. Minimise soil disturbance and external inputs
3. Maximise biodiversity
4. Maintain living roots
5. Integrate animals

These principles align closely with practices in agroecology as discussed earlier. There is an excellent website with many examples of how to implement the principles.[92]

Agri-chemicals

There are many complex challenges to food production in NSW, and the topic of declining pollinating species can be largely traced to the synthetic inputs used in conventional and industrial

[91] http://www.soilsforlife.org.au/about.html.
[92] https://www.nmhealthysoil.org/category/soil-health-principles/

farming methods along with increasing pollution levels[93]. These have led to declining biodiversity and health of our natural soil, plant and water systems to support healthy levels of species. These also impact the quality of food produced and the ability of our food to maintain good health, shown in increasing health costs across the state.

Disappearing habitats and use of pesticides are driving the loss of pollinator species around the world, posing a threat to ecosystem services that provide food and wellbeing to many millions – particularly in the Global South – as well as billions of dollars in crop productivity[94]. The bees, butterflies, wasps, beetles, bats, flies and hummingbirds that distribute pollen, vital for the reproduction of over 75% of food crops and flowering plants -- including coffee, rapeseed and most fruits -- are visibly diminishing the world over, yet little is known of the consequences for human populations.

The contribution to Australia's agricultural output from crops and commodities that are responsive to pollination by insects is significant. The range of insect-pollination-responsive crops includes many that provide high value use of limited resources such as water and soil fertility. Whilst many different insects can affect pollination of one or another of these responsive crops, the European honeybee has for many reasons become the predominant pollination agent of choice in most parts of the world including Australia and producers of responsive crops have come to depend on the services provided by honeybees to achieve economically viable productivity.

More than 8000 pesticide products are formally registered for use in Australia (25% of these being used in households and 75% in agricultural settings). Pesticide use in Australia has been increasing from the early 1990s to-date. This has brought about numerous benefits to urban as well as rural settings due to the fact that dangerous and annoying creatures have been kept under control. But there have been challenges as well. Cases of pests becoming resistant to chemicals and concerns about the environmental impact of this activity have triggered several debates.[95]

Some chemicals are applied on crops when they are growing: others are used to protect produce after it is harvested. Chemicals used for insect control in crops may pose a threat to honeybees located or working in the vicinity of treated crops. The bees can be killed or otherwise adversely affected by many commonly used agricultural chemicals. The conflict between chemical use and insect pollinators requires careful attention to the choice of chemical and the timing and method of application. For example in spring 1998, drift from aerial spraying with dimethoate in a Western Australia barley crop damaged honeybee populations in more than 100 hives brought in to pollinate an adjacent canola crop. Managed hives can be moved to avoid insecticide problems if timely advice is given, but wild insect populations are more vulnerable. Most poisoning occurs when pesticides are applied to flowering crops, pastures and weeds. Pesticides should be kept to a minimum while hives remain in the vicinity. The other threat associated with the use of agricultural chemicals is the contamination of products including honey by such chemicals, either as a result of applications

[93] https://www.abc.net.au/news/science/2022-01-20/air-pollution-pollination-flowers-crops/100764594

[94] FAO, 2019.

[95] http://www.ncrrsepa.org/pesticide-use-in-australia/

made to the plants from which the bees source the products or from chemicals applied to control pests or diseases of the bees themselves.[96]

The destruction of remnant vegetation through clearing and diseases like dieback also threatens the level of incidental pollination services available from not only feral honeybees but from native bee populations as well. "In a new report by the current Special Rapporteur on Food, Dr. Hilal Elver, written in collaboration with the Special Rapporteur on Toxics, a clearer account is provided of global pesticide use in agriculture and its impact on human rights. The report also canvasses the negative consequences that pesticide practices have had on human health, the environment and society, which are underreported. It also examined how to better protect farm workers, consumers and vulnerable groups, as well as what natural resources are necessary to support sustainable food systems.[97] The report stated that pesticides kill 200,000 people each year and that pesticides do not increase agriculture yields."

Current work on a post-2020 Global Biodiversity Framework by the UN Convention on Biological Diversity advocates for a reduction in pesticide use of 'at least two thirds' and 'eliminating the discharge of plastic waste.'[98]

When some Western nations decided that the threat of particular agricultural chemicals was too high to tolerate, they banned their use. Australia is still using many of those chemicals, but there is movement her for us to control the use of such dangerous poisons[99]. Consumers should have the right to choose.

We can move away from the use of pesticides through Integrated Pest Management (IPM) which is a generic approach to managing pests, weeds and diseases in a wide range of agricultural and horticultural situations. IPM is intended as an environmentally sensitive approach to pest management that aims to reduce the impact of undesirable organisms to sustainable levels without necessarily eliminating the pest. This enables avoidance of both long term and short term adverse impacts that are often associated with a total reliance on agricultural chemicals targeted at eliminating pest organisms. IPM programs seek to combine the manipulation of multiple aspects of the environment, including natural predator and competitor organisms, with minimal, timely use of chemicals to disadvantage a specific pest organism thereby limiting both its population and its impact on the enterprise in question.

In addition to the arguments and evidence in this section, we refer back to previous content on the benefits of agroecological farming, which use less or no synthetic inputs, and embrace more ecologically-sound ways of farming, including the use of biofertilisers often made on farm rather than industrial synthetic fertilisers.

---

[96] https://www.agrifutures.com.au/wp-content/uploads/publications/10-081.pdf

[97] UN Special Rapporteur on human rights and toxics, Pesticides and the Right to Food, 7 March 2017, <http://www.srtoxics.org/2017/03/pesticides-right-food/>.

98 https://www.cbd.int/article/draft-1-global-biodiversity-framework

[99] Gammage, B. Pascoe, B. 2021 *Country. Future Fire, Future Farming.*

Intensive Livestock Production

There is a growing area of scientific literature establishing the dangers of high-density housing of animals in confined spaces on the grounds of economies of scale. Research has shown that this results in bacterial and viral acute infections within the very environments which such practices intend to evolve greater transmissibility and resistance.[100] The sheds ostensibly built to keep disease out are instead the environments in which pathogenic species flourish. Highly industrial models promote highly pathogenic strains of avian influenza. H7N4 and H7N7, for instance, have been documented on large broiler and layer poultry operations in Victoria and Queensland since the 1970s. "The concentration, scale, and throughput of animal production that are driving the new disease ecology, selecting for the evolution of greater deadliness, and increasing the geographic extent of pathogen transmission."

Genetically Modified Organisms (GMO)

The precautionary principle is a common-sense approach which derived from the World Commission on Environment and Development (WCED) report, led by then Norwegian Prime Minister, Gro Harlem- Brundtland. The precautionary approach states if an action or policy has a suspected risk of causing harm to either the public, or the environment – then the burden of proof is that "not harmful" falls on those taking the action. In other words, in the absence of proof that GMOs are not harmful, the use of GMO seeds should not be used until they are proven safe.

Pollinator decline

"The top three global causes of pollinator loss are habitat destruction, followed by land management -- primarily the grazing, fertilisers and crop monoculture of farming -- and then widespread pesticide use, according to the study[101]. The effect of climate change comes in at number four, although data are limited.

"Air pollution reduces ability for butterflies and bees to pollinate flowers and crops, study finds. In a controlled field trial, the abundance of bees, flies, moths and butterflies and how often they visited flowers was far lower in the presence of nitrogen oxides (NOx) and ozone (03), compared to plots where those pollutants were absent.

"Nitrogen oxides mostly come from agricultural emissions but are also produced when fossil fuels are burnt. Combined with sunlight and volatile organic compounds, they can form ground-level ozone (O3)."[102]

[100] Wallace, 2016.

[101] https://www.sciencedaily.com/releases/2021/08/210816112104.htm

[102] https://www.sciencedaily.com/releases/2021/08/210816112104.htm

Being able to farm and utilise the honey from Australian bees would be a very useful way of future-proofing the Australian honey industry, given the dangers posed by European foulbrood disease.[103]

Recommendations

- Introduce a NSW Healthy Soils Act (such as the New Mexico Healthy Soils Act)[104]
- 'Reduce pollution from all sources to levels that are not harmful to biodiversity and ecosystem functions and human health, including by reducing nutrients lost ot the environment by at least half, and pesticides by at least two thirds and eliminating the discharge of plastic waste'[105]
- Provide further resources for chemical residue monitoring in fresh and processed foods produced within and imported into Australia
- Develop a national food contaminants register (for genetically modified foods and chemical/ pharmaceutical residues)
- Labelling requirements to enable eaters to identify the use of synthetic inputs in food production
- Increase regulation to limit GMOs
- Implement One Health approaches to livestock production to limit the risks of zoonotic disease and anti-microbial resistance

[103] Gammage, B. Pascoe, B. 2021 *Country. Future Fire, Future Farming.*
[104] https://www.nmhealthysoil.org/category/soil-health-principles/

[105] CBD Global Biodiversity Framework, Draft 1, Target 7

Consideration of workforce challenges and skills development

Key issues

Ageing Workforce

An ageing workforce in Australia presents significant challenges for the future, with an urgent need to develop a younger workforce across the food and agriculture sector. With the average age of farmers across Australia at 58 years of age (in 2018-19),[106] our next generation will need to step in to take over various roles across production and distribution of Australia's food and fibre to ensure these industries are able to continue uninterrupted.

Access to Land

Access to agricultural land is a huge barrier to entry for young farmers. Whether looking to farm on small plots in urban areas, or engage in large-scale operations, the cost of farming makes a career in farming both unattainable and unenticing. Land prices are just one hurdle, alongside capital required for infrastructure and equipment, changes to lending and misconceptions about agriculture.[107] In recent years, there has been a rise in the creation of land-sharing platforms, such as AFSA's FOOPL (Farming on Other People's Land),[108] Farmer Incubator[109], and Young Farmers Connect Farm Links[110] to make inroads in connecting young people with opportunities to farm.

Labour conditions

Fair working conditions on large farms and in processing facilities is under scrutiny, as agriculture in Australia has a long and continuing history of slavery, beginning with blackbirding, and continuing through inadequate pay and working conditions for Pacific Islander people and backpackers.

Throughout the COVID-19 pandemic, the crisis has highlighted the current reliance on migrant labour for picking and packing in the agriculture industry. The two main types of foreigners picking fruit in Australia include those on the government's seasonal worker program (typically from Pacific countries) and working holidaymakers (often backpackers) who must complete 88 days of regional farm work to extend their visas for a second year.[111] The industry's pre-pandemic workforce shows of the 65,000 harvesters working around the country in 2019, 52,000 were on working

[106] https://www.abs.gov.au/statistics/industry/agriculture/agricultural-commodities-australia/2018-19
[107]https://www.abc.net.au/news/rural/2021-02-03/young-farmers-struggle-to-get-foot-in-the-door/13112816
[108] https://afsa.org.au/farming-on-other-peoples-land/
[109] https://www.farmerincubator.org/
[110] https://www.youngfarmersconnect.com/farm-links
[111]https://www.theguardian.com/australia-news/2020/dec/19/ripe-for-reform-pandemic-crisis-exposes-fault-lines-in-australias-fruit-industry

holidaymaker visas, while 8,000 were on the seasonal worker program, and only 5,000 were Australian citizens and permanent residents[112]. As an often undocumented and underpaid workforce, unfortunately there have been reports that these migrant workers have been misled, indebted and exploited[113].

Fair working conditions on large farms and in processing facilities is under scrutiny, as agriculture in Australia has a long and continuing history of slavery, beginning with blackbirding, and continuing through inadequate pay and working conditions for Pacific Islander people and backpackers.

The Covid-19 pandemic has highlighted the unsafe working conditions within the food processing sector, namely meat-processing facilities and abattoirs, as employees require close interaction on processing lines and the work is of rapid nature[114].

The increasing trend of consolidation of ownership in ever-larger processing facilities has detrimental impacts on livelihoods and communities. As food production industrialises, the people who work within the operation become a de-skilled workforce, learning only one task across a complex system, leading to more injuries such as RSI (especially in cold temperature and with vibrating equipment)[115]. Additionally, the shutting down and consolidation of processing facilities, such as abattoirs and mills, has led to a depopulation of rural areas and harvest labour shortages.

This is in contrast to the UN Declaration on Rights Peasants and Other People Working in Rural Areas (UNDROP), which in Article 15.4, states, “peasants and other people working in rural areas have the right to determine their own food and agriculture systems, recognised by many States and regions as the right to food sovereignty. This includes the right to participate in decision-making processes on food and agriculture policy and the right to healthy and adequate food produced through ecologically sound and sustainable methods that respect their cultures.”

Local systems with fewer steps between the grower and the consumer often support organic and sustainable farms, which are committed to paying fair wages and are more community-driven and diverse. They also offer transparency – something that extended supply chains are not usually able to provide[116].

Recommendations

- Access to agricultural land needs to be reviewed, with viable pathways for individuals and businesses onto arable land, to establish local food systems that prosper. This is linked with

[112] http://freshproduce.org.au/workforce-shortages/industryemployment/
[113] https://www.smh.com.au/interactive/2016/fruit-picking-investigation/
[114] https://www.worksafe.vic.gov.au/managing-covid-19-exposure-meat-and-poultry-processing
[115] https://www.repetitive-straininjury.co.uk/factory-workers-develop-rsi/
[116] https://www.bbc.com/future/bespoke/follow-the-food/how-covid-19-is-changing-food-shopping.html

our above recommendation about 'Food Lands' with reference to the French model of protecting agricultural land for those who have studied agriculture and purchase it to farm.

- "The UN Declaration on Rights Peasants and Other People Working in Rural Areas, in Article 15.4, states, "peasants and other people working in rural areas have the right to determine their own food and agriculture systems, recognised by many States and regions as the right to food sovereignty. This includes the right to participate in decision-making processes on food and agriculture policy and the right to healthy and adequate food produced through ecologically sound and sustainable methods that respect their cultures."
- Food and agricultural workforce conditions need to uphold human rights declarations including UNDROP
- Ensure the implementation, monitoring and compliance of recent Fair Work changes guaranteeing a minimum wage for all food and agricultural works[117]
- Urgent need for local processing facilities

[117]https://www.theguardian.com/australia-news/2021/nov/04/australian-farm-workers-entitled-to-minimum-wage-in-major-industry-shake-up?fbclid=IwAR14R5-4BXBS38PU2AEKDGwxyPJFRugdFsG4PgUvpn22I2ViSHp03aXT6eU

Reducing food waste and destruction

Key Issues

Tackling Australia's Food Waste

One third of the world's food is wasted.

- 25% of water used in agriculture is used to grow food that is ultimately wasted – throwing away one burger wastes the same amount of water as a 90 minute shower
- Food waste produces eight per cent of global greenhouse gas emissions. If food waste was a country it would be the third largest greenhouse gas emitter, behind the USA and China
- Food waste is also a major problem in Australia. The National Food Waste Strategy Feasibility Study produced by Food Innovation Australia Limited reported that:
    - Food waste costs the economy around $36.6 billion each year
    - Each year we waste around 7.6 million tonnes of food across the supply and consumption chain – this wastage equals about 312kg per person, equivalent to around one in five bags of groceries or $2,000 to $2,500 per household per year
    - Food waste accounts for approximately 3% of Australia's annual greenhouse gas emissions
    - Australia uses around 2600 gigalitres of water to grow food that is wasted – this equates to the volume of water in five Sydney Harbours
    - The amount of land used to grow wasted food covers in excess of 25 million hectares, a landmass larger than the state of Victoria

According to the most recent report on global food loss and waste from the Food and Agriculture Organisation of the United Nations (FAO) we lose or waste about 30% of all the food that is produced globally. AFSA recognises that this is no lesser problem in NSW than it is in other parts of the world, although the reason for that waste may be different.

Food Loss and Food Waste

When food is lost or wasted, land and water resources are wasted, pollution is created and greenhouse gas emissions (GHGe) are emitted to no purpose. To make matters worse, even within a wealthy country like Australia, there are still people unable to gain access to sufficient food.

Food waste is a multidimensional challenge, which means we also need to look for several solutions. We can break it down into **food loss** and **food waste**.

- **Food loss** occurs at the production level and continues throughout the supply chain until it reaches the retail sector.
- **Food waste** is what occurs at the retailer and household level.

This means the solutions required to deal with these problems are different depending on the nature of the issue and where it is occurring.

For producers, being able to ensure that harvest can occur at the right time to ensure that produce is available and ready for market is critical. This means that supply chain inputs such as harvest labour and transport are critical to ensuring that this is not a significant source of food waste. During the COVID pandemic, accessing labour and ensuring that transport is available at the right time have been challenging.

An ongoing issue for producers has been the obligation to supply 'beautiful' produce – that is unblemished, standard size and shape as required by larger retailers. These are not features that impact on the quality, taste and edibility of the produce at all but impact significantly on the unnecessary waste produced and result in producers bearing that cost or receiving significantly less for a product that is not materially different. This issue has, to some degree, been addressed through a variety of 'ugly' fruit and vegetable programs and campaigns, but these tend to be of marginal value as they simply serve to emphasise that this is marginal produce when it is not.

It is also important to educate consumers about food waste and while the efforts of programs such as Love Food Hate Waste are welcome, there is still more that needs to be done to help consumer better understand the need to purchase wisely, store fresh food appropriately and utilise what they have in the fridge and pantry rather than turning to easy alternatives – thereby ensuring perfectly good food is thrown into the bin.

Acknowledging that there will always be some waste in the food system it is also critical that such waste is well managed. Where fresh food imply doesn't sell in a timely way, there needs to be easy access to that produce for food service charities such as OzHarvest and Secondbite, along with many others. Accessing fresh food for those who are unable to feed themselves properly is an important role played by these organisations – which rely on accessing the excess produce that is not used by others.

Food waste that is beyond use should not end up in landfill and ensuring that there are appropriate facilities to transform that waste into other products such as compost, digestate or energy is the key to ensuring that food and the minimal food waste that comes from it is included in developing a circular economy. This means understanding where such facilities are best located in order to take best advantage of the food waste resource while at the same time meeting community expectations and environmental health standards.

Although food waste is itself an issue, there is also the compound issue of food packaging. In particular non-recyclable food packaging that simply serves to add to the waste problem of single use plastics. France has recently implemented a ban on plastic wrapping of fresh fruit and vegetables as part of their efforts to reduce the impact of single use plastic packaging and other European countries will soon be following suit. Moving the food system to be part of a circular economy means ensuring that all packaging is either recyclable or compostable and that there are relevant processing facilities to manage the packaging once it's use is finished.

Government Targets

Australia has set a goal to halve its food waste by 2030, aligning with the UN's Sustainable Development Goal 12.3.

Actions to be undertaken to reduce food waste are laid out in the National Food Waste Strategy Roadmap and the National Waste Policy Action Plan.

Some of these actions include:

- Establishing Stop Food Waste Australia to support the National Food Waste Strategy
- A $4 million investment to establish Stop Food Waste Australia, which will implement the Australian Food Pact, sector actions plans, and other initiatives to reduce food waste across the supply chain.
- Developing the Australian Food Pact voluntary agreement for industry
- The Australian Food Pact brings together organisations from all parts of the food chain to identify solutions to reduce food waste and increase productivity
- Diverting more food to the food rescue sector
- Redistributing food that would otherwise be wasted will help feed the more than one in five Australians who do not have adequate access to food
- Support for education campaigns
- Increasing public awareness about the scale of the food waste problem and its negative impacts is an important part of reducing food waste, particularly in households
- Research and technological improvements
- Investment in agricultural efficiency and innovation, waste treatment infrastructure, and ways to create value from food waste will reduce the amount of food waste ending up in landfill

Love Food Communities

The 2 year NSW trial launched in 2019 to reduce food waste through the Love Food Communities program[118] is a step in the right direction. The projects are an important part of the NSW Government's commitment to halve food waste by 2030:

- Participants will need to complete a survey to understand how much food they are throwing out so that they can change their food practices and learn how to better store food and reuse leftovers.

[118] https://www.nsw.gov.au/news/program-to-reduce-food-waste-nsw

Recommendations

- Support innovative models for distribution and supply of food to shorten and decentralise supply chains, and reconnect producers and consumers (E.g. community-supported agriculture, food hubs, farmers markets, on-farm sales and farmgate stalls)
- Remove aesthetic food standards from contracts between producers and retailers
- Enact legislation to prohibit the disposal of food and organic matter in landfill by the end of 2023
- Financially support the development of community-led and local circular economies e.g. community composting, FOGO collections in all local-government areas
- Invest in consumer education e.g. food storage, best before vs use by dates, seasonality to reduce food waste
- Implement the NSW Plastics Policy to reduce single use and unnecessary packaging
- Expand the Love Food Communities program beyond the current 4 location focus to the entire NSW community

Developing technologies to bring food production into cities

Key issues

Technology in food production

AFSA holds serious concerns over attempts to apply digital and technology innovations to food production and supply. As La Via Campensia outlines, "new attempts are also being made to envision a digital future – of farming without farmers, fishing without fishers- all under the garb of digitalisation of agriculture and to create new markets for synthetic food."[119] We believe bringing food into cities is inhibited by poor planning rather than an issue to be solved by technology.

In addition, there is a need to invest in the development of supply chain infrastructure in regional areas for small-scale producers such as abattoirs, grain mills, and on-farm and cooperative-managed processing facilities. Initiatives to connect producers to consumers are also vital, such as Open Food Network and other open-source platforms which create online marketplaces for small-scale food producers, to connect producers and eaters without relying on the supermarket duopoly of Woolworths and Coles. The Open Road[120] program is currently being piloted in Victoria

Urban agriculture

Given the social and economic benefits there is every reason state and local governments should provide resources to support the growing trend of urban agriculture. Examples include permaculture principles of small-scale intensive growing, and integrating gardens into building designs. Initiatives include prioritising vacant land for food production, 'cut the red tape' when it comes to community food initiatives (including growing productive plants on verges), and of the need to integrate food growing into new public housing and high density developments.[121]

---

[119] https://viacampesina.org/en/food-sovereignty-a-manifesto-for-the-future-of-our-planet-la-via-campesina/

[120] https://about.openfoodnetwork.org.au/open-road/

[121] AFSA Peoples Food Plan, 2013

This has been evident in Cardinia Food Circles, Victoria, whereby co-design principles were utilised to build a shared understanding of the Cardinia Shire food system, and to address its challenges and opportunities, amongst a diverse and representative group of stakeholders[122]

Recommendations

- Strengthen efforts to identify 'Food Sheds' by consulting with shires and taking into consideration research by UTS, SPUN, and Food Futures Sydney in relation to peri-urban planning.
- Enable zoning for smaller, localised food production and associated processing and distribution infrastructure in peri-urban areas with targeted reforms of SEPPs
- Implement Food-sensitive planning and urban design (FSPUD)
- Invest in supply chain infrastructure in regional communities
- Support the farming and utilisation of urban, open and underutilised spaces by introducing appropriate SEPP's for Councils to adopt urban agriculture policies and support new and existing activities

[122] Lourival I, Rose N. From Nar Nar Goon to Koo Wee Rup: can participatory food policy making processes contribute to healthier and fairer food systems in the Australian municipal context? A case study from Cardinia shire, Melbourne. Journal of hunger & environmental nutrition. 2020:1-35.

Development and growth of the food industry (raw or processed) as an export

Key issues

Export as an issue

Exports and growth are the current focus of Australian policymakers and large-scale farmers, and they are also at the root of the environmental, social, and economic issues we face. Australian farmers produce 93 per cent of Australia's food, even while exporting some 70 per cent of what we produce overseas. Meat producers are among the largest exporters, with on average 75% of beef and veal, and 73% of lamb and mutton, sent offshore[123]. The productivist and export focus is often framed within a moralising discourse that Australian agriculture is 'feeding the world'. Yet, the reality is that exports are directed not to countries suffering widespread food insecurity, but rather the 'highest value markets in developed economies and to the middle classes in developing countries'[124].

> *The focus on growing more has made agribusiness input companies and food processors rich, but keeps many farmers chasing their tails, which can result in their land condition going backwards. Buy more land, buy more machinery, take on more debt, require more inputs and then buy more land. Ad infinitum.*[125]

> *Post-invasion Australian farms have swung between very large operations owned by squatters to smaller family farms encouraged by government land acts to increase food production for export. Australian governments, big agribusiness and many farming advocates have been singing the productivity song for a long time. These messages accelerated in the financial deregulation of the 1980's. Get big or get out. Produce more with less. Buy bigger machinery. Grow more tonnes. Trade in futures. Trade in water. Get rid of your collectives, cooperatives and single-desk trading platforms.*[126]

AFSA affirms the following:

> *"The promoters of the capitalist world order realise that food sovereignty is an idea that impinges on their financial interests. They prefer a world of monoculture and homogenous tastes, where food can be mass-produced using cheap labour in faraway factories, disregarding its ecological, human and social impacts. They prefer economies of scale to robust local economies. They choose a global-free market (based on speculation and cut-throat competition) over solidarity economies that require more robust territorial markets (local peasant markets) and active participation of local food producers. They*

[123] ABARES 2021
[124] Muir 2014: 5
[125] Chan, Gabrielle. 2021. Why you should give a f*ck about farming
[126] Chan, Gabrielle. 2021. Why you should give a f*ck about farming

prefer to have land banks where industrial-scale contract farming would replace small-holder producers. They inject our soil with agro-toxics for better short-term yields, ignoring the irreversible damage to soil health. Their trawlers will again crawl the oceans and rivers, netting fishes for a global market while the coastal communities starve. They will continue to try to hijack indigenous peasant seeds through patents and seed treaties. The trade agreements they craft will again aim to bring down tariffs that protect our local economies."[127]

Climate Change

The focus on scale, intensification, and export has contributed to climate change, the rise of pandemics of zoonotic diseases such as avian and porcine flus, and plagues of insects and rodents. The intensive production of a constantly narrowing range of species and breeds of animals and plants common in uniformity-loving capitalist agriculture is leading to greater risks in our food system. In the case of the rise of zoonoses like coronavirus, one of the most significant risks is from intensive livestock production.

Corporate Domination and Fair Trade

There is extensive evidence to suggest, that in the current, corporate dominated globalised food system:

- family farmers everywhere struggle to earn a decent living
- fresh, nutritious food is becoming less affordable for many people
- the industrialised and globalised agriculture and food system creates as much as 57% of total global greenhouse gas emissions
- industrialised agriculture (via deforestation and land use change) is a major factor in the mass extinction of other species
- animal welfare standards are barely existent in factory farms
- resources such as soil, water, phosphate and cheap, readily accessible oil, on which the industrial food and agriculture system depends, are in sharp decline
- as much as half of all food produced is wasted
- we need fair trade, not just free trade

The free trade agenda may have been relevant in an era of cheap fossil-fuel driven, globalisation; but this era is coming to an end as these forms of energy become depleted. Just as the new economy of the future will be increasingly powered by renewable energy sources, so too the engines of economic development will need to become increasingly regionalised and localised.

Food sovereignty doesn't mean the abandonment of trade and the pursuit of total food self-sufficiency. Enjoying the foods from other countries and cultures is one of life's pleasures, and enriches us all. But trade should be conducted on the basis of some fundamental principles that

127 https://viacampesina.org/en/food-sovereignty-a-manifesto-for-the-future-of-our-planet-la-via-campesina/

genuinely work to the universal benefit: solidarity, transparency, respect for human rights, and ecosystem integrity. Trade, in other words, that is fair to soil, water, air, plants, animals, farmers and eaters everywhere. That Free Trade Agreements (FTAs) work to the benefit of most farmers is a myth promoted by governments and big corporate agri-business. Consumers may, in the short term, enjoy the benefits of cheaper food imports, but this is at the cost of long-term food sovereignty.

Recommendations

- Remove export growth from government objectives, these objectives should relate to the growth of agroecological farming systems and improvements in our soil, water, air and domestic food security
- Develop grants for on-farm and cooperatively owned processing infrastructure such as abattoirs, dairy processing, grain mills, and more (e.g. Artisanal Agriculture grants in Victoria)
- In the development of grant opportunities in food and agriculture, remove export requirements for funding eligibility
- Conduct an independent review of all FTAs, and of all their impacts – social, environmental and economic - is long overdue, and the Australian people should have the opportunity to debate its findings and recommendations
- Develop policy options in conjunction with the Australian Fair Trade and Investment Network (AFTINET) - a national network of community organisations and many individuals concerned about trade and investment policy
- Support fair, transparent and cooperative trade

Implications for quality control and labelling of processed / manufactured food

Key issues

Nutritional claims

A clear and strong message from national forums conducted by AFSA over more than a decade is that those who produce and promote unhealthy food must have their freedom to act curtailed in the interests of society as a whole. Similar to tobacco regulation, the food industry could and should be subject to a range of legislative and regulatory approaches aimed at reducing the intake of foods of low or non-existent nutritional or health benefit. Proper regulation of the marketing activities of the industry will save the country tens of billions in healthcare costs over the coming decades. It will also help prevent millions of Australians from having to cope with the pain and suffering of diabetes and other obesity- related diseases.

While the issues are complex, regulatory approaches such as restriction of junk food advertising, stronger food labelling laws and taxes on unhealthy foods have to be part of our national conversation around healthy eating.[128]

One issue is that most of the regulation of food labelling (on nutrition) takes place at a federal level through FSANZ and associated governance bodies. There is scope for state governments to influence the FSANZ Code (containing standards on nutrition labelling) through their membership of the Australia and New Zealand Ministerial Forum on Food Regulation, so they can advocate through that to implement additional regulation regarding things like added sugar labelling.

> *Unlike drug corporations, food manufacturers do not need to make explicit health or disease prevention claims on their food labels to communicate health benefits to consumers. Food companies can instead rely on simple nutrient and ingredient claims on their products —such as "high" in protein, fibre, omega 3 fats, or antioxidants—which then function as implied health claims. These claims are intended to produce what we may call "imagined health benefits," whereby consumers form a link between particular food components and their health benefits. One of the aims of nutritional marketing is to populate the imaginations of consumers so as to create nutritional halos around commercial products. Importantly, food labelling regulations in most countries facilitate and are complicit with these implied health claims by permitting the use of nutrient content claims on most ultra-processed food.*[129]

[128] Australian Food Sovereignty Alliance : The People's Food Plan — working paper, February 2013
[129] Gyorgy Scrinis, Ultra-processed foods and the corporate capture of nutrition—an essay, 2020 https://www.bmj.com/content/bmj/371/bmj.m4601.full.pdf

Regulations

There are two sides to the regulatory burden, in that current quality control and labelling regulations are onerous and inhibit the growth of small scale food businesses - who are often the producer, processor, distributor and retailer.

Whilst there exists some national voluntary production labelling such as organic, fair trade, or ethical production, this system needs to be turned on its head. The regulations should cover declaration where products have had synthetic inputs, GMO or are farmed in feedlot conditions, rather than putting the onus on producers to prove otherwise. A review of regulatory and labelling requirements for processed food should be expanded beyond allergens and food contents, to include chemicals, additives used during production.

> *Various strategies have been proposed or implemented, typically calling for greater transparency and independence of scientists, research funding, scholarly publications, and expert committees. They include proper disclosure of conflicts of interest in journal publications and for decision making committees; the refusal of industry funding and sponsorships by university scientists and professional associations; and the exclusion of industry funded studies from dietary guideline reviews. Given the central role of labelling and marketing in corporate scientific strategies, recent government initiatives on food labelling and marketing in countries such as Chile and Mexico could go further still, disallowing all types of nutrient, ingredient, and health claims and restricting the marketing and availability of all ultra-processed products.*[130]

Food waste

Other issues surrounding labelling requirements of processed food also relate to food waste. There is general confusion amongst consumers, and even some retailers, about what 'best before' and 'use by' dates mean. Resolution of this confusion would result in significantly less food that is past it's 'best before' date being disposed of by people who think it is no longer fit for consumption.

Recommendations

Eaters should have as much information about their food systems as possible, and everything we need to make fully informed decisions and choices; this applies especially to the need for comprehensive labelling. AFSA recommends:

- Independently funded research into dietary guidelines and the exclusion of industry funded studies from dietary guideline reviews
- Strengthening of Junk Food advertising, taxation and labelling requirements
- Work with communities and FSANZ to improve transparency of Junk Food Labelling
- Disallow all types of nutrient, ingredient, and health claims and restricting the marketing and availability of all ultra-processed products

[130] Gyorgy Scrinis, Ultra-processed foods and the corporate capture of nutrition—an essay, 2020

- Require all organisations that receive funding from the NSW Government to restrict all promotion (including sponsorship) related to unhealthy food and beverages as a condition of funding
- Strengthen fast food menu-labelling requirements with regard to nutrition in consultation with local communities
- Labelling regulations should focus on additives/chemical/GMO inputs throughout the chain - so that consumers can easily identify what chemicals have been used in manufacture
- Education on 'best before' dates to reduce food waste.

Other topics

Concentration of Power in the Food System

Key Issues

Supermarkets & Big Dairy

"Australia has by far the most concentrated supermarket sector in the developed world. Today, far from the rhetoric of 'free' and 'competitive' markets, the food economy is governed by an oligopoly of private interests."

Author and academic Raj Patel uses the metaphor of an hourglass to describe the globalised food system, with a large number of farmers at the top, and a huge number of eaters at the bottom, but most of the value in the system being squeezed and syphoned off by a tiny number of corporate actors in the middle[131]. Since deregulation of the dairy industry, the multinational food and beverage company, Kirin, now controls around 80% of Australia's drinking milk market, forcing out farmer-run cooperatives like Dairy Farmers[132]. Two companies, Weston Foods and Goodman Fielder, control more than half of the flour milling, bread and bakery markets[133].

"As suppliers to companies like Kirin in the milk market, farmers are forced to accept lower and lower prices in order to win supply contracts. In the milk sector, farmers have seen dropping farm gate prices since deregulation in the early 2000s."

Supermarkets - "anti-competitive policies and practices that depend on enormous market power, including: anti-competitive price discrimination, shopper docket schemes, 'store saturation' strategies and over-sized store strategies. These practices assist the growth of the dominant players by unfairly handicapping smaller independent competitors."[134]

Big Meat

One Brazilian company controls so much of the global meat market it can openly admit to having bribed more than 1,900 politicians and continue to grow in spite of endless scandals. Its name is

---

[131] Patel, R., 2007, "Stuffed and Starved: Markets, Power, and the Hidden Battle for the Global Food System". Black Inc

[132] Durie, J. "Big supermarkets gain fresh food market share at the expense of the small guys" The Australian, 9 March 2011 http://www.theaustralian.com.au/business/opinion/big-supermarkets-gain-fresh-food-market-share-at-the-expense-of-the-small-guys/story-e6frg9if-1226018006708

[133] "Foreign takeovers continue" The Weekly Times, 7 March 2012 http://www.weeklytimesnow.com.au/article/2012/03/07/452681_business-news.html [accessed 6 July 2012]

[134] Let's Have Fair Competition! The risk of losing retail diversity, choice and true competition in Australia's supermarket industry, Master Grocers Australia, available at: http://www.mga.asn.au/index.php/download_file/view/1294/1/.

JBS, and it has an annual revenue of AUD$70 billion, slaughters some 13 million animals per day, and it has been on an acquisition spree since its owners were let out of jail, including a purchase of the world's third largest alternative protein company Vivera earlier this year. Just weeks ago, JBS got the green light to takeover Huon Acquaculture, Australia's second largest salmon producer.

In June 2021, JBS won a bid to take over Rivalea, which owns two abattoirs in southeastern Australia. The acquisition gave JBS control of more than a third of pig kills in Australia.

We argue that localised agrarian futures are a common sense alternative to the current industrialised food system. We argue for a divestment from multinationals and re-investment in ethical and ecologically-sound production. Local production and processing builds community resilience and empowers people while respecting and creating opportunities for increased nourishment and employment.

The JBS takeover highlights an urgent need for policies which support diversification of the meat processing sector and support for smaller producers. Supporting a mix of small-scale local abattoirs would dramatically increase the resilience of local economies, especially in the face of crises like the COVID-19 pandemic.

Recommendations

- Tackle the corporate control of the food system:
    - prohibit concentration of ownership to no more than 5% of any sector
- Establish a supermarket ombudsman with strong enforcement powers as a first step to tackling the abuse of market power by the supermarket duopoly against suppliers and shoppers
- Carry out an independent, comprehensive national review of competition law and policy to address duopoly and oligopoly power across the food system

References

1. FAO 10 elements of agroecology
2. Food Sovereignty, a Manifesto for the Future of Our Planet | La Via Campesina
3. https://about.openfoodnetwork.org.au/open-road/
4. Agroecology Science and Politics https://www.researchgate.net/publication/336445239_Agroecology_Science_and_Politics
5. UNDROP United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas : resolution / adopted by the Human Rights Council on 28 September 2018 https://digitallibrary.un.org/record/1650694?ln=en
6. UNDRIP https://www.un.org/development/desa/indigenouspeoples/declaration-on-the-rights-of-indigenous-peoples.html
7. A 20 Year Economic Vision for Rural NSW https://www.nsw.gov.au/sites/default/files/2021-02/20%20Year%20Vision%20for%20RNSW_0.pdf
8. NSW 2040 Economic Blueprint https://www.treasury.nsw.gov.au/sites/default/files/2019-11/0909-02_EconomicBlueprint_Web.pdf
9. AGRICULTURE INDUSTRY ACTION PLAN Taskforce recommendations to government https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0006/535056/agriculture-industry-action-plan-taskforce_recommendations.pdf
10. NSW DPI Strategic Plan 2019-2023 https://www.dpi.nsw.gov.au/about-us/publications/nsw-dpi-strategic-plan-2019-2023
11. NSW DPI Corporate Plan 2012-2015 https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0009/593514/NSW-DPI-Corporate-Plan-2012-2015.pdf
12. NSW DPI Strategic Plan 2017-2019 https://www.dpi.nsw.gov.au/about-us/publications/nsw-dpi-strategic-plan-2017-2019
13. http://www.australiancollaboration.com.au/pdf/FactSheets/Land-degradation-FactSheet.pdf
14. The Minister's Planning Principles A Plan for Sustainable Development in NSW December 2021 https://www.planning.nsw.gov.au/-/media/Files/DPE/Plans-and-policies/Policy-and-legislation/The-ministers-planning-principles-2021.pdf
15. Regenerative agriculture in Aotearoa New Zealand–research pathways to build science-based evidence and national narratives
16. Australian Food Sovereignty Alliance, People's Food Plan, 2013
17. Chappell, M.J. 2018. *Beginning to End Hunger: Food and the Environment in Belo Horizonte, Brazil, and Beyond*. UC Press.
18. Wallace, R. 2016. *Big Farms Make Big Flu.* Monthly Review Press.
19. Chan, Gabrielle. 2021. *Why you should give a f*ck about farming*

20. Gammage, B. Pascoe, B. 2021 *Country. Future Fire, Future Farming.*
21. Maddison, Sarah. 2019. *The Colonial Fantasy. Why White Australia can't solve Black Problems.*