Australian Food Sovereignty Alliance

Submission to CSIRO: Transforming Australian Food Systems discussion paper

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We thank CSIRO for initiating discussions towards food system transformation in Australia. AFSA welcomes the opportunity to provide a written submission, as well as all further opportunities to participate in development and implementation of strategies. We hope CSIRO 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 within our food system.

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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 (CSIPM), which relates to the UN Committee on World Food Security (CFS).

Our vision is to enable agroecological and regenerative farms to thrive. This has taken on an added salience in the face of the increasing impacts of the climate crisis, the ongoing COVID-19 pandemic and rising food prices as a result of ongoing droughts, fire, flood, and war. 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 we are committed to decolonial futures for food and agriculture systems.

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

Executive summary

AFSA thanks CSIRO for the opportunity to provide feedback on the *Transforming Australian Food Systems* discussion paper. Since we first published the People's Food Plan[1] 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 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 security in Australia. La Via Campesina - the global movement of small-scale food producers - 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.[2]*

Food sovereignty is founded on 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.[3]

We commend efforts by CSIRO to include First Peoples, smallholders and civil society in food system transformations, and provide feedback on recommendations to increase research, investment and strategy on technological innovations, productivity and exports and other emerging approaches that remain in conflict with the core principles of food sovereignty.

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[1] C. Parfitt et al, The Peoples Food Plan, Australian Food Sovereignty Alliance, 2013. https://afsa.org.au/wp-content/uploads/2012/11/AFSA_PFP_WorkingPaper-FINAL-15-Feb-2013.pdf
[2] https://viacampesina.org/en/food-sovereignty-a-manifesto-for-the-future-of-our-planet-la-via-campesina/
[3] Patel, R. (2009). What does food sovereignty look like? Journal of Peasant Studies, 36(3), 663-671.

Focus area 1: Enabling equitable access to healthy diets

1. How can industry, government and communities work together to increase the adoption of more sustainable and nutritious diets?

'A considerable inertia, manifest in public policies, corporate structures, education systems, consumer habits and investment in research, favours the currently dominant model of agriculture and food systems, representing a series of lock-ins. In the dominant model, environmental and social externalities are not properly considered and, therefore, not appropriately factored into decisions influencing the development of food systems. To overcome this inertia and challenge the status quo, it is imperative to create a level playing field on which different approaches can be equitably compared. This requires redirection of investments and efforts to design and implement innovative approaches, including agroecological approaches, that provide concrete alternatives to the dominant model and open transition pathways towards SFSs.'[4]

AFSA commends CSIRO in recognising the need for industry, government and communities to work together to increase sustainable and nutritious diets for all Australians.

We note that 'industry' encompasses a broad spectrum of food producers, from small-scale farmers up to multinational corporations. As such, this spectrum also represents vastly different views on what constitutes sustainable and nutritious diets, particularly where industrial agriculture and large-scale food companies produce and promote ultra-processed foods to eaters. With this consideration in mind, AFSA believes industry, government and communities should aim towards adopting the Right to Food as a framework for developing actions towards increasing sustainable and nutritious diets.

The right to food is set out in Article 25.1 of the *Universal Declaration of Human Rights*, and it is also enshrined in the *International Covenant on Economic, Social and Cultural Rights (ICESCR) Article 11*, asserting that governments at all levels should continually and permanently guarantee the availability of and access to food that satisfies this right. The right to food must be maintained across the life span, and for all people irrespective of location, gender, race/ethnicity, income, etc. Australia ratified the ICESCR in 1975[5].

Furthermore, the right to safe (potable) and palatable water is a central consideration from both a rights-based and public health perspective, and should be understood as a key aspect of the right to food. This is emphasised in *Goal 6 of the UN's Sustainable Development Goals: Ensure access to water and sanitation for all*[6].

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[4] https://www.fao.org/3/ca5602en/ca5602en.pdf
[5] https://www.mdpi.com/1660-4601/16/10/1804/htm
[6] https://www.un.org/sustainabledevelopment/water-and-sanitation/

AFSA outlines the following recommendations for industry, government and communities to address Right to Food for sustainable and nutritious diets.

Industry: AFSA recommends that industry should 1) Stop exporting Australia's food and water to other markets and 2) Eliminate ultra-processed foods from being produced, marketed and distributed to eaters.

Nutrition and sustainability of diets are inextricably linked. Sustainable diets are those with low or positive environmental impacts, which contribute to food and nutrition security and to a healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, nutritionally adequate, safe and healthy; while respecting and benefiting food system and farm workers[7]. Notably, a sustainable diet should be healthy by definition, whereas a 'healthy diet', by most definitions, need not have any relationship with environmental sustainability in any of its forms[8].

Despite producing most of our food for domestic consumption and exporting up to 70% of our agricultural produce, the vulnerability of Australia's supply chains was laid bare by the COVID-19 pandemic and recent flooding events. The Intergovernmental Panel on Climate Change has warned that extreme weather events will become more frequent and severe in Australia[9], and this demands a more resilient food system. 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 and governments can no longer rely on Big Food to shore up supply chains or relief agencies to provide emergency food.[10]

In response to both food insecurity and public health issues, a number of false solutions have emerged which promote the fallacy that ultra-processed foods will help address food insecurity, reduce climate change impacts, and enhance human health and wellbeing. These include:

- **Marketing of First Food Formulas.** While AFSA fully supports the notion that first foods are a complex and sensitive issue for parents and their children, and breastfeeding is not always a viable option, the marketing of first food formulas should ensure that parents can make informed decisions about the implications of using breastmilk substitutes.
- **Ultra-processed/bio-fortified foods and supplements.** The argument for ultra-processed foods (UPFs), bio-fortified foods and supplements is founded on projections that populations in all regions will face deficiencies in nutrients such as vitamin D, calcium, iron, potassium, zinc, folate and vitamin E in all regions[11]. However,

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[7] FAO, 2011
[8] https://www.sciencedirect.com/science/article/pii/S0924224422003867?dgcid=coauthor
[9] https://www.ipcc.ch/
[10] https://www.bbc.com/future/bespoke/follow-the-food/how-covid-19-is-changing-food-shopping.htm
[11] IPES-Food, 2022. *The politics of protein: examining claims about livestock, fish, 'alternative proteins' and sustainability,* s.l.: IPES-Food Panel.

studies[12] reveal that there is no 'gap' in terms of global supply versus nutritional requirements, and that North and South America, as well as Sub-Saharan Africa, are projected to continue producing surpluses of plant and animal proteins. Such a reductionist demand-and-supply framing of food security ignores poverty and poor access to food as key inhibitors of the right to nutritious food. It frames global conglomerate producers of UPFs, bio-fortified foods and supplements as saviours delivering the 'techno-fix' to global nutritional deficiencies. It also obscures the central role of these global capitalist producers in destroying ecosystems and displacing agroecological small-holder farmers. Such an argument distracts communities from the nutritional bounty that these farmers have been historically delivering through their diverse range of sustainably and ethically-sourced organic produce.

- **Lab meat.** Lab-grown alternative proteins (APs) are found to be extremely expensive, particularly due to the culture, media and technology involved in cell-based production. It is estimated that cell-based AP production could cost around twice as much as chicken production[13]. Further, the high intensity demands of lab-grown meat products might lock in a further dependence on petro-chemicals and large-scale monocropping, whilst the expansion of large lab-meat producers in the Global South might displace the small-scale livestock producers already operating ecologically sustainable agroecological 'default' livestock systems [14]. Such production raises concerns over the antidemocratic pathway towards cell-based meat.

- **Reductionist nutrition advice.** A reductionist nutritionist perspective promotes an undemocratic understanding of food systems by undermining concerns of food processing and genetic modification, distracting public awareness from the unsustainable sourcing of certain ingredients in UPFs and bio-fortified foods, and diminishing the importance of maintaining a nutritionally diverse diet[15]. It also promotes a protein fetishism[16] which detracts from a comprehensive discussion of the nutritional composition and processing of foods. Such a discussion highlights how the nutritional quality of products such as bio-fortified foods and supplements ultimately depends on the ingredients involved, as well as the level and means of processing. For example, whilst the marketing for plant-based proteins is focused on the product's fortified levels of iron, zinc and vitamins B1 and B2, high levels of dietary fibre and refined carbohydrates,

[12] Sexton, A., 2018. Eating for the post-Anthropocene: Alternative proteins and the biopolitics of edibility. *Transactions of the Institute of British Geographers,* 43(4), pp. 586-600.

[13] Rubio, N. R., Xiang, N. and Kaplan, D. L., 2020. Plant-based and cell-based approaches to meat production. *Nature Communications,* Volume 6276, pp. 1-11.

[14]https://landworkersalliance.org.uk/wp-content/uploads/2018/10/Response-to-George-Monbiot-livestock-critique.pdf

[15] Scrinis, G., 2013. *Nutritionism: The Science and Politics of Dietary Advice.* s.l.:Columbia University Press.

[16] Curtain, F. and Grafenauer, S., 2019. Plant-based meat substitutes in the flexitarian age: an audit of products on supermarket shelves. *Nutrients,* 11(11).

and low cholesterol, it fails to discuss the product's high levels of saturated fat and sodium and free sugars[17].

The abundance of ultra-processed foods in contemporary society severely undermines both human health and environmental wellbeing. While most foods undergo some degree of processing (e.g., canning or pickling vegetables for preservation), ultra-processed foods are those characterised by "formulations of ingredients, mostly of exclusive industrial use, that results from a series of industrial processes", and whose consumption is recommended to be limited by dietary guidelines in some countries (Australia's guidelines do not yet refer to 'ultra-processed foods'). Examples include carbonated soft drinks, confectionary, sweet or savoury snacks, hot dogs, instant/ready meals, etc. Their ingredient lists are typically long, but feature no or minimal whole foods, and instead a combination of constituent substances and additives that are high in energy and nutrients linked to poor health outcomes (e.g., salt and hypertension) and low in nutrients known to be beneficial for health. Ultra-processed foods unnecessarily consume valuable environmental resources, accounting for 36-45% of total diet-related biodiversity loss, up 33% of total diet-related greenhouse gas emissions, land use and food waste, and up to 25% of total diet-related water use.

Considering the role of small-scale food producers as part of 'industry', policy and funding to scale out localised food systems based on the principles of agroecology and food sovereignty can effectively enable an increase in sustainable and nutritious diets.

2. What legislative and policy opportunities can ensure equitable access to healthy diets?

In guaranteeing the right to food, the Federal Government must recognise that food and dietary 'choices' are not choices, but are shaped by structural barriers (economic, environmental, social, cultural, geographic) imposed on individuals and households.
- The **Federal Government** must fulfil the obligations of the *UN Covenant on Economic, Social and Cultural Rights (1975)* to ensure all people have the Right to Food, by legislating the right to food, and implementing recommendations of the World Health Organisation and the UN Special Rapporteur on the Right to Food.
- **All levels of government** must acknowledge and actively support the contribution of culturally significant traditional knowledge, law, practice and food production by First Peoples to the health and wellbeing (physical, emotional, cultural) of people and Country.
- The **Federal Government** must adhere to human rights declarations, including the *UN Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP) and the UN Declaration on the Rights of Indigenous Peoples (UNDRIP)* to address food security and equitable access to food.

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[17] Bohrer, B., 2019. An investigation of the formulation and nutritional composition of modern meat analogue products. *Food Science and Human Wellness,* 8(4), pp. 320-329.

- The aim of **all levels of government** should be to reduce and eventually remove reliance on food charities (outside of acute emergency/disaster situations, where relief should also be provided within a food sovereignty framework), enabling all people to access food via socially acceptable and empowered means.
- Public policies at **all levels of government** should be reoriented toward preventive health, such as those that improve access to fresh, locally and sustainably produced food[18].

First Foods

- The **Federal and State Governments** should prioritise actions that promote, support, and protect breastfeeding, as recommended by the *Australian National Breastfeeding Strategy - 2019 and beyond* (ANBS). Ensure full implementation and funding of the ANBS.
- Provide ongoing funding for breastfeeding research and monitoring[19] in Australia, directed to:
    - Increasing the understanding of the importance of breastfeeding amongst citizens and health professionals; and
    - Increasing the prevalence of breastfeeding, particularly in priority groups.
- Provide legislative support for breastfeeding at environmental and societal levels:
    - Implement the Baby-Friendly Health Initiative[20]. In Australia the BFHI focuses on improving healthcare for babies, their mothers and families by ensuring all mothers, regardless of their feeding choices and circumstances, receive unbiased information, appropriate support and factual advice in both the antenatal and postnatal period;
    - Provision of paid parental leave for at least 6 months, and preferably 12 months, adopted nationally; and
    - Provide parenting facilities to enable breastfeeding in public places, included in local government planning requirements for all public amenities such as shopping centres, as well as outdoor public spaces such as parks.
- **All levels of government** and health professional organisations should not accept funding or other support from infant formula manufacturers.
- The **Federal and State Governments** should financially support the development and ongoing operation of human milk banks in all states and territories; should make donor milk available free of charge to any infant who requires human milk; and should ensure the ethical governance of donor milk.

Food environments

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[18] https://onlinelibrary.wiley.com/doi/full/10.1002/hpja.618
[19] https://www.worldbreastfeedingtrends.org/wbti-country-report.php?country_code=AU
[20] https://bfhi.org.au/

- AFSA supports interventions at the retailer level to improve product selection, promotion, pricing, and placement of locally produced whole foods (as well as reducing the sale/exposure of ultra-processed foods).
- At **all levels of government**, food outlets and vending machines in facilities managed by government (e.g., local government early childhood centres, train stations) and government office/operational buildings should make available healthy food and drinks and restrict unhealthy food and drinks.
- AFSA asserts the need for changes to **state-level** planning schemes that empower and enable **local government**s to make planning decisions based on the health and wellbeing interests of residents - e.g. being able to reject development applications from fast food outlets without being taken to court.
- **State and Federal Governments** to leverage fiscal tools to create incentives for increased healthy food in supply chains, retail, and consumer purchasing, and disincentives for unhealthy food and beverages. For example, apply a levy on sugar-sweetened beverages and ensure trade agreements favour public health rather than commercial interests.

Food and water access

- The **Federal Government** should introduce a Universal Basic Income[21].
- The **Federal Government** should dis-incentivise ownership of more than one property (e.g., through taxation) to reduce the incidence of housing investment for rental (both short and longer-term) income, speculation, and landbanking causing much of Australia's housing stress, which is a major factor in peoples' ability to allocate a sufficient proportion of household budgets towards food.
- The **Federal Government** should ensure that the Basics Card is eligible for spending at farmers' markets, box schemes, CSAs, and other direct distribution channels providing nutritious, socially-just and ecologically-sound food. This is an opportunity to incentivise the purchase of healthy, local food by lower-income communities and also support the livelihoods of small-scale farmers.
- **All levels of government** can subsidise local production by paying small-scale farmers full price for their produce and then subsidising the sale of this food to low-income households, such as through food hubs, local greengrocers or independent grocery stores, and/or through cooked meals at dedicated venues (similar to Belo Horizonte's 'popular restaurants', where lunch is $1 no matter who is buying it)
- **State Governments** should introduce a universal school lunch or breakfast program with food procured from local producers that would provide a level of basic food security for every Australian child, and avoid the stigma associated with accessing 'food relief' charity in schools.
- **Local governments** should audit the locations of public drinking water (e.g., bubblers, drinking fountains and taps) to identify gaps, and subsequently install public drinking water stations in areas of most need, as identified by local residents.

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[21]https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp1617/BasicIncome

- AFSA supports the recommendations made in the Water Services Association of Australia report[22].

3. What strategies would be most effective to improve affordable community access to healthy food in regional and remote Australia?

AFSA asserts that 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, and full democratic participation in the food system. States including South Africa, Kenya, Switzerland, Bolivia, Ecuador, Mexico and Brazil have made constitutional provisions guaranteeing the right to food[23], albeit with varying success.[24]

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 systemic innovations, weaving together interests of farmers and eaters to assure that every citizen had the right to food.[25]

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

Presently, the failure of Australia to achieve the right to food is exemplified by:
- Incomes that are inadequate for covering the costs of living. The initial Coronavirus Supplement received by JobSeeker recipients ($550 per fortnight in addition to the base $560) brought these people out of poverty – as defined by an income greater than the poverty line of $457 per week (the poverty line is defined as 50% of median household income). Reduction of this supplement to $250 a fortnight in September 2020 and further to $150 from 1 January 2021, followed by complete cessation on 31 March 2021 was detrimental to food security for those on social security payments. Subsequent increase by $50 per fortnight does nothing to once again bring these people out of poverty[26];
- High rates of diet-related diseases due to availability, marketing, pricing, and overconsumption of poorly nutritious food. Diet-related diseases (e.g., hypertension, type 2 diabetes, cardiovascular disease) are the leading cause of death and disease in

[22] https://www.wsaa.asn.au/sites/default/files/publication/download/FINAL%20Closing%20the%20gap%20FA04%20Summary%20WEB.pdf
[23] http://www.fian.org/fileadmin/media/publications/10yearGuidelines_CivilSociety_SynthesisPaper_en.pdf
[24] 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>
[25] Chappell, J. 2018. Beginning to End Hunger. UC Press.
[26] https://righttofood.org.au/what-does-the-new-jobseeker-rate-mean-for-food-insecurity-in-australia/

Australia[27]. Approximately one-third of daily energy intake is from discretionary (or 'junk' or ultra-processed) foods; and

- Water is undrinkable in many remote communities, particularly Aboriginal and Torres Strait Islander communities[28].

Increased government funding and support for various initiatives that improve access to and affordability of local, nutritious, culturally-appropriate, socially-just and ecologically-sound food (e.g., local growers' markets, food procurement that prioritises local growers) have the potential to prevent or reduce the significant burden diet-related non-communicable diseases place on the Australian population and health care system.

4. Are there any other R&D priorities that should be addressed to ensure Australian food systems become more equitable? Which priorities are the most urgent?
Other comments

AFSA takes a strong position that R&D focused on emerging technologies only support further social and ecological crises for smallholders, First Peoples and citizens, whereby innovations enable agribusiness to assert further control over food systems.

In contrast, AFSA supports R&D priorities that enable:
- Horizontal knowledge sharing between farmers to promote agroecology as a science, movement and practice
- Funding to support localised distribution models (CSAs, food hubs, farmers markets, aggregate schemes)
- Indigenous-led native food sector determined by First Peoples

Focus area 2: Reducing waste and improving circularity

5. How can industry, government and communities work together to reduce waste and improve circularity?

AFSA welcomes CSIRO's efforts to address colossal amounts of food waste in Australia each year. We note that while some suggested recommendations, such as reviewing regulation and legislation relevant to redistribution of surplus food are needed, we argue that continued investment in technologies will not necessarily address the structural impediments of the waste in the industrial food system.

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[27]https://www.aihw.gov.au/reports/burden-of-disease/abds-impact-and-causes-of-illness-and-death-in-aus/summary
[28]https://www.wsaa.asn.au/sites/default/files/publication/download/FINAL%20Closing%20the%20gap%20FA04%20Summary%20WEB.pdf

To reduce waste and improve circularity, AFSA recommends a whole-of-system approach that identifies the weaknesses of current food value chains and distribution, and incorporates food sovereignty pillars to strengthen the system.

Current issues and weaknesses

The supermarket duopoly also leads to significant food waste at harvest. While both Coles and Woolworths have aligned with food charities in corporate social responsibility initiatives to redirect unsold or 'surplus' food, research has revealed a number of contradictions in this arrangement.[29] Most notably, a large volume of perfectly edible produce does not even reach the shelves (i.e. has no opportunity to be redirected to charity) due to supermarket aesthetic standards and production volumes. No transparent data on this phenomenon of 'upstream' food waste exist in Australia, but US research estimates that when this waste stream is added to retail and consumer waste, about half of all produce grown is thrown away.[30] The power of large supermarkets to shift risk – and associated wastage – onto producers is a key part of this problem. For example, a Tasmanian lettuce grower contracted to Woolworths had to plant crops to fill the supermarket's largest possible supply order, but would usually bulldoze most of it back into the ground:

> *I have to grow for the maximum size of an order, or else I lose the contract. So I grow on that scale even though the order is usually a lot less. Everything I don't sell, I have to destroy.[31]*

The demands of large retailers thereby impose false and unsustainable economies of scale, where farmers are forced to overproduce and huge volumes of perfectly edible, nutritious food is wasted. This is apparently to ensure that supermarket shelves are never empty. However, the COVID-19 pandemic clearly demonstrated that distribution models relying on long supply chains are the most vulnerable when crisis hits. Supply chain interruptions and panic buying showed up the weaknesses in the 'just in time' model, with supermarket shelves empty of many basic products such as eggs, pasta, and meat. Meanwhile, many farmers faced the sudden closure of their usual market channels, as the operations of some farmers' markets and food services businesses ceased.

For large-scale farms, this spelled disaster. For example, a watermelon grower in the Northern Territory whose market was primarily restaurants, caterers, and airlines had very little choice but to watch the melons rot in the fields. With 600 tonnes versus a pallet of produce to sell, selling direct to eaters was not an option. However, small-scale farmers had significantly greater capacity to pivot to a greater diversity of direct sales channels. Entities such as Open Food Network[32] rose to the challenge to bring a thrilling wave of new farmers onto their platform to directly connect with eaters looking for alternatives to the supermarkets. The upsurge in people

29 https://www.qut.edu.au/study/business/insights/powerful-supermarkets-push-the-cost-of-food-waste-onto-suppliers-charities

30 https://www.theguardian.com/environment/2016/jul/13/us-food-waste-ugly-fruit-vegetables-perfect

31 https://www.themonthly.com.au/issue/2014/august/1406815200/malcolm-knox/supermarket-monsters#mtr

32 https://openfoodnetwork.org.au/

seeking direct sales from farmers was breathtaking. For example, one beef producer saw an 85 to 100% increase in direct orders during the first month of the pandemic, which allowed them to cover their costs in the absence of restaurant sales and on-farm tourism operations.[33] Another organic producer went from delivering 300 produce boxes per week to 800, while others reported an initial spike in interest which steadied out to around 30% growth over time.[34] Although there were some adaptation challenges involved – for example, developing systems to support the massive increase in demand – small-scale producers were able to succeed in providing food where long supply chains failed. The pandemic demonstrated that globalised food systems are brittle and threatened, while local food systems, solidarity economies, and strongly networked and collectivised communities are strong.

Alternative distribution models, based in localised networks and drawing on close relationships between producers and consumers, present farmers with the option of greater financial security, risk sharing, and deeper connection with the people who eat their produce. Given the grassroots nature of these models, good policy in this area relies less on intervention and more on enabling scale appropriate regulation that supports small-scale farmers.

6. What are the best ways to empower producer and consumer behaviour change to help reduce waste and improve circularity?

As above, reducing waste and improving circularity can be effectively supported by food systems controlled by First Peoples, small-scale producers and communities. Putting control locally can enable circular economies by a) establishing localised food systems through alternative distribution methods such as CSAs, farmers markets, food hubs and box schemes; and b) practising agroecological farming which produces enough fresh, affordable food to feed local communities without wasting produce, water and soil in the process.

Examples of alternative distribution models include:

CSA (Community Supported Agriculture)	Members buy shares in an individual farm's projected harvest in advance and for a set period (typically a season or a year) and receive regular deliveries. Members share in both the risks and benefits of the farm, but by mitigating risk through good farming practices and diversity, members will generally enjoy a full box.
Multi-farm cooperative	A group of farmers get together to market, plan, harvest, pack, and distribute a produce box. Pricing may be similar to CSA, in that members subscribe for a set period of time and share in both risks and bounty, or may be based on custom ad hoc weekly/monthly orders. Farmers have less administrative and marketing overhead and can

33 https://www.abc.net.au/news/2020-04-05/farmers-rising-food-sales-gate-coronavirus/12119368

34 https://www.abc.net.au/news/2020-05-24/fruit-and-vegetable-consortium-launched-in-australia/12262468

	specialise in a smaller number of crops, while eaters are provided with a more diverse box.
Food hub	The food hub is a dedicated distributor for local small-scale farms, with lower costs associated with transportation, marketing, administration, and packaging that allow it to pay a fair price to farmers. Food hubs can be larger multi-farm cooperatives, or farmer/eater cooperatives, or other collaborative not-for-profit models. Food hubs might also include shared value chain infrastructure. Members can subscribe for a set period or order individual boxes on a one-off basis.
Food co-ops and bulk buyers' groups	Consumers organise themselves in networks to buy and distribute food from local producers. There is typically a co-op membership fee, but the ability to buy in bulk means that members can pay lower wholesale prices. Food co-ops may develop direct relationships with producers and/or purchase through a food hub.
Direct or farm-gate sales	Individual farms offer a selection of products available for direct purchase via the farm gate or through an online store. This might include a produce box scheme where consumers can purchase a one-off box or choose the items in their box (rather than subscribing as per CSA).
Farmers' market	Multi-stall markets where farmers can sell produce directly to consumers, usually on a regular basis (weekly or monthly are most common in Australia). Farmers' markets offer the opportunity for direct contact and connection between producers and eaters as in CSA or farm gate sales, but without a subscription commitment.
Reko rings	Sales are made online (e.g. in a local Facebook group), whereby vendors list items and eaters pay and arrange pickup at a dedicated point and time.

To address system transformation throughout the value chain, for the purpose of reducing waste and improving circularity, AFSA recommends that:

- Federal and State Governments should support food value chain platforms, incubators and aggregation mechanisms in which public bodies invest in and reward sustainable food producers and the production of public goods, exploring:
    - Funding the development of local and regional processing hubs and distribution channels that provide greater processing and handling capacities for fresh products from small and medium-sized farmers adopting agroecological and other innovative approaches and improve their access to local food markets;

- Providing incentives for First Peoples, young farmers and food producers, women and community-led enterprises that capture and retain value locally, recognising and addressing their specific constraints and needs; and
- Adapting support to encourage local food producers, food enterprises and communities to build recycling systems by supporting the reuse of animal waste, crop residue and food processing waste in forms such as animal feed, compost, bio gas and mulch.

7. Which organisations are best placed to lead and/or support implementation of the suggested recommendations?

Food system transformation should be led foremost by First Peoples, farmers, fishers and civil society to ensure the implementation of suggested recommendations. AFSA asserts that First Peoples, smallholders and civil society have critical knowledge and skills to effectively care for Country and establish systems under which waste can be better managed through agroecology and traditional knowledge.

Although AFSA asserts that implementation of suggested recommendations should be led by grassroots initiatives, we recognise the important role that government plays across all three levels to support food system transformation. Governments should seek to consider effective use of policy and planning instruments within each level to ensure that First Peoples, smallholders and civil society are empowered to manage food systems. This includes:

- All levels of government should provide opportunities for public servants and communities to learn from Indigenous knowledges and practices of caring for Country.
- All levels of government should build capacity to develop and manage ecologically-sound agro-ecosystems that are more resilient in the face of climate change and rising biosecurity threats.
- All levels of government should implement policies that support diversified, sustainable, equitable markets that enhance connections between producers and eaters.
- Local Governments should provide public facilities to host farmers' markets, food and seed fairs and festivals for agroecological and other diversified sustainable local producers.
- Federal and State Governments should facilitate the registration of agroecological and other sustainable food producers with trade and food-safety authorities that accommodate their size and production capacity;
- Federal and State Governments should provide grants to democratically-constituted farmer organisations that share knowledge and create strong networks to collectivise and develop cooperative production, processing, and distribution infrastructure needed (e.g. farming equipment, abattoirs, boning rooms, grain mills, dairy processing, refrigerated transport and storage).

8. Are there any other R&D priorities that should be addressed to ensure Australian food systems reduce waste and improve circularity? Which priorities are the most urgent? Other comments?

AFSA notes suggested recommendations by CSIRO relies heavily on circular economy interventions such as Life Cycle Assessment (LCA) and digital technologies to manage food waste reduction, recovery and redistribution. While these approaches will illuminate critical

issues under the current industrial food system, AFSA suggests additional R&D priorities should be considered to include:

- Increased investments in public research and development, and in national and local research systems to support programs in agroecological approaches;
- Transdisciplinary research conducted through platforms that foster co-learning between practitioners and researchers, and horizontal dissemination of experience among practitioners (e.g. farmer-to-farmer networks, communities of practice and agroecological lighthouses);
- Educational programs for agricultural extension and public health workers promoting horizontal learning processes and democratically-determined use of appropriate technologies, as well as a better understanding of the role of agroecological practices for nutrition and human, animal and environmental health;
- Power imbalances and conflicts of interest in relation to the generation, validation and communication of knowledge about food production and processing, by valuing different sources of knowledge and bridging gaps between knowledge generated and transmitted through Indigenous Peoples and social movements on the one hand, and the scientific sector on the other.

Focus area 3: Reducing greenhouse gas emissions

9. Which organisations are best placed to lead and/or support implementation of the suggested recommendations?

Following on from previous sections, AFSA asserts that First Peoples, smallholders and civil society are best placed to lead on suggested recommendations to reduce greenhouse gas emissions (GHGs).

AFSA notes that on page 12 of the discussion paper, reference to GHGs from agriculture states: "In Australia, food systems are estimated to contribute between 30–40% of domestic GHG emissions." We prompt CSIRO to investigate how size and scale of agricultural activity correlates with increased emissions from food systems. For example, food miles from importing and exporting food accounts for around 19 percent of emissions from agriculture, despite AFSA's core argument that no country should need to import and export food and water to other markets.

AFSA and its members promote the application of agroecology to address the climate crisis. Given that AFSA's members are small-scale, agroecological farmers operating through localised food systems, CSIRO should enable opportunities to lead the development and implementation of strategies to reduce GHGs from agriculture in Australia.

We also assert that First Peoples should be considered first and foremost in the development and implementation of strategies to reduce GHGs. AFSA welcomes CSIRO's recommendation

to support First Nations communities to use sustainable, low-emissions Indigenous agricultural approaches, in a self-determined manner.

10. What existing agricultural and food manufacturing sectors are recognising sustainability-related best practices?

AFSA and its members are at the forefront of recognising sustainability-related best practices, given that food sovereignty promotes agroecology in principle. Agroecology is both a movement and a practice that works with nature to enhance biodiversity and restore agricultural land and water, sequestering carbon and producing systems that are more resilient in the face of escalating climate-change-induced natural disasters.

CSIRO should consider engaging directly with First Peoples, small-scale farmers, fishers and other independent food producers part of AFSA's network to understand how best-practice approaches to sustainability are being applied throughout the food system. From pastured pig and poultry farmers, to millers and bakers; market gardeners and native food producers, there is a diversity of small-scale food producers who practise sustainability out of care for Country, not as a result of economic or legislative imperatives.

Here, it is critical to note that sustainability encompasses social and economic dimensions of food and agricultural systems, as well as ecological. However, in most western countries such as Australia, AFSA argues that the economic pillar of sustainability remains privileged and often results in weak social and ecological outcomes where agribusiness touts greenwashed approaches that enable industrial-scale agriculture to continue on a pathway of growth and productivity. In turn, First Peoples, smallholders and civil society remain disempowered by structural barriers to determine their own food systems, and co-manage land and water sustainably.

AFSA welcomes any opportunity to inform CSIRO about how members apply agroecology to address social, ecological and economic justice in food systems.

As well as AFSA being a collective of First Peoples, farmers and food activists, other small businesses and organisations leading sustainability-related best practices across the entirety of Australia's food system include: First Nations Bushfood & Botanical Alliance Australia; Australia's Right to Food Coalition; Open Food Network; Sustainable Table; Southern Harvest Association; Fair Food Brisbane; Farmer Incubator; Friends of the Earth Australia; Gene Ethics; grAiNZ; Melbourne Farmers Markets; Milkwood; Warndu; and Young Farmers Connect.

11. Are there any other R&D priorities that should be addressed to ensure Australian food systems can reduce emissions? Which priorities are the most urgent?
Other comments?

AFSA appreciates CSIRO's efforts to promote R&D pathways to transitioning to renewable energies in Australia's food systems. We acknowledge that continued combustion of fossil fuels is the key driver of climate change from increased GHG emissions.

However, R&D priorities focus largely on development of existing and novel technologies to reduce GHG emissions across the food system. AFSA believes there are critical gaps in CSIRO's R&D priorities, which would be filled through rigorous consultation with First Peoples and smallholders. As addressed above, AFSA's members already practise and promote low-emissions farming across the value chain. Development of new technologies is expensive and potentially inaccessible to smallholders, therefore CSIRO should consider other or additional R&D priorities:

- Work collaboratively with First Peoples and small-scale food producers to understand how agroecology is applied as a low-tech, highly-effective solution to GHG emissions reductions in food systems;
- Co-design a pathway for farmers across the country to apply agroecology as a framework for community-led, low-tech, low-emissions responses to reducing GHG emissions.

Focus area 4: Improving environmental and economic resilience

12. Which organisations are best placed to lead and/or support implementation of the suggested recommendations?

As above, AFSA, its members and other ally organisations should be considered best placed to lead and/or support the implementation of suggested recommendations, particularly with reference to the following:

- **Foster collaboration and knowledge sharing across the value chain to identify priority supply chain weaknesses and solutions**

Where productivist food and agricultural policy encourages farmers to specialise, scale up, and outsource knowledge and inputs, localised economies support *scaling out* and diversifying through horizontal knowledge sharing farmer-to-farmer. Agroecological farming supports producers to effectively feed their local communities with healthy, nourishing foods, with clear boundaries where production puts a strain on ecological, social and economic limits.

Horizontal knowledge sharing is a component of solidarity economies, whereby farmers can share and build upon their experiences and skills to empower others with the knowledge to grow their own food while healing Country.

An important distinction: Horizontal knowledge sharing ≠ nutritionists / dietary guidelines

AFSA maintains that nutrition advice and food labelling are insufficient measures to achieve food sovereignty. Such interventions do not empower individuals and communities to strive towards meaningful transformations of food systems. Further, it promotes a reductionist perspective on food systems which ignores a plethora of interconnected issues, such as the ethical considerations of ingredient sourcing, levels of processing and/or genetic modification, and the importance of diet diversity. Ultimately, horizontal knowledge sharing should aim to empower individuals with the knowledge they need to move away from the industrial food system and unhealthy foods for both human and planetary health.

With this being said, it is vital to recognise that providing information to people is necessary but insufficient for generating desired behaviours and habits. Environmental, economic, structural, and cultural factors beyond knowledge alone – such as income and the resulting household food budget, availability and accessibility of food retail outlets and other markets, and cultural and personal preferences/requirements – influence what people choose to eat. Even armed with comprehensive knowledge, some people are constrained in their options by these and other factors. It is thus essential that governments and other decision-makers do not emphasise food consumption as an issue for individual responsibility.

- **Build transparent and diversified food supply chains and support the participation of new enterprises, particularly SMEs and Indigenous food ventures**

AFSA is well-positioned to support this component of environmental and economic resilience, through 1) promotion of agroecology as a movement and practice and 2) through building solidarity economies to diversify food supply chains (refer to our answer for Focus Area 2: Question 6).

- **Explore place-based solutions to support rural and remote communities**

Policies that enable gentrification of agricultural land and ownership of large and multiple properties are contributing to the increasing inaccessibility of Land in Australia. While landsharing examples are on the rise (see AFSA's Farming on Other People's Land program[35], Farmer Incubator[36]), many do not offer long-term secure tenure for a variety of reasons, including restrictive planning controls. Additionally, land-use legislation typically prohibits more than one dwelling on agricultural land that might support multiple farming households on a single property. This is in contradiction to council decisions that too frequently allow sub-division of viable agricultural land for 'lifestyle' blocks, taking land out of farming as per the first point.

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.

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35 https://afsa.org.au/our-work/farming-on-other-peoples-land/

36 https://www.farmerincubator.org/

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.[37]

- **Greater implementation of sustainable land management practices and adoption of climatesmart agricultural technologies to support long-term environmental sustainability**

As previously stated, AFSA asserts that First Peoples, smallholders and civil society should lead on development and implementation of sustainable land management strategies. In food systems, scaling out agroecological farming in collaboration with First Peoples' traditional knowledge will ensure sustainable land management practices. CSIRO should consider the IPCC's most recent report, which identifies agroecology and Indigenous knowledge systems as recommendations for climate change adaptation in agriculture.

What AFSA cannot support is adoption of climate-smart agricultural technologies, which impede on the rights of First Peoples and smallholders. In recent years, agribusiness has responded to calls for more sustainable food and agricultural systems with so-called solutions such as sustainable intensification, Climate Smart Agriculture, and precision agriculture which focus largely on yields and system stability, rather than solutions that address the complex social and political issues related to industrial agriculture. These technologies and methods support the fallacy of green capitalism and 'nature-based solutions'.

'Nature-based solutions' lean on agricultural innovations and technologies for the purpose of promoting carbon and biodiversity offsets that can be used as credits by governments to meet critical climate change reduction targets. 'Nature-based solutions' are more accurately described by the food sovereignty movement as 'nature-based dispossessions' as they enable agribusiness to claim large amounts of land, forest and water from smallholders and Indigenous Peoples, particularly in the Global South[38]. In addition, concepts such as 'nature-positive' and 'net zero' are a weak measure for reducing emissions and halting biodiversity loss, where viewing nature through the lens of economics assumes that fossil fuel emissions can be permanently absorbed in equal amounts in forests, soil and oceans.

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[37] https://www.landcan.org/pdfs/LT_Report_Finalx_with_attachments.pdf
[38] https://www.localfutures.org/an-agribusiness-greenwashing-glossary/

13. How can cross-sector data sharing be encouraged across all levels of the system? And what kind of data would producers, manufacturers, retailers, consumers and the logistics industry find most useful for improving resilience?

The smallholders we represent have very basic digital needs: we need connectivity and access to the internet, which is lacking in so many rural areas. Farmers need smartphones so they can access information such as weather forecasts that help us decide when to cure a harvest without risk of spoiling in unanticipated rain. And we need to be able to connect to local markets to sell our produce – not through Alibaba or other international large scale, mono item markets, but through open source platforms developed by not-for-profits like Open Food Network. Farmers don't need digitalisation, they need technology justice.

Principles for technology justice:

- Enable people, communities, and other-than-human life to have agency;
- Do not seek control / liberate;
- Stimulate reciprocity and greater (protected) sharing;
- Regenerate and repair relations / builds and restores social tissue and all life;
- Prioritise access and ownership by people and communities to its infrastructures
- Challenge power;
- Embrace and sustain people's knowledge, artefacts, and ways of being/knowing; and
- Reflect and support world-making organised by equity and justice.

Just technology practices:

- Sharing data, sharing technology and all products of technology, rather than owning (tech as commons);
- Creating and sustaining synergies with other-than-humans (convivialising and decolonising tech);
- Governing according to socially agreed upon use rights and obligations
- Decentralising platforms and infrastructures (or finding just balance between central/decentralising);
- Visibilising all labour (human and beyond-human) in the making and use of technology; and
- Adapting technologies to pluriversal ways of knowing/being - not a "one size fits all".

14. What national manufacturing capabilities would be most practicable in reducing reliance on importing critical inputs? And what are the potential obstacles and costs to their implementation?
(for example: food products, agricultural chemicals, processing equipment)

The smallholders we represent are significantly less reliant on imports than farmers operating under the industrial food system. For one, we reject the use of agricultural chemicals which are not needed to grow food for local communities. Firstly, Australia already produces enough

diverse food to feed ~70 million people per year from fruits, vegetables, meat, dairy, eggs and grain. AFSA argues that we can reduce reliance on importing food products by acknowledging this fact. In addition, we reject the use of agricultural chemicals which are not needed to grow food for local communities.

National efforts to enable access to critical infrastructure such as abattoirs would be most practicable among AFSA's members. AFSA proposes that a mix of small-scale local and on-farm abattoirs present an important opportunity to support small-scale, artisanal producers and regional economies through local processing and value adding. A return to far more abattoirs that service small-scale farms in a small radius (20-100km) would dramatically increase the resilience of local economies in the face of climate change and future pandemics, as well as in the seemingly inevitable continued loss of medium-scale regional abattoirs to their large-scale industrial counterparts.

Abattoirs owned and operated by farmers and their communities can escape the profit imperative of corporate models, and instead direct funds into regional jobs and community development, with the potential for a renaissance of associated industries (e.g. tanning, leatherworks, soap-making, more value adding of meat products, and of course local meat for households, local providores and restaurants).

The global food sovereignty movement has advocated for legislative, policy, and financial support for local value chain infrastructure for decades, and the FAO has at least a decade of advocating for connecting smallholders to value chains[39]. Our long-expressed concerns at the vulnerabilities of long, highly-centralised supply chains were repeatedly manifested over the series of COVID-19 lockdowns in 2020 and 2021. There really is no time like the present to show support for local food economies!

15. What do you think are the most important features of a resilient food system? Do you agree with our current definition?
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AFSA notes that the CSIRO's definition of a resilient food system captures the need to be adaptive and ensure people have access to sufficient and healthy food, particularly during disruption (or crises). However, we argue that agility and adaptation risk being co-opted under a capitalist food system, and applied to productivity and growth despite increasing social and ecological crises in Australia.

As such, AFSA argues that food sovereignty provides a clearer definition of a resilient food system:

> *[Food sovereignty] is 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*

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[39] https://www.fao.org/fileadmin/templates/cfs/Docs1516/cfs43/CSM_Connecting_Smallholder_to_Markets_EN.pdf

produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations[40].

Food sovereignty is upheld by smallholders, Indigenous Peoples and citizens through 7 key pillars:

1. Food for people
2. Builds knowledge and skills
3. Works with nature
4. Values food providers
5. Localises food systems
6. Puts control locally
7. Food is sacred

16. Are there any other R&D priorities that should be addressed to ensure Australian food systems are environmentally and economically resilient? Which priorities are the most urgent?
Other comments?

AFSA fails to understand how any of the R&D priorities in this section ensure environmental and economic resilience outside of the industrial food system. All recommendations suggest that R&D priorities have not considered the knowledge, skills or needs of First Peoples and smallholders in this area:

● Bioengineered biological treatments and climate-tolerant cultivars for improved agricultural resilience
● Process engineering for greater flexibility within production, manufacturing and transportation operations
● Developing and enhancing digital systems that can collect and aggregate data for multi-use purposes that support resilience outcomes
● Development and deployment of automation, drones and robotics to address labour shortages and reduce volatility in seasonal employment
● Research and piloting of new market mechanisms and business financing models to improve business resilience
● Research and testing of new adoption pathways and mechanisms to increase the uptake of newly developed technologies/solutions

The *Action Group on Erosion, Technology and Consultation* (ETC Group)[41] monitors the impact of emerging technologies and corporate strategies on biodiversity, agriculture and human rights. The ETC Group puts forward: "New high-risk technologies, ranging from the very small

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[40] https://foodsecurecanada.org/who-we-are/what-food-sovereignty

[41] https://www.etcgroup.org/

(synthetic biology, nanotechnology) to the very large (geoengineering), are rapidly developing. Their promoters promise that they hold the keys to solving climate change, world hunger, energy shortages and biodiversity loss and the precautionary principle and social and economic impacts are often ignored in the rush to deploy the latest technofix." There is no clearer example of this than U.S. billionaire Bill Gates, whose book '*How to Avoid a Climate Disaster*' details false solutions to global food crises under a changing climate. Conveniently, Gates is currently the biggest private owner of farmland in the United States, acquiring 242,00 acres of agricultural land worth almost $700 million[42].

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

We reject the push for so-called 'inclusive digitalisation of agriculture', which is simply another way for multinational corporations to maintain and gain further control of food and agriculture systems. The overall trend of digitalisation is towards an integration between the companies that supply products to farmers (pesticides, tractors, drones, etc.) and those that control the flow of data. AFSA has joined a global movement of smallholders, Indigenous Peoples and broader civil society actively campaigning against the digitalisation of agriculture, on the basis that "techno-fixes" will not work to solve the complex social and ecological crises from industrial agriculture, and will further erode the rights of small-scale peasant farmers.

On the input side, agribusiness is joining the trend of getting farmers to use their mobile phone apps to supply them with data, on the basis that they can give 'advice' to the farmers. On the output side, big e-platform corporations can be seen buying their way into the sector and taking control of food distribution. Together, they favour the use of chemical inputs and costly machinery, as well as the production of commodities for corporate buyers not local markets. They encourage centralisation, concentration and uniformity, and are prone to abusing their power and monopolisation. Farmers may find themselves locked into selling their farm products to just one company at a price determined by their algorithm. Farmers are sometimes contractually forbidden from repairing the equipment on their own farms[43].

Food workers may find their jobs replaced by machines such as robots and drones. They may be expected to work at the same pace as a robot, perhaps by wearing robotic devices, even

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[42] https://www.theguardian.com/commentisfree/2021/apr/05/bill-gates-climate-crisis-farmland

[43]https://grain.org/en/article/6595-digital-control-how-big-tech-moves-into-food-and-farming-and-what-it-means#

though this has already been leading to more accidents in highly automated workplaces such as industrial meat processing facilities.

Focus area 5: Improving value and productivity

17. Which organisations are best placed to lead and/or support implementation?

AFSA does not support objectives and strategies to grow agricultural value and productivity in Australia. Growth and exports are the enduring 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 percent of Australia's food, even while exporting some 72 percent of what we produce[44]. Meat producers are among the largest exporters, with on average 75% of beef and veal, and 73% of lamb and mutton, sent offshore[45]. As governments call for more productivity and more exports, we should ask:

> **'why should a highly productive, net exporting country seek to export more of our precious soil and water in the form of commodities for the profit of a few?'**

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'[46].

While AFSA puts forward this view, we do note that this focus area references growing Indigenous-led enterprise within the native food sector:

- Developing Australia's Indigenous First Nation's Food Industry and embedding social and cultural food metrics to increase value in both domestic and export markets.

As a non-Indigenous organisation, AFSA asserts that Indigenous food sovereignty must be considered at the core of food sovereignty. Coloniser capture of Australia's native food industry needs to be addressed with Indigenous leadership and strong solidarity from non-indigenous allies. Although native plants and plant foods need to be incorporated back into agriculture in Australia, any commercialisation of indigenous flora or fauna should be led by First Peoples as a means of social and economic empowerment. At present, First Peoples make up around only 1 percent of Australia's native bush food industry[47], leaving the market largely in the hands of non-indigenous people and corporations seeking profit from culturally significant foods.

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[44] https://www.agriculture.gov.au/abares/products/insights/snapshot-of-australian-agriculture-2022#around-72-of-agricultural-output-is-exported

[45] ABARES 2021

[46] Muir 2014: 5

[47] https://www.abc.net.au/news/2021-07-09/native-food-sector-seeks-connection-with-indigenous-australia/100271318

18. What should be considered appropriate success measures of value and productivity improvement?

Considering AFSA's stance against increasing value and productivity of food and agriculture as a commodity, we suggest considering the intrinsic value of land and water as living, life-sustaining parts of our ecosystems, rather than value of high-yields and productivity supported by technological innovations.

Any measurable targets to build resilience of food systems should be viewed through a socio-ecological lens. Some examples include:
- Reducing the amount of food Australia imports and exports to protect agricultural land and water from degradation and biodiversity loss;
- Scaling out localised food systems through agroecology as a framework and practice;
- Improved welfare of farmers and communities operating through small-scale farming and distribution models;
- Enabling First Peoples with access to land, tenure and traditional foodways.

19. Do the opportunities, recommendations and R&D priorities sufficiently address the risks and challenges that food growers and manufacturers might face as they seek to improve value and productivity?

AFSA supports some opportunities, recommendations and R&D priorities put forward by CSIRO, including:

- Work with Aboriginal and Torres Strait Islander communities to build and scale-up self-determined Indigenous food ventures and identify systemic barriers and enablers to food system opportunities
- Improve resource management strategies (e.g., chemicals, water, soils, energy, by-products, land management)

Both of these recommendations have potential to enable First Peoples and small-scale food producers to have greater control over food systems, including management of land and water through agroecology and traditional knowledges. However, it is critical that this potential is realised effectively by inviting First Peoples, smallholders and civil society to be part of strategy development and implementation.

AFSA disagrees that many of the opportunities, recommendations and R&D priorities sufficiently address the risks and challenges in the food system in line with improving value and productivity. This includes:

- **Attract and retain a robust labour force and ensure skilled workers have the capabilities to keep pace with new technology advancements**

AFSA argues that Australian agricultural policy has failed farmers through the promise of technological advancements, which have led to a highly competitive food system that has forced farmers to go big, or get out. 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'[48].

> *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.*[49]

Productivism has underpinned Australian agricultural policy since the rise of neoliberalism in the 1980s, placing increasing pressure on farmers to compete on price and volume of production to the detriment of social and ecological welfare[50]. Farmers who cannot afford high-tech equipment to keep up with increased domestic and export demands are being forced out of farming as large-scale agribusiness monopolises the market. The Australian Government's plan to grow agriculture to a $100 billion industry is a false solution, built on decades of social and ecological exploitation of agricultural workers, land and water. Few farmers will benefit from the notion that increased productivity will reap economic benefits felt in their own pockets. Scaling up agriculture for productivity and exports further encourages monocultures as a threat to biosecurity, and overproduction where land and water is degraded.

- **Streamline and simplify the export regulatory/compliance environment to reduce red tape and increase participation by businesses, particularly SMEs**

This suggested recommendation highlights the lack of consultation with small-to-medium scale food producers, particularly AFSA members who are firmly against expanding their enterprise to exports.

Rather, AFSA's members advocate for developing scale-appropriate regulation and reduced red tape to enable localised food systems to scale out across the country. For example, AFSA and its members have been vocal about the need to reform food safety regulation to reduce barriers for SMEs across the value chain.

The three levels of government, each with legislation and agencies that mandate food safety and standards in Australia, results in a duplication of effort for small- and medium- scale food businesses.

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[48] Muir 2014, p.5
[49] Chan, Gabrielle. 2021. Why You Should Give a F*ck About Farming (p. 15)
[50] https://doi.org/10.1016/j.jrurstud.2011.12.005

At the state government level, the Victorian Government has a specific meat regulator that creates increased regulatory burden and duplication of effort, for example conducting quarterly audits of butchery facilities, compared to an annual audit in New South Wales. Furthermore, Victoria contrasts other states and territories that have integrated food regulators, which are able to view each sub-sector as part of a greater food standards system, resulting in regulation more commensurate to risk.

AFSA recommends a review of the ability of state and local jurisdictions to easily and consistently interpret the food standards set at the federal level, to ensure small- and medium-scale food businesses can consistently meet the food standards, without the need to overcome different application processes and inconsistency between state and local (e.g., Environmental Health Officer) auditing processes.

Regulatory reform should always be conducted through a transparent and participatory approach which identifies the priority needs of small-scale farmers, and which uses measures already available in the food regulatory system to prevent outbreaks:
1. Consult with producers with regard to the cost and administrative impact of any of government reforms;
2. Identify and improve any current regulatory and non-regulatory measures that can be improved, rather than adding more costly and burdensome steps for producers and processors; and
3. Provide the expected assurances to low-risk producers that there will be exemptions that apply to them should any new regulatory measures be put in place.

Any risk-management measures considered should target the known source of outbreaks, namely large-scale, intensive operations and sections of the processing industry engaged in the export and import of agricultural products. Appropriate assessments of the relationship between scale, production methods, supply chain length and logistics, and risk should be a priority.

To summarise, AFSA's members have long-advocated any efforts to support streamlining and simplifying food regulation, but we need reform to support localised systems, not as an incentive to export our food and water.

- **Identify and establish new overseas export markets**
- **Identify and build strong relationships with comparable international markets to collaborate and share insights**

As above, AFSA has made its stance against exports clear. Under these recommendations, we note that establishing new overseas export markets and building relationships is often facilitate through Free-Trade Agreements (FTAs).

A Free Trade Agreement (FTA) is defined by the Australian Government as "an international treaty between two or more economies that reduces or eliminates certain barriers to trade in goods and services, as well as investment. **Australia negotiates FTAs to benefit Australian exporters, importers, producers and investors** by reducing and eliminating certain barriers to international trade and investment[51]."

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[51] https://www.dfat.gov.au/trade/agreements/trade-agreements

While FTAs certainly reduce barriers for increased trade to the benefit of 'exporters, importers, [large-scale] producers, and investors', they do so at enormous costs to farm, fish, and food system workers as labour protection laws are circumvented to increase corporate profits[52], and corporations are given even greater power to control food systems. Another immeasurable negative consequence of free trade is to privatise biodiversity (e.g. through patents on seeds), increasingly making it illegal for farmers to save, exchange or modify seeds from so-called protected varieties[53]. The narrowing of genetic diversity in industrial agriculture (in both seed and breed), combined with rapid trans-boundary mobility of produce - in particular meat and livestock - has created the perfect storm for what evolutionary epidemiologist Rob Wallaces calls 'the NAFTA flu' and its ilk. Industrial agriculture could not have created a more perfect breeding ground for global pandemics than sheds of immunologically compromised homogeneous animals slated for immediate export under free trade agreements if it had tried.

In 2018, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) came into force after the US failed to ratify its predecessor, the TPP. Around 23 percent of Australia's total exports come from agricultural produce traded with countries under the CPTPP, including beef, sheepmeat, wool, pork, cereals and grains, dairy, rice, sugar, cotton, wine, horticulture, and seafood. These exports contribute around $12 billion to Australia's annual GDP[54], at a detrimental cost to the environment, small-scale farmers and farm workers, fishers and fish workers, food system workers, and Indigenous Peoples.

Governments and corporations hold up FTAs as a measure of social and economic development, however, La Via Campesina and other organisations globally have campaigned against corporate capture of food systems, documenting how smallholders and local communities are adversely impacted by free trade. Colonial capitalist food systems systematically fail to uphold the rights of smallholders under UNDROP while contributing to climate change and biodiversity loss, offering short-term solutions where profit for a few is prioritised over people and planet.

CSIRO should carefully consider conducting research on the impact of FTAs and the importing/exporting of food products across other markets, in relation to ensuring the rights of Indigenous Peoples, smallholders, civil society and the natural environment are recognised.

- **Improve input efficiency in food production, particularly the use of Australia's natural capital**

AFSA rejects the notion that nature is capital. In order to effectively achieve food system transformations needed to enhance social, ecological and political outcomes for people and the planet, we need socio-ecological not economic approaches. Industrial agriculture is largely

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[52] https://grain.org/en/article/5800-new-free-trade-agreements-normalising-the-brutality-of-transnational-supply-chains
[53] https://grain.org/en/article/6701-trade-agreements-privatising-biodiversity
[54] https://www.dfat.gov.au/trade/agreements/in-force/cptpp/outcomes-documents/Pages/cptpp-goods

responsible for biodiversity loss, which in turn increases the impact and severity of climate change and emerging diseases. The Global Biodiversity Framework established 23 biodiversity targets at COP15 in December 2022, where high exporting countries promoted offsets and net zero approaches in biodiversity, as they have in climate COPs. Agroecology is a real solution for biodiversity and to fight, given that it enhances and relies upon biodiversity in low emissions, short-value chain systems.

In viewing nature as capital, approaches such as 'climate-smart agriculture', 'sustainable intensification' 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 food system transformation based on the needs, knowledge, priorities and agency of people and nature, rooted in territories.

Construct, scale-up and upgrade infrastructure (production, processing and logistics) to meet increased production demands

As previously stated, AFSA and its members call for critical infrastructure at a local scale to suit the needs of small-scale businesses.

A 2020 report from a Parliamentary Inquiry on animal welfare in the UK[55] has outlined the challenges farmers face without access to local processing facilities and extensive benefits to small-scale farmers, animal welfare, and environmental outcomes from supporting the development of small-scale abattoirs. The issues and benefits are also highly applicable to the Australian context. One recommendation of particular note addressed planning issues in this way:

> *2.43 Government should consider low capacity abattoirs processing under 1,000 LSUs and running alongside other farming and processing activities being deemed agricultural buildings with respect to business rates and building control, subject of course to planning conditions necessary for local community protection.*

The Canadian province of British Columbia has also very recently introduced proposed legislation[56] to ease the burden on small-scale livestock producers who slaughter small numbers of animals on farm for sale off farm, an initiative we are interested in discussing further.

In Victoria, in the Farming Zone, 'rural industry' is an acceptable use, however it excludes abattoirs and sawmills. We propose a very simple change to the legislation to enable

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[55] https://apgaw.org/wp-content/uploads/2020/06/The-Future-for-Small-Abattoirs-in-the-UK.pdf

[56] https://www.countrylifeinbc.com/province-reveals-abattoir-changes/

small-scale on-farm abattoirs with a small throughput of animals[57]. (See also: answer to Q14 in Focus area 4).

20. Are there any other current and emerging food system opportunities that should be included in this focus area?

Against the social and ecological crises brought on by agricultural systems that are geared towards productivity and exports, localisation is considered the antidote for many of the current and future challenges we face to feed growing populations under an increasingly volatile and inhospitable climate.

In her book *Who Really Feeds the World: The Failures of Agribusiness and The Promise of Agroecology*[58], Vandana Shiva explains the social and ecological value of localising food systems:

> *Two principles have shaped the evolution of food systems across the world. The first is that everyone must eat. The second is that every place where human beings live produces food. Between these two principles, the food systems that have evolved to nourish people are, by their very nature, local. These systems of food production nourish both biological and cultural diversity. The localisation of food is not only natural but vital, because it allows farmers to practice the Law of Return, produce more food through biodiversity, create food systems adapted to local cultures and ecologies, and nourish themselves, their communities and the soil that they give back to.*

For governments and corporations, viewing food systems through the lens of localisation is in direct contrast with how they understand the generation of profits that inform policies to scale up farming using competitive incentives, technology and other market mechanisms. However, the COVID-19 pandemic, biodiversity loss, and climate change in Australia reveal the fragility of a globalised food system, and should prompt policymakers to consider how agricultural policy should support localisation and solidarity economies to safeguard food security.

In the social context of Australia, including localisation and solidarity economies in opportunities and recommendations have potential to address social and ecological injustices for First Peoples, caring for Country and increased participation of smallholders and civil society in food system transformation.

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[57] AFSA also supports a change to enable small-scale sawmills, as the use of small, portable mills (e.g. Lucas mills) for sustainable agroforestry of endogenous timber is already quite widespread, and should also be allowed without a permit to support diverse business models, as is common on agroecological farms.

[58] https://www.penguinrandomhouse.com/books/536677/who-really-feeds-the-world-by-vandana-shiva/

21. What additional gaps in technology and research need to be addressed to support growth in the food system, especially in terms of mechanisms for translating research into practice?
Other comments?

Research into scaling out localised food systems, rather than scaling up for agricultural value and productivity should be addressed.

Indicator shortlist

22. Can this indicator approach be used to track different dimensions of the food systems transformation process and examine whether change is occurring and going in a desirable direction?

AFSA welcomes CSIRO's efforts to include measurable indicators to track food system transformation. However, we do believe it could be more useful to separate tracking data based on the size and scale of industrial activity.

For example, tracking GHG emissions from agricultural land activities; GHG emissions from pre- and post-production activities in the food system; and GHG emissions from the entire agri-food system of Australia; and Average portion of natural vegetation embedded in agricultural lands should be compared between small-scale and industrial farms. This would enable CSIRO to identify where changes need to occur if it intends to transform our food system.

23. Is the current shortlist appropriate? Are there any indicators listed that should be removed?

Some indicators for enabling equitable access to healthy diets are inappropriate, such as:

• Inadequate fruit and vegetable intake rate
• Retail value of ultra-processed food sales per capita

These indicators are vague, and do not consider the structural impediments that lead to poor diets in Australia.

24. Are there any currently existing indicators with Australian data that should be included?

- Prevalence of mild, moderate and severe food insecurity across Indigenous communities;
- Availability of safe drinking water as a percentage across rural and Indigenous communities;
- Percentage of Indigenous-led enterprise within Australia's native bush food sector;

- Percentage of Indigenous and small-scale farmers within national governance/advisory bodies e.g. National Biosecurity Reference Group;
- Risk of chronic disease and illness in Indigenous communities;
- Prevalence of mild, moderate and severe food insecurity across rural and remote communities;
- Percentage of supermarket concentration across food distribution market;
- Amount and percentage of food produced for supermarket contracts and sent to landfill;
- Cost of non-biodegradable packaging used in the food supply chain;
- Average household consumption of ultra-processed foods compared to sustainably-produced organic foods, according to each household income level;
- Growth of and access to alternative food distribution models (CSAs, food hubs, farmers markets);
- Growth of and access to small-scale and on-farm abattoirs, nationally and regionally;
- Growth of and access to local seed banks/ heritage seeds;
- On-farm biodiversity levels;
- National and local soil health measurements, e.g. OM content, salinity levels, erosion levels, soil carbon levels;
- Distances that food travels (through the system) from farmer to household consumption (small scale and large scale/industrial separately); and
- Levels of pesticide and herbicide consumption.

25. Should the indicators be used for cross-country comparison (if the data is available) or focussed solely on Australia and changes over time?
Other comments?

AFSA agrees that cross-country comparison can be useful if the intention is to learn from other countries to improve social, ecological and economic outcomes in Australia's food system.