

A Local Food Act for Australia – the Conversation continues:

The Impetus for and Viability of Local Food Systems

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On 20 March 2014, the Conversation published an article authored by Dr Nick Rose entitled "[Let's Reap the Benefits of Local Food over Big Farming](#)". By 16 April 2014, this article had been read over 6,300 times and shared hundreds of times across social media. It generated 84 comments directly, from farmers, journalists, researchers and other interested parties.

AFSA is working with partners and stakeholders in Victoria, NSW and Tasmania to promote the concept of a Local Food Act in each of those states, which meets key challenges and priorities for a fairer and more sustainable food system.

Writing in a journalistic context entails extensive editing for reasons of space. Some concepts and examples are abbreviated, almost to a short-hand version, and others are omitted entirely. We felt that the response to this piece warranted a more comprehensive explanation of the ideas in the original piece.

What Amory and I have done in this article is engage with some of the main themes emerging from the very extensive comments made to the original article, with the aim of moving forward the conversation in a constructive manner. The main themes we will engage with are posed as the following questions:

What's wrong with the dominant agricultural paradigm?

What suggests that local food systems constitute a viable and desirable alternative?

What is needed to develop local food systems?

Introduction – what is the trajectory of food system change?

We live in an era of increasingly rapid change in many aspects of our societies and culture. In the last thirty years, we have seen multinational corporations become more wealthy and powerful than many nations. During the same period, [inequality has reached levels not seen since the infamous 'Gilded Age'](#) of the late 19th and early 20th centuries. Humanity is no closer to eradicating the scourges of hunger, poverty and warfare; on the contrary, all three are arguably becoming worse. Communications technologies have become ubiquitous in cities and are reaching even remote areas. While globalisation of finance and trade has brought unimaginable riches to a very few, the interconnection of global economies has sent financial crises cascading through countries on the global periphery, that are now reverberating back to the centre. “Green” ecosystems perspective are now mainstream yet [non-linear climate change seems to be upon us](#), far ahead of schedule...

From the perspective of farmers, all of this has meant a massive loss of control, as horizontal and vertical integration define most of the marketplace. Forty years ago, Australia's two supermarkets, Coles and Woolworths, had less than 40% of the grocery retail market between them. Now, in the most concentrated supermarket sector in the world, they hold close to 80%, and have expanded their operations far beyond food into liquor sales, petrol stations, finance and insurance, communications, hardware, gambling, and much more. Seed companies are now food companies and international brokers. Cigarette companies are also food companies; and food companies [spend billions of dollars every year marketing their products](#) to all of us, targeting our children in particular...

A counter-dynamic is also well underway. The first farmers' market where people could attach a farmer's face to their produce opened for business in Australia in 1999; now there are more than 150. Community gardens have grown from a mere handful in the late 1980s to 250 or more across the country today. Hundreds of primary schools have kitchen gardens where children can learn about growing vegetables and healthy eating. [More than half of all Australians are now growing or raising some of their own food](#), relearning traditions that were widespread only two generations ago. Veggie box schemes and community-based bulk buying groups are sprouting up all over the country.

This process of *food localization* in Australia follows in the footsteps of the UK, US, and Canada. In the US, [more than 8000 farmers markets are in operation](#) (up from just over 1000 in the early 1990s). In California,

there were no markets in 1970, by 1981 there were 53. And there are now roughly 80 state certified farmers markets in Los Angeles County alone. Ten thousand U.S. schools are part of a [National Farm-to-School Network](#), up from a mere handful in the late 1990s. [Over 200 Food Hubs are now in operation](#), providing distribution, aggregation and marketing solutions to small-and-medium sized growers, enhancing the visibility, scale and impact of the local food movement.

The process is beginning to be supported by legislation at both state/province and Federal levels, as we discussed in the *Conversation* article.

So there are at least two trends apparent: the further consolidation and expansion of the big, industrialised and globalized food system, which seems to turn farmers into contractors on their own land and proud farming nations like New Zealand into “vassal states” (as described this week by Jamil Anderlini, Financial Times Beijing Bureau Chief on Radio National). And the rapid spread of a local food movement based on connection to place and people and solidarity with farmers.

The issue of “food security” has become a global policy topic, with vigorous debates about how it should be conceptualized. As the world community, nation-states, and communities embrace this goal, albeit from often quite divergent perspectives and assumptions, questions about the impacts of various farming and food systems become paramount.

What’s wrong with the current agricultural paradigm?

The current agricultural paradigm is based on large-scale monocrop farms that produce for commodity exchanges and wholesale markets. These wholesale markets are increasingly export markets, which are linked to free trade agreements, and in recent years to speculation from financial interests on the price movements of globally traded commodities. Global markets also facilitate foreign ownership of domestic agricultural land, invasive entitlements that have been enforced by structural adjustment programs of international financial institutions such as the World Bank.

Monocrop farms are vulnerable to pests, weeds, and disease, and rely on chemical controls, including crop varieties bred and / or genetically modified for specifically this mode of production. Large-scale industrialised agriculture treats farmland as a factor of production, rather than as an ecosystem, using industrially-produced fertilizers as the basis of soil fertility. “High yielding varieties” [developed as part of](#)

[the 'Green Revolution'](#) only reach their potential when lavished both with water and with favoured, i.e. patented and profitable, agricultural chemicals. Petrochemical-based agriculture raises the costs of farming and makes farmers dependent on fossil fuels, patented seeds and chemical factories. The factories are often toxic polluters. Runoff from the use of industrial agriculture chemicals damages water supplies and the chemicals themselves often endanger non-target wildlife, farm workers, and formerly productive ecosystems. (Fisheries at the mouth of the Mississippi river are affected by [eutrophication and 'dead zones' in the Gulf of Mexico](#) which receives both runoff from industrial farming and effluents from the string of agricultural chemical plants that line the Mississippi river.)

The bioaccumulation of these chemicals is an unquantified threat to the health of wildlife and people. The depletion of soil fertility, and the mutation of pests and weeds, requires constant increase in the volumes and intensity of the application of these chemicals: an estimated seven-fold increase in the past four decades.

Large-scale monocrop farms depend not only on off-farm inputs, but on a market system which can absorb monocrops. As processors, wholesalers, distributors, and retailers have consolidated, farmers have fewer options for sale, and the buyers set the price. This problem has affected farms of all scales that depend on wholesale contracts, but smaller and more diverse farms have more options for production and scale of sale.

Monocrop farms are locked into chains of dependency – both on the suppliers of industrial inputs, and on just a few transnational corporate buyers of the commodities they produce (see below). So these farms are fragile and vulnerable, as well as being environmentally and socially hazardous. Slight market fluctuations can put these farms into the red and specialized, expensive equipment and infrastructure can make it hard for them to diversify production.

As the industrial monocrop farming system has been encouraged, often through multi-billion dollar crop subsidy payments (as in the US and Europe), some countries have experienced an overproduction problem. The immediate result is that the price drops to a point where farmers cannot recoup their costs. Faced with the bankruptcy of farms, and influenced by powerful corporate lobbies whose profitability depends on continually high production of just a few commodities, governments have locked in policies to subsidize monocrop farms and to seek overseas markets.

This strategy has been destructive to the viability of farmers of the Global South who produce enough for domestic consumption but cannot compete with subsidized industrial products “dumped” into

their economy below the cost of production. And “Free Trade” policies seek to prevent recipient countries from protecting their own farmers with policies such as limits to imports or price supports for domestic products.

But Free Trade policies don't only hurt the Global South. In abandoning a farming system based on the domestic market, even rich Northern agricultural export countries (including Australia) are facing a loss of control over aspects of their food system.

Free Trade grants foreign countries the right to enter our domestic markets. When Chinese canned imports undercut the prices of Australian brands, grocery stores may stock only the cheaper import, or if they stock both, unwitting consumers may select the cheaper option, endangering the viability of domestic produce. Considering the supply system to restaurants, choice is even more choked, as buyers source the cheapest produce from distributors who systematically work to increase their cut.

As shoppers, as patrons of restaurants and cafés, we need to be asking ourselves: what are we eating, and why? Who has made the decisions regarding the range of produce that we have access to? Who benefits from those decisions?

Further, Free Trade dictates that our agricultural goods will be sold to the highest bidder on the international market. In countries that have experienced famine, agricultural exports continue because there are international buyers who can pay more than the citizens of a starving country. This happened during the great famine in Ireland in the 1840s, when Ireland continued to export food to England even as its own people were starving to death. It happened numerous times in India during the reign of the British Raj, as documented carefully by Nobel laureate Amartya Sen. If too much land is controlled by export interests, it's possible for a country to simultaneously suffer famine and export food, as Ethiopia did in the 1980s

The problem with the 'supply and demand' theory of 'free markets' is that *need* does not constitute *demand*. Only *buying power* constitutes effective demand. Shocking examples from history like the Irish famine are not aberrations; they are a logical consequence of the 'normal' operation of 'the market'. Further, selling to the international market means that our finest goods may become unaffordable to us as global elites are prepared to pay a higher price than ordinary Australians can afford.

Of course, regardless of what market theory says, food is a basic necessity of life, along with clean air, water and decent housing. That is why access to good food is one of the fundamental and universal human rights to which Australia and most other countries in the world

(with the notable exception of the United States) have committed themselves to realizing. Relegating access to good food to a function of pure market economics has had serious consequences for human and environmental health and well-being; and that is why we advocate a rights-based approach to the development of food policies and frameworks at any tier of government.

Another chilling result of submitting our agricultural system to the functions of a global marketplace is that our land, water, and ecology are up for sale to the highest bidder. This means that Australian land and water can be purchased by foreign interests who would of course be entitled to export their 'private property'. It's worth noting that they would be under no obligation to provide agricultural goods at affordable prices to Australians in a time of crisis. Foreign ownership of land and agricultural enterprises relinquishes sovereign control over the riches and resources which are our patrimony. Proposed new free trade agreements like the Trans Pacific Partnership extend the rights of foreign investors.

Our colleague and AFSA President Michael Croft spoke to this issue recently in a debate organized by the St James Ethics Centre in Sydney, on the topic, 'Should foreign investment in Australian agriculture and infrastructure be strictly limited?' You can listen to Michael's contribution (and the other speakers) at [Radio National's Big Ideas](#); and read our perspective on [why it's vital to safeguard our most precious assets for the future](#).

Here in Australia, the consequences of more than two decades of bipartisan pursuit of 'free trade' agreements are becoming increasingly visible. We are losing on the order of [10 farmers every day](#). Nearly half of our farmers are over 55 and young people are not seeing agriculture as a viable vocation. Our agriculture education institutions refuse to respond to young peoples' interest in ecological agriculture. Farmers who love their land [are increasingly taking on more debt](#) to keep production levels up in a seemingly endless 'get big or get out' dynamic.

Governments, agri-business corporations, and educational institutions have focused on increasing production of certain narrow commodity groups: grains, meat and dairy, what Tony Weis terms '[the industrial grains, oilseed and livestock complex](#)'. Meanwhile as many as 2 billion people have nutritionally inadequate diets, a global pandemic of obesity is unfolding, and the environmental and climatic costs of chemical- and fossil fuel energy-dependent industrialised agriculture are mounting rapidly. As currently structured, the globalized 'productivist' food and agriculture system contributes as much as 50% or more of all greenhouse gas emissions.

The current food system isn't working. As Olivier De Schutter, the outgoing United Nations Special Rapporteur on the Right to Food, put it in his final report delivered earlier this year:

Measured against the requirement that they should contribute to the realization of the right to food, the food systems we have inherited from the twentieth century have failed....The eradication of hunger and malnutrition is an achievable goal. However, it will not be enough to refine the logic of our food systems – it must instead be reversed...The current food systems are efficient only from the point of view of maximizing agribusiness profits... Wealthy countries must move away from export-driven agricultural policies and leave space instead for small-scale farmers in developing countries to supply local markets.

Ethically, the inescapable conclusion from the above is that Northern countries such as Australia must embrace the transition to a more localized food system, because it is our complicity in driving forward a productivist agenda of agro-exports that is generating waste, pollution and perpetuating an increase in global hunger and malnutrition. Will we do so? That remains to be seen.

What suggests that local food systems constitute a viable and desirable alternative?

While [great majority of all Australian producers depend on off-farm income to make ends meet](#), Jonai Farms, with 12 breeding sows on 60 acres, selling direct to local people, has become profitable after only two years of operations. This means that the owners, Tammi and Stuart Jonas, can devote themselves entirely to farm and farm-related educational work. There is surely a message here for many other Australian producers who struggle to make ends meet in the 'get big or get-out' productivist food system.

[Research published in 2011](#) suggests that the **desire to 1) support local farmers and producers**, 2) support local retailers, and 3) keep jobs in the local area, are the factors behind the major increase in demand for the products of local food economies. Those consumer sentiments doubled or nearly doubled between 2006 and 2010.

This is consistent with [recent \(unpublished\) survey data](#) obtained by the Australia Institute in October 2012. In answer to the question, 'What top two measures should Australia adopt to ensure that sufficient quantities of fresh, healthy and affordable foods are available to all?', 86% nominated 'Support local farmers to produce more', and 63% nominated 'Protect our best farmland from different uses, e.g. mining /

housing'. In response to the question, 'How important is it to you that Australian family farmers and small-to-medium sized food businesses are economically viable?', 62% said 'very important', and 30% said 'quite important'.

A number of new institutions have demonstrated the viability of local food systems: Farm-to-school, local branding schemes, Food Hubs, and Urban Agriculture.

Local Branding schemes

[Local Food Plus](#) is a Canadian national branding and certification scheme, which demonstrates the growing levels of support for and confidence in local food systems.

The entry-level requirement for any farm wishing to be certified is that [it must produce for local markets](#). Since beginning in 2005, more than 200 farmers and processors have achieved certification, and LFP has partnerships with more than 100 retailers, wholesalers, and institutions. It's estimated that 100,000 purchases per day are made under the label, which suggests the message is reaching a lot of Canadians.

The Local Food Plus label stands for 'Certified Local Sustainable', which requires adherence to the following principles in food production:

1. Employ sustainable production systems that reduce or eliminate synthetic pesticides and fertilizers
2. Avoid the use of hormones, antibiotics and genetic engineering
3. Conserve soil and water
4. Ensure safe and fair working conditions
5. Provide healthy and humane care for livestock
6. Protect and enhance wildlife habitat and biodiversity on working farm landscapes
7. Reduce on-farm energy consumption and greenhouse gas emissions.

Farm to School

An outstanding example of the potential of local food systems to boost the profitability of producers, and simultaneously achieve health and educational outcomes, is the national [Farm to School Network](#) that has been operating in the United States since 2007. From modest beginnings with a handful of schools in the late 1990s, over 10,000 schools across the country are now participating in the program, the centerpiece of which is 'establishing relationships between local foods and school children'. Farm to School programs include:

- Sourcing local products for school meals-breakfast, lunch, afterschool snacks-and in taste tests, educational tools and classrooms snacks.
- Introducing food-related curriculum development and experiential learning opportunities through school gardens, farm tours, farmer in the classroom sessions, chefs in the classroom, culinary education, educational sessions for parents and community members and visits to farmers' markets.

The benefits of the program include the following:

- Strengthen children's and communities' knowledge about and attitudes toward: agriculture, food, nutrition and the environment.
- Increase children's participation in the school meals program and consumption of fruits and vegetables, thereby improving childhood nutrition, reducing hunger, and preventing obesity and obesity-related diseases.
- Benefit school food budgets (after start-up costs) if planning and menu choices are made consistent with seasonal availability of fresh and minimally processed whole foods.
- Support economic development across numerous sectors and promote job creation.
- Increase market opportunities for farmers, fishers, ranchers, food processors, and local food manufacturers.
- Decrease the distance between producers and consumers, thus promoting food security while reducing emissions of greenhouse gases and reliance on oil.

Food Hubs

Another new institution developed to facilitate local food systems are **food hubs**. These are regional distributors and marketers which help farmers get their products to consumers. Although they are profitable, they operate according to different ethics than the wholesalers and middlemen whose function they have replaced. They exist to support local farmers and a local food system. A number of food hubs even operate as farmer coops or non-profit organizations.

In the US, Food Hubs are defined as 'businesses or organisations that actively manage the aggregation, distribution and marketing of source-identified food products' (Michigan State University and Wallace Centre, National Food Hub Survey 2013). The key findings from the [2013 National Food Hub survey](#) revealed the following:

- Food Hubs are financially sustainable, with an average turnover of \$3.7 mn, and 66% operating with no grant funding
- 60% of them take some other business form than private for-profit ownership.

- Food Hubs are creating jobs: 19 paid positions on average.
- Food Hubs are growing to meet market demand: More than 95% are experiencing increased demand, with the main clients being restaurants, schools and small grocery stores; 62% of Food Hubs commenced operations in the past 5 years
- Food Hubs are creating market opportunities and providing crucial services for small and mid-sized producers: 76% of Food Hubs say most or all of their producers are small to mid-sized, and 74% say most of their customers are within 100 miles
- Food Hubs are achieving social justice objectives: 50% of Food Hubs accept food stamps and nearly half have explicit commitments to equity and food security.
- 60% of gross sales were products from small farms (under \$500K annual sales).

In Australia, there is a nascent Food Hubs sector, currently being supported by the [Australian Food Hubs Network](#) with resources, a website and a social media presence. At the end of 2013 the [South East Food Hub](#) became operational, following an extensive period of market research and community, grower and business consultation.

Urban agriculture and 'zero hunger' strategies

As noted by the United Nations Development Program's 1992 study and 1996 book, *Urban Agriculture: Food Jobs, and Sustainable Cities*, there is a wave of **urban agricultural** initiatives across the world. Brazil and Argentina have developed a "social solidarity economy", supported by national 'Zero Hunger' strategies and the creation of Ministries dedicated to support small-scale family farmers as well as city-based strategies to integrate local markets with food banks, community kitchens, and low-income restaurants to get good food to those who need it most. The outstanding case study here of course is Belo Horizonte in Brazil, '[The City that Ended Hunger](#)'.

Australia also has a strong tradition of urban agriculture, which traditionally has taken the form of non-commercial and small-scale community gardening; but which is now expanding in many new and innovative directions. AFSA and the Food Alliance are supporting this process, in particular through the development of an Urban Food Network and Urban Food Charter for Victoria, which we hope to see replicated in other states.

Community gardens and urban agriculture are often criticised for being niche activities undertaken by 'urban greenies' and the 'worried well'. It's frequently said that they will never make any impact on 'feeding the world' because they produce insignificant amounts of food. The truth or otherwise of that assertion depends greatly on the

context, particularly the production system being used and the skills, experience and knowledge of the urban agriculturalist in question.

In the United States, there are some outstanding examples of 'low-tech, high yielding' urban agriculture systems. These range from commercial operations to family gardens. [Growing Power in Milwaukee produces hundreds of thousands of kilos of food per year](#) on just a few acres, through a combination of low-cost aquaponics systems and high-grade composting and worm farming. The Dervaes family have documented an 'Urban Homestead' system which they say [produced 2,500 kilos of food](#) on 1/10th of an acre.

In Australia, data on yields of urban agriculture is notoriously hard to come by, but one very notable exception is the work of Angelo Eliades, an exponent of the permaculture 'food forest' method in Preston (Melbourne). Angelo is remarkable for the methodical and systematic way he has built his backyard food forest, and in particular for his documentation of everything he's done, from species selection, plantings, climate events and yields. All of this is available at his blog, [Deep Green Permaculture](#).

Angelo built his food forest on the 'leached and lifeless' soil of his 80m² backgarden during the winter of 2008. He calls his method 'backyard orchard culture'. It's based around the careful selection and strategic siting of a range of different tree species (Angelo has 30), interspersed with numerous varieties of berries (21, with multiples of several varieties), herbs (90) and other perennials, with some space left for annual vegies. He mixes early-, mid-, and late- fruiting varieties to 'give extended seasonal cropping – instead of having one tree produce a glut of fruit all over a few weeks, you can extend your cropping" over several months.

For Angelo, a key motivator is yield; his aim was to show what's possible in a small space, the 'typical suburban backyard' in inner Melbourne. He wanted to counter the skepticism of folks in government agencies like DPI who scoff at the idea that permaculture and backyard gardening can actually produce significant amounts of food.

But he's also very interested in resilience, in selecting species that can do well in a Melburnian climate that is behaving increasingly erratically, with damp and cool summers, short and mild winters, freak hail storms, and extremely hot days in early spring. Never mind the droughts, the fires and the floods.

You can see here the outlines of a vision for a community-based resilient food future. What about his yields? As of 2012, Angelo has documented approximately 200kgs per year, roughly 60% from trees, 5% from berries, and 35% from vegetable plants. And that's with only

2/3 of his trees mature enough to produce. He anticipates 500kg of production well before the end of this decade.

Even his current yield equates to 14 tonnes per acre. Average dryland wheat yields in Australia are in the 2 tonne per acre range, even after many millions of dollars have been spent on research and genetics.

What is needed to develop local food systems?

In a comprehensive review of the state of the world's food and agricultural systems, assessing them according to the yardstick of whether they support the full realization for all of the human right to adequate food, UN Special Rapporteur on the Right to Food, Olivier De Schutter, has found both global and national food systems to be failing badly. As a result, he has called for a 'new paradigm focused on well-being, resilience and sustainability' to replace the 'productivist paradigm'.

In what amounts to a blueprint for a transformed food and agricultural system, oriented mainly towards local production for local communities, he advocates:

- Strong support for small-scale producers, including 'public goods for training, storage and connection to markets'
- Support for the necessary transition to agro-ecological modes of production
- Measures to support local markets and local food processing
- A restructure of trade policies and agreements so that they support local food economy development
- At the national level, the adoption of 'multisectoral strategies' to support the expansion of local food systems, targeted especially at smaller-scale producers, economic diversification, and the strengthening of social welfare systems to boost the purchasing power of low income and vulnerable groups
- Recognition that local food systems can coexist with large-scale agro-export production, but governments must 'be aware of the different functions that different agricultural models serve to fulfill, and adopt a balanced approach towards them', instead of privileging the latter over the former.

Several institutions and policy frameworks have been developed to support the development of local food systems.

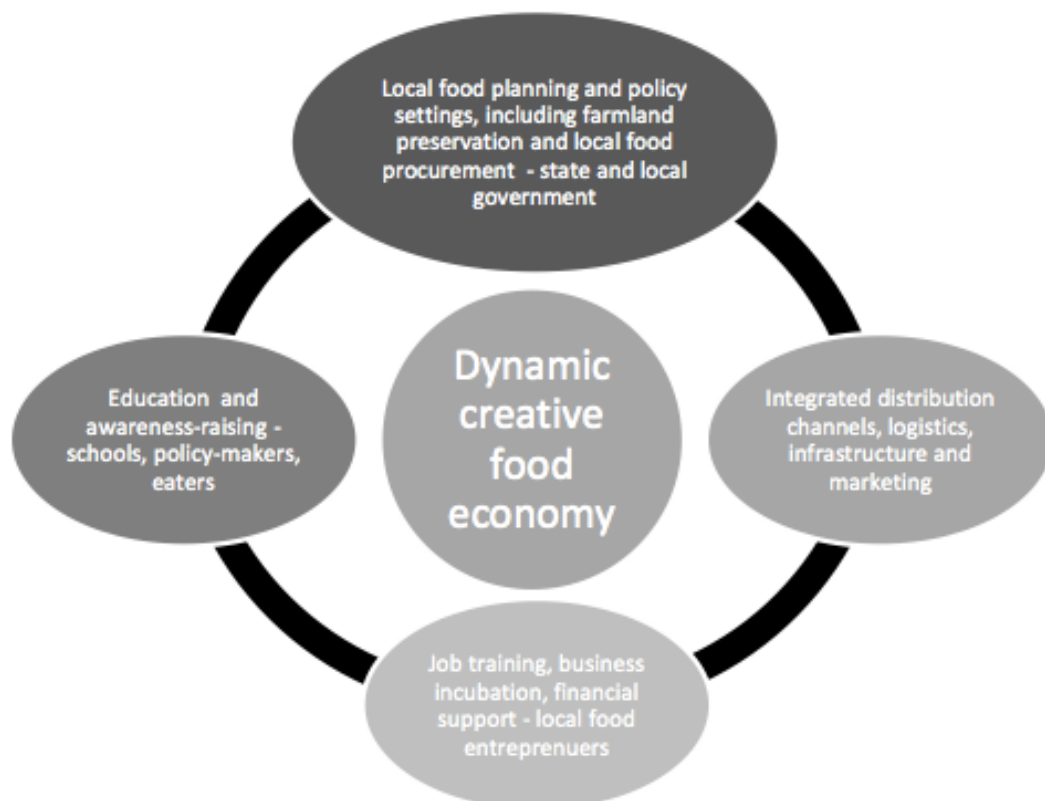
Food policy councils

Across North America, non-governmental [Food Policy Councils](#) have brought together food banks, nutritionists, farmers, consumer groups, and urban designers to build relationships, divert waste, create new

markets for farmers, and increase healthy eating. These Councils operate at the state, regional and local levels, and have been instrumental in building shared knowledge and understandings of the strengths and weaknesses of local and regional food systems, thereby creating the basis for strategic collaborations and initiatives to tackle priority issues. Their work has been the basis for developing government policies like the Ontario Local Food Act.

In Melbourne a number of local governments and regions have prepared, or are in the process of preparing, local and regional food strategies. Research undertaken in 2013 for the development of the Regional Food Strategy for Southern Melbourne included a study of six centres of '[creative and local food economies](#)' from the United States, the United Kingdom, Brazil and Italy. Four key themes emerged from that research, namely:

- The *interconnectedness* of creative food economies, as illustrated below, show how diverse and sometimes discrete activities stimulate demand for produce from local farmers and food enterprises, driving a virtuous cycle in successful creative food economic development:



- The second theme is the highly *collaborative nature* of successful

creative food economic initiatives. The creative food economy is seen as an integrated **system**, constituted as a whole by the sum of diverse elements and actors. Accordingly it makes sense, from a governance and economic development perspective, to include as many of those actors as possible in the design, planning and implementation of local food initiatives.

- A third theme is the primary importance of *education*. This takes two main forms. In the first place, there are the education and awareness-raising efforts of local food activists, environmental campaigners, health professionals and others about the many ethical and environmental reasons to support local food. As the case of Toronto demonstrates, this contributes to a better-educated population, which has generated a substantial and growing demand for the products of local food farms and enterprises.
- Fourth, there is a leading role for post-secondary colleges and universities in providing the *research, technical support and training capacity* to support innovative food economy entrepreneurs, and to supply them with a skilled and capable labour force. Also important here is an extension capacity to support local farmers and growers transition to sustainable and diverse production methods.

There is an awareness in many places **of the systemic problem of waste** and a willingness to innovate and develop strategies to redesign resource circuits and supply chains. In Melbourne, for example, the '[Food Know How](#)' community and business composting program being undertaken by Cultivating Community in collaboration with the City of Yarra, local residents and businesses. A new social enterprise, Spade and Barrow, has developed an innovative marketing strategy around '[Nature's Grade](#)' produce, purchasing the 'whole crop' and not applying strict aesthetic requirements as these can result in crop wastage of 20% or more. This makes a significant difference to the bottom line of many growers.

Improve aspects of the production system

Evaluating the production system, the Special Rapporteur indicated that three major changes need to take place if the world is to transition to a sustainable food system that feeds all people well and reduces its environmental and climate impact:

1. Reduce levels of factory farmed meat production
2. Reduce the rush to devote land and grain production towards agro-fuels

3. Tackle the high levels of inefficiency and waste throughout the system, which result in as much as 1/3 of all food produced being wasted.

How can local food systems help here? Again, it is a question of producers and their communities being closer to each other, understanding each other's needs and working together to satisfy them.

As regards factory farmed meat, the more educated shoppers become about the provenance of their food – the hallmark of local food systems – the more they will want to ensure that the meat is produced ethically. There is a growing movement towards pasture-raised poultry and rare breed free range pig farming in Australia. This model of livestock production, as well as being ethical, can also be profitable from the producer's perspective, as the experience of [Jonai Farms](#), [Bundarra Berkshires](#), and many other similar operations around the country demonstrate. In conjunction, the trade of local butchers is being renewed in Australia as in North America. One of the important roles of local butchers is to educate customers about nose-to-tail eating and cooking: "That pig only has two tenderloins."

Moving away from factory farmed meat towards ethical meat production and consumption is part of the bigger transition towards sustainable forms of agriculture, which the Special Rapporteur places under the global movement of 'agroecology':

Agroecology refers to a range of agronomic techniques, including intercropping, the recycling of manure and food scraps into fertilizers, and agroforestry, that reduce the use of external inputs and maximize resource efficiency. It is consistent with, and complementary to, genetic improvement...as done by generations of farmers cultivating landraces. There are strong environmental arguments in favour of agroecology. But agroecology also provides other social and health benefits. Diverse farming systems contribute to more diverse diets for the communities that produce their own food, thus improving nutrition. Because agroecology reduces the cost of farming by minimizing the use of expensive inputs, it improves the livelihoods of farming households, particularly the poorest households. And it supports rural development: because it is knowledge-intensive and generally more labour-intensive, it creates employment opportunities in rural areas. Though easier to implement on smaller-sized farms, agroecological techniques can be disseminated on a large scale, and should also inspire reforms in how large production units operate.

Australia has its own traditions of agroecology, including biodynamic practices, regenerative agriculture, permaculture, and indigenous

Aboriginal land management and harvested landscapes. These themes and linkages have recently been explored at length by AFSA member Dr Charlie Massy, [in an essay published on our website](#).

Is there a necessary linkage between local food and sustainable agriculture production?

We argue that more localized food systems are likely to encourage and support agroecology and other sustainable forms of agriculture. Why? Because a key distinguishing feature of local and regional food economies are the higher levels of trust and more intimate connection that purchasers have with the producers of food, as epitomised by the interpersonal relationships facilitated in farmers' markets. Those who identify with local food do so because they want to know where their food comes from. Typically, this includes a desire to know how it was produced.

Agroecology can even be used as part of export-oriented production. Regenerative agriculture is practiced in Australia by several large-scale producers, Charlie Massy included, many of whom would export some or even most of what they produce.

Peri-urban agriculture

One of the problems facing farmers who sell to urban markets is the pressure on peri-urban farmland. Australia is one of the most intensely urbanised countries in the world, with an estimated 90% of us now living in the major cities and urban conurbations on the coast. As our big cities –especially Sydney and Melbourne– have expanded over the decades, they have increasingly encroached upon the fertile farmland on their fringes that was vital in supporting their existence in the first place.

As house prices and land values have skyrocketed over the last few decades, these development pressures have intensified considerably. When combined with other pressures on the profitability of Australia's producers, in particular the downwards squeeze on farmgate prices exercised by the supermarket duopoly, more and more farmland has been sold to developers for housing subdivisions.

Globally, a number of cities have now worked to establish greenbelts or landscape preservation zones to safeguard farming. Perhaps the most outstanding example is [Ontario's greenbelt](#), which protects 1.8 million acres of land in Canada's most populous province. The Ontario greenbelt both protects areas of high biodiversity and conservation values, and sustains 5,500 mainly small farms which form the basis of a thriving local food economy.

These sorts of institutions and policies remove agricultural lands from the real-estate market to maintain regional economic diversity and dynamism. In conjunction with this elongated article, we have also asked orchardist Ed Biel to write about peri-urban issues in the specific context of Sydney, with his proposed solution to the central issue of grower profitability: a partnership between developers and producers in the form of an 'Agricultural Enterprise Credit Scheme'. (Check the [AFSA website](#) for Ed's coming article.)

The health connection

Among the costs and benefits of a local food system are the costs and benefits of **health**. Medical scientists have long been insisting that eating more fresh fruit and vegetables is a simple and urgent health act. Fewer than 1 in 10 Australians eat the recommended daily servings of fresh fruit and vegetables, and we eat far too much processed and fast foods laden in saturated fats, salt and high quantities of refined sugars. Local food systems have a major role to play here, not least because over 60% of local produce is typically fruit and vegetables. A pandemic of dietary-related ill-health is sweeping the country: by 2025, [up to 3 million Australians over 25 will have diabetes](#), largely caused by dietary factors.

Local Food Acts

As discussed in the original article, Local Food Acts are a policy instrument designed to support local food systems in a number of different ways, from raising levels of food literacy (systemic understanding of the food system, including the development of healthy eating habits and nutritional education) to developing procurement policies for state institutions. Local Food Acts build on the experiments and programs of Food Policy Councils to design relationships appropriate for regional and local food and agricultural systems. In the 'further reading' section below we provide references to several legislative and policy initiatives that have been important in furthering the expansion of local food systems in North America.

Conclusion

One of themes in the international discussion of these issues is that food security is too minimalist as a way of understanding what is needed. The alternate concept is "food sovereignty", a concept developed by La Vía Campesina, the international movement of farmers and fisherfolk. Embraced by DeSchutter, food sovereignty is 'the possibility for communities to choose which food systems to depend on and how to reshape those systems' – as a precondition for the 'full realization of the right to food.' Food security may deliver calories, but it does not

deliver resilient farming systems and markets, dignified work, diverse systems, or **democracy**. DeSchutter argues that

The greatest deficit in the food economy is the democratic one. By harnessing people's knowledge and building their needs and preferences into the design of ambitious food policies at every level, we would arrive at food systems that are built to endure.

Local Food is one element of the larger global movement of food sovereignty: local people working together to establish food systems, laws and policies that meet their own needs for health, well-being and environmental sustainability, as the first priorities, before and above the needs of transnational corporations for profit and capital accumulation. Other key elements of food sovereignty include agrarian reform (especially in the global South), the transition to agroecology, and Fair Trade frameworks.

We are all familiar with 'Fair Trade' products, which have appeared in increasing though still limited numbers on supermarket and grocery store shelves in recent years. 'Fair trade' means that those whose labour produces the item – coffee, chocolate and tea being the most common – are treated 'fairly'. Fair trade affects earnings, reducing the middleman's share to return more of the purchase price to producers. But it goes beyond price. Fair Trade certified producers operate in democratic cooperatives, use some of the increase of earnings for collective goods like schools and health clinics, and use sustainable agricultural practices.

There is however a much bigger, structural question: what would a Fair Trade Agreement between countries actually look like? How it would differ from a 'Free Trade' agreement? For the global food sovereignty movement, of which AFSA is a part, the subject of trade is particularly important, having regard to the impact of trade liberalisation on small family and peasant farmers. La Vía Campesina's alternative to free trade is trade based on food sovereignty principles: fair and transparent trade regulated by democratised international institutions, within the broad context of all nations working toward greater food self-sufficiency, and being supported in these efforts. This is consistent with the perspective of Olivier de Schutter, in terms of how international institutions and frameworks need to be redesigned to support the full realisation of the right to food.

But what would a 'Fair Trade' agreement actually mean in practice? So far, we don't really know. Some in La Vía Campesina point to the emerging Latin American 'ALBA' (Bolivarian Alliance for the Americas) framework of 'trade by solidarity', suggesting that it might constitute a potential model. There is an emerging 'social and solidarity economy', part of a broader movement for 'economic democracy' or a

'solidarity economy', which is driven by core values and principles linked to the satisfaction of the basic necessities of life for all people, as distinct from the current priority of achieving infinite 'economic growth' via pursuit of profit and capital accumulation – although we now know that growth does not reliably trickle down.

As the 'TINA' (there is no alternative) agenda of ceaseless globalisation of production and consumption falters, these sorts of alternatives and movements will gain increasing visibility and traction. At AFSA we believe that any 'Fair Trade' agreement to which Australia is a party must be negotiated with the full involvement of those directly affected by the goods and services to be exchanged. We would very much welcome and support direct farmer-to-farmer exchanges across borders, and cultural and linguistic boundaries, so that Australian farmers can see for themselves the impact of 'free trade' deals on their counterparts in South Korea, Taiwan, the Phillipines and other countries in our region; and vice-versa. It is, we believe, through such exchanges and the consequent formation of relationships based on trust and mutual respect, that we will be able to formulate 'Fair Trade' agreements based on principles of genuine equality and support for the mutual well-being of all peoples.

To return to the question we posed in the introduction: what can we expect in terms of directions of change over the next 5, 10 or 20 years? At this point it is simply too early to say. There are contradictory tendencies manifesting right now. The forces marshaling in defense of the status quo are substantial and powerful. The inertia in the system, and hence the difficulty of change, should not be underestimated.

But appearances can be deceptive. Large changes can happen in short periods of time when ideas become popular. The local food movement in the US is proof that new economies can be built even in the midst of a national economic crisis, redirecting billions dollars toward the smallest farms.

The outlines of what a fair food future might look like, in Australia and round the world, are clearly visible. What happens from here is quite literally dependent on what we individually, and more important, *collectively*, decide to do. We can remain disconnected, dissatisfied, perhaps believing that 'they' will take care of it, but with a nagging voice suggesting that 'they' probably won't. Or we can work together, use our creative powers of imagination and innovation, building relationships and commitments to support the changes that are already underway and design new models, new businesses, new ways of working and living together, that will help usher in a better future for us all.

Peak Oil and other constraints on food and agriculture

Many people who commented on the article were interested in speculating about the effects of peak oil, fossil fuel subsidies, climate change, and efforts to reduce carbon footprint on farming practices and global markets. This rich area of debate deserves an article all its own and we will be investigating these issues for an in-depth report soon. To keep up with news and research from the Australian Food Sovereignty Alliance, you can sign for our free e-news at <http://www.australianfoodsovereigntyalliance.org/>.

Further Reading

Olivier De Schutter, Special Rapporteur on Food to the United Nations: Those who are interested can [read his final report here](#), and it is certainly worth doing so if you want a full understanding of all the issues. The whole body of his work, and that of his predecessor, Jean Zeigler, is available at www.srfood.org, and is a rich source of material and evidence.

United Nations Development Program 1992 project, Urban Agriculture: Food, Jobs, and Sustainable Cities, 2001 updated edition now available on the internet at: www.jacsmit.com/book.html.

Indigenous Australian Agriculture: Charles Massy, "Collective Thinking and Country" Paper delivered at the Eco-Oceania Health Conference in Melbourne, December 2013.
<http://www.australianfoodsovereigntyalliance.org/blog/2014/03/07/collective-thinking-and-country/>

[The Peoples Food Plan, Australian Food Sovereignty Alliance, 2012-2013](#)

The [Local Food Act and Local Food Fund, Ontario](#), Nov 2013

[Illinois Local Food Farms And Jobs Act 2009](#)

[Child Nutrition Act And Farm-To-School Laws Across The Us: The Farm-To-School Network Reaches Thousands Of Schools](#)

[37 US States Have Some Form Of Law Or Policy That Supports The Public Purchasing Of Locally Produced Food](#)

[NSW Biodiversity Banking And Offsets Scheme](#)

[Market Forces: Creating Jobs Through Public Investment In Local And Regional Food Systems](#)

[The 25% Shift: The Benefits Of Food Localization For Ne Ohio And How To Realize Them](#)

[A Review Of Farmland Trusts: Communities Supporting Farmland, Farming And Farmers](#)

[Findings of the 2013 National Food Hubs Survey](#)