

FOODPRINT MELBOURNE

INQUIRY 6

How can Melbourne's foodbowl ensure a reliable food supply in future?

WORKSHEET 9

A role play

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AIM

The aim of this role play is to consider the question: *How can Melbourne's population have a secure food supply in 2050?*

ORGANISING THE ROLE PLAY

Three different suggestions for organising this roleplay can be found in the Teacher's Overview. These suggestions include alternatives such as using all eight roles, grouping roles and using fewer roles.

SCENARIO

It is 2020, and a meeting is being held of Melbourne's Food Vulnerability Group (FVG). The FVG is responsible for planning a secure food supply for Melbourne. Each member of the group has been asked to develop a presentation about the actions that should be taken to plan a secure food supply for Melbourne in 2050, when the population is predicted to be over 7 million people. Each member has also been asked to make a case for the actions that they propose by presenting evidence about Melbourne's food supply and risks to its food supply.

There are 8 interested parties (roles) represented at the meeting. Each has learned something from the previous lessons and completed worksheets and each will now use what they have learned to make a case to support the actions that they propose, and to convince the other interested parties in the FVG to support their proposed actions to plan a secure food supply for Melbourne.

THE ROLES ARE:

- Farmer
- Water authority
- Resident of a Melbourne suburb
- Waste management authority
- Urban planner
- Property developer
- Opposition government member of parliament
- Economist

There is an information sheet and a case study for each role to assist representatives/groups to prepare their presentation.

Each representative/group has two lessons to read through the information and prepare a presentation to the FVG. The presentation may be an oral, a PowerPoint/Prezi, video, Skype interview or may use other forms of technology.

During the third lesson, each group will present its ideas to the class (which acts as the FVG). In their presentations, each group should highlight their three main points.

In lesson four, the FVG debates the merits of each group's ideas including answering challenges put to them by other representatives. The teacher will be the moderator of the discussion.

Finally, each student will write a one-page report on the FVG's findings responding to the question – *How can Melbourne's population have a secure food supply in 2050?*

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*A role play:
Farmer*

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FARMER

Refer to worksheets: 2, 3, 5, 6

Your role:

You are a vegetable farmer in Melbourne's inner foodbowl. You farm in an area with good soils and a mild climate that allows long growing seasons. Farming close to Melbourne enables you to get your produce to market quickly so it stays fresh. You are close to reliable transport and it's easier to employ farm workers than it would be if you moved further away from the city. But the costs of farming close to the city are rising, the supermarkets aren't paying you as much for your vegetables as they used to and in recent summers you have sometimes run out of water. Urbanisation is encroaching closer to your farm, making farming in the city's foodbowl more difficult.

Key facts:

Without farmers there would be no one to produce food in the city's foodbowl.

Today there are many ageing farmers on small properties and fewer young farmers. In 2011, 47% of farmers were aged 55+ years, and only 13% of farmers were under 35. Farmers over 65 are staying on the land longer, especially on family-run farms. There are pressures on farm viability. Farmers have higher input costs (fuel, fertilisers, pesticides and water) and receive lower prices for their produce. The supermarket chains often have direct contracts with a small number of large scale producers.

With encroaching urbanisation, the value of agricultural land rises above the value of what can be produced, challenging farm viability and farmer access to land. Farm consolidation (farms growing larger in size) is reducing the number of farms and the opportunities for young people to work on farms.

Farmers in Melbourne's foodbowl find it difficult to expand due to lack of available land and high land costs. Property rates, conflicts with residential neighbours, hobby farmers and fragmentation of land (into smaller blocks) all reduce the productive capacity of the foodbowl. Speculative investors also buy land in the foodbowl close to the Urban Growth Boundary, anticipating urban re-zoning.

Farmers in Melbourne's foodbowl could look to niche market farming in the future, selling directly to consumers (at the farmgate or at farmers' markets) and to businesses in the city to earn a greater share of the 'food dollar'.

CASE STUDY: FARMLINK

FarmLINK connects new farmers with land, mentorship opportunities and resources through a variety of web-based initiatives. Farm owners with land available for rent or sale, or with expertise to share, are put in touch with new farmers looking for land and mentorship. The website acts as a 'match-making' service between new farmers and the resources that they need.

For example, FarmLINK Ontario offers farming workshops on irrigating, planting, harvesting techniques and other skill-based learning opportunities that new farmers benefit from. At the other end of the farming workforce cycle, the Californian FarmLink program helps farmers nearing retirement to plan for succession or to find other options where in-family succession isn't possible.

Some FarmLINK websites not only offer resources for new farmers, but also offer opportunities for more experienced farmers to guide new farmers into the profession. A number of these FarmLINK programs work alongside initiatives such as Growing New Farmers and offer teaching resources, along with resources for more experienced farmers to develop their own teaching and mentoring skills.

However, the main barrier that these websites help new farmers to overcome is that of getting access to land. Some of the programs offer assistance with creating leasing agreements or lease-to-own agreements. Others offer a wider range of land transfer models. For example, New England Landlink covers seven states in the northeast of the United States and helps farmers to transfer land through sales, rentals, leases, lease to eventual sale, and work-in models (similar to share-farming).

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*A role play:
Water Authority*

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WATER AUTHORITY

Refer to worksheets: 2, 4, 5

Your role:

You are a regional manager of a water authority within Melbourne's foodbowl. You are responsible for residential water supplies and for recycled water produced at the water treatment plant in your area. You see the potential to use more recycled water for food production, particularly within the inner foodbowl.

Key facts:

Climate change is likely to further reduce the amount of water available for agriculture with reduced rainfall, more frequent and severe droughts and the effects of a warming climate.

In the 1996–2010 Millennium Drought food prices increased, Australia's food exports dropped and around 35 000 jobs were lost in related industries. Melbourne's foodbowl regions of Bacchus Marsh and Werribee came close to running out of water during this drought. Bacchus Marsh received emergency water allocations, and at Werribee, vegetable growers were supplied with recycled water from the nearby Western Treatment Plant.

Recycled water is expensive and cannot always be delivered when required. Sometimes the salt levels are too high for irrigation – too much salt will damage the fertile soils and affect the appearance of some vegetables.

To deliver more recycled water to farmers, investment is required in infrastructure to store recycled water for when it is needed, provide new pipelines to farms and to continue to improve the water quality.

There is potential to drought-proof food production close to Melbourne's water treatment plants as currently only 6% of recycled water is used for food production – 84% of the recycled water is pumped into the sea. Ten per cent of this unused water would be enough to grow half of the vegetables needed to feed Melbourne in 2050.

CASE STUDY: BONEO RECYCLING SCHEME

Boneo is in the south of the Mornington Peninsula, a region favoured for vegetable growing thanks to its mild maritime climate, good soils and easy access to city markets.

The Boneo Recycling Scheme supplies just over 1,000 megalitres of class A recycled water from the Boneo Treatment Plant to 10 customers, mostly market gardeners. Small treatment plants such as Boneo add to the volume of recycled water distributed in the peri-urban area and play an important role in providing cost-effective access to recycled water for nearby farmers.

Recycled water is seen by farmers as a way to drought-proof their business, providing security in low rainfall years and for some, the ability to diversify into growing niche crops with high water requirements, such as radishes. Some farmers with access to recycled water now factor in total reliance on recycled water for their summer cropping – a level of planning confidence unmatched by non-recycled water supplies.

Plants such as Boneo offer a small-scale solution, which can be easily applied in a variety of peri-urban areas, but peri-urban areas to the southeast of Melbourne also have potential access to water from the Eastern Treatment Plant, one of Melbourne's two main water treatment plants. The Eastern Treatment Plant was upgraded in 2014, and now produces 380–700 million litres of class A recycled water per day. Much of this water is currently discharged to the sea, and there is significant additional capacity to use recycled water for vegetable production in the area.

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*A role play:
Water Authority*

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CASE STUDY: WERRIBEE IRRIGATION SCHEME

Werribee South is one of Victoria's most important vegetable growing areas, producing around 10% of the state's vegetable crops from just 0.02% of its agricultural land. Around 300 growers in the district produce lettuces, broccoli, cabbages and other vegetables.

Werribee Irrigation District is located around 30 kilometres west of Melbourne's CBD next to the Western Treatment Plant, which treats around two thirds of Melbourne's wastewater.

Werribee Irrigation District has long been irrigated from the Werribee River, but at the height of the Millennium Drought, flows in the Werribee River were so low that extraction for irrigation was capped at 5% of entitlements in 2006/07, and 0% of entitlements in 2007/08. Farmers turned to groundwater as a replacement, but groundwater extraction was stopped with little warning due to worryingly low aquifer levels, leaving farmers without irrigation water for cropping.

In 2004, with other sources of irrigation water under pressure, the state government committed over \$20 million to develop additional water treatment at the Western Treatment Plant and a pipeline to the irrigation district. A 55ML per day Class A water plant was completed within 12 months, and farmers received their first deliveries of recycled water in 2005, creating one of the largest recycled water schemes in Australia.

While the recycled water was initially intended to supplement river water and groundwater, the extreme conditions of the Millennium Drought meant that it quickly became the dominant water supply for the Werribee Irrigation District, preventing production in the area from collapsing.

Salinity levels in the water are relatively high, due to high salt levels in effluent from industry and domestic sources, and recycled water is currently mixed with river water to reduce salt levels. However, diverting recycled water to irrigation has also reduced environmental impacts on marine environments, thanks to the reduced outflow from the plant.

CASE STUDY: VIRGINIA PIPELINE SCHEME

The Virginia Pipeline Scheme delivers recycled water from the Bolivar Waste Water Treatment Plant (BWWTP) to around 350 horticultural growers in the Northern Adelaide Plains region, around 35 km from Adelaide. The scheme was established in 1999, driven by local growers that were facing a shortage of irrigation water.

The scheme delivers around 17 GL of Class A treated recycled water via a 100-kilometre-long network of pipelines. The recycled water is used to grow a wide variety of fruit and vegetables, nuts, olives and wine grapes. It has been important in providing a secure source of water for growers in the region during one of the driest periods on record.

An initiative is now underway to plan the next stage of expansion for this recycled water scheme. The Northern Adelaide Irrigation Scheme is a proposal to provide an additional 20 GL of recycled water from the BWWTP to growers in the Northern Adelaide Plains region, more than doubling the current capacity of the scheme.

A key component of this new proposal is investment in storage infrastructure, so that recycled water produced during the winter can be made available during the main growing season in the drier months. Two types of storage are currently being explored, below ground storage in a local aquifer and above ground storage in a series of lagoons.

Increasing the capacity of the recycled water scheme has a number of potential social, environmental and economic benefits. The Northern Adelaide Plains region produces around \$350 million of agricultural products a year, which represents around a third of South Australia's Gross Domestic Product from Agriculture, and water availability is currently a key constraint on horticultural production. Increasing the use of recycled water from the BWWTP also reduces discharge to the Gulf of St Vincent, protecting the state's marine environment.

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*A role play:
Resident of a
Melbourne Suburb*

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RESIDENT OF A MELBOURNE SUBURB

Refer to worksheet: 8

Your role:

You and your family have lived in a middle-ring suburb of Melbourne (10–20 kilometres from the CBD) all your life. You love the tree-lined streets and village feel of the area in which you live, and you don't want to see it change. You have noted the Victorian government's policy to encourage infill of housing and the development of "activity centres", which will mean changes in your suburb. More apartment blocks are going up in your area and you're worried that it is losing its character.

Key facts:

In the middle-ring suburbs of Melbourne, many people's sense of place is centred around the home and garden. It provides a sense of privacy, security and a safe place for raising a family, shade in the summer and shelter from cold winds in winter. Most residents like it this way.

This liveability is under threat from Melbourne's increasing population and the state government's policy to encourage urban infill (more development in existing urban areas) – medium-density dwellings and apartment blocks constructed on sites that were formerly occupied by detached houses.

Government policy (setting the Urban Growth Boundary and ResCode) has limited urban fringe expansion, rezoned vacant land, altered housing setbacks and building heights, and site coverage has been changed. Local councils implement rules specific to their area. https://www.planning.vic.gov.au/__data/assets/pdf_file/0023/12758/PPN27-Understanding-the-Residential-Development-Standards-ResCode_June-2015.pdf

Urban infill increases the number of cars relative to the number of housing allotments and encourages more street parking. The local streets were never designed for the scale of the traffic resulting from this urban infill.

At times, the protective tree canopy disappears with infill. The trend in infill design is towards large, blocky, two-storey (or higher) buildings. The nature of the suburbs is changing.

SAVE OUR SUBURBS PETITION

To make a difference you have joined a Save Our Suburbs group to petition against this change.

I live in Essendon with my family and have done so for over 23 years. The destruction I have witnessed in the last five years is unacceptable! I want a stop to massive inappropriate over developments destroying our beautiful suburbs in particular Essendon. I want a stop to 'hit and run' developers who care solely about profit and leave behind nothing but problems for residents such as sub-standard housing, traffic congestion and parking issues. I want the State Government to hear our pleas and take on board our concerns and put the brakes on this out of control 'building' train. I want the State Government to change the planning regulations to better suit the Melbourne residents and to protect our established suburbs and safeguard our beautiful period properties!

<https://www.change.org/p/richard-wynne-mp-planning-minister-save-our-suburbs>

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A role play: Waste Management Authority

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WASTE MANAGEMENT AUTHORITY

Refer to worksheet: 8

Your role:

You work for an authority that recovers waste in metropolitan Melbourne. The waste authority is trying to reduce the amount of food waste that is sent to landfill by recovering food waste from households and businesses (like cafes, restaurants and food processors). You see the potential to convert more of this food waste into organic fertilisers that can be used by farmers in Melbourne's foodbowl as an alternative to conventional fertilisers.

Key facts:

Food waste that is sent to landfill creates methane gas (a strong greenhouse gas) as it decomposes, contributing to GHG emissions.

Food waste occurs at various stages of the food supply chain, and costs the Australian economy around \$20 billion each year.

Food waste on farm includes rejected produce that does not meet the strict standards of the major supermarkets for fruit and vegetables of a particular size, shape and colour. Farmers may not make enough money from selling this produce, so it often rots in the field or on the tree. Food is also wasted during processing and transportation. Over 60% of food waste occurs in these stages of the supply chain, before food reaches the consumer.

Around 40% of food waste occurs in the household. Around 36% of the average household rubbish bin in Victoria is wasted food, and two thirds of this food waste could have been avoided.

Feeding Melbourne generates 207 kilograms of food waste per person per year across the food supply chain. This level of waste represents 3.6 million hectares of land, 180 gigalitres of water and generates one million tonnes of greenhouse gases. Initiatives are under way to reduce food waste. Consumers are being encouraged to avoid wasting food and to buy "ugly" or misshapen produce in supermarkets or at markets.

Businesses such as Secondbite and FareShare have established fresh food recovery programs. They collect food from supermarkets and other businesses and they deliver it to community groups, who provide food to those experiencing food insecurity.

Local governments around Melbourne are beginning to collect food waste from households along with organic waste. The government is investing in the infrastructure to process this food waste into compost that can be used on farms, but more investment is needed in additional infrastructure to process the waste.

Research is underway to use food waste as an alternative source of fertiliser. Conventional fertilisers are based on fossil fuels and phosphorous rock, which are non-renewable resources, so alternative sources need to be found.

Farmers are being encouraged to turn on-farm food waste into animal feed.

The Australian government has set a target to halve food waste by 2030, in line with the 2015 Sustainable Development Goals (SDG 12) target to halve food waste.

CASE STUDY: REDUCING FOOD WASTE

Food Know How is an initiative in Melbourne to reduce food waste in households, cafes, restaurants and offices. The initiative was originally established as a collaboration between Cultivating Community and the City of Yarra, with funding from Metropolitan Waste Management Group. The program promotes strategies to prevent and reduce food waste, such as menu and meal planning, using up leftovers, tips about shopping and food storage, as well as composting and worm farming.

The Food Know How program currently focuses on reducing food waste in households. However, an earlier phase of the program also involved cafes, which received advice and training on strategies such as efficient food preparation, menu planning, stock management and portion monitoring. Cafes were also offered subsidies and

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A role play: Waste Management Authority

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support to establish onsite organics recycling, or had kitchen food waste collected and composted for them via the program's collection scheme.

Spade and Barrow is another Melbourne-based project that targets on-farm food waste. Spade and Barrow purchases 'natures grade' produce from farmers, including produce that would usually be rejected by supermarkets, because it does not conform to their strict product specification standards, which specify the size, colour and shape of produce. Produce that is rejected by supermarkets is typically wasted, because it is difficult to find another market for it, or because the price it would fetch does not cover the cost of picking, packing and transporting the produce. Spade and Barrow work with farmers to harvest and purchase the whole crop.

CASE STUDY: ONTARIO FOOD COLLABORATIVE

The Ontario Food Collaborative (OFC) is a Canadian cross-municipal collaboration that uses a whole food systems approach to reduce food waste, recognising that much food waste occurs early in the food supply chain, on farm or during processing, rather than in households.

Participants in the OFC include actors across all levels of government, non-government organisations, farmers, food processors, distributors and retailers, restaurants and food services. The initiative began in 2014 with a roundtable to share information and develop a shared vision for food waste reduction, which has led to the development of an overarching strategy to tackle the issue.

The collaborative aims to achieve its goals by mapping the food chain and discovering where food is wasted in a local context, identifying stakeholder partnerships that have the potential to intervene at key stages to divert waste. The group has also undertaken a number of pilot projects. One of the key features of the group is the way

that it shares the information and evidence gathered across government regions and departments. The group aims to actively engage with policy-making, with a goal of using information discovered through their system mapping to help shape data collection that will build an evidence base for policy change.

CASE STUDY: CALIFORNIA SAFE SOIL

In California, unsold fresh food that supermarkets can't donate to food redistribution organisations is being collected and recycled into liquid fertiliser for agriculture. Since 2012, California Safe Soil has been using mechanical grinding, heating, and enzymatic digestion (which is 720 times more efficient than composting) to produce a liquid fertiliser product.

The new technology means that it only takes three hours to turn waste into new products for agricultural use. Little gets lost in the process, with close to 90% turned into liquid fertiliser and 10% into animal feed. As the waste processing is contained, they also avoid some of the common composting facility complaints around smell, and the speed of turnaround means far less land is needed for the facility than some other composting techniques.

Creating a liquid final product reduces the bulk of freight compared to compost, and has allowed farmers to deliver the fertiliser through existing irrigation networks. Application of the liquid fertiliser has seen growth rates boosted by up to 30%, and water application reduced by up to 25%. This has reduced reliance on some synthetic fertilisers, and helped lower the level of nitrate run-off.

After four years the company is expanding, which will enable them to process enough waste to produce liquid fertiliser for 128,000 acres of agriculture and also 3,200 tonnes of animal feed. This will reduce GHG emission by 74,000 MTCO₂e – equivalent to taking 15,000 cars off the road. The company's next steps are expanding its collection service, and beginning to finesse their fertiliser compositions to match particular crop needs.

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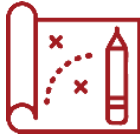
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*A role play:
Urban Planner*

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URBAN PLANNER

Refer to worksheets: 2, 5, 8

Your role:

You are an urban planner, who works for a local government on Melbourne's fringe. Your role is to make decisions about different uses of land and development in your local area. Your local government is in an area of Melbourne that is under pressure from rapid population growth. Your local government wants to protect farmland in the area to create jobs and economic growth. The state government has expanded the Urban Growth Boundary (UGB) in your area several times, resulting in the loss of productive farmland, and there is pressure to expand the UGB again. Rather than expanding the UGB, you believe that the density of housing should be increased, so that houses are on smaller blocks of land, and that there should be greater infill (development) of existing urban areas.

Key facts:

Melbourne's population is expected to be about 7 million in 2050.

If strong targets can be set for infill of existing urban areas, then less new land will be needed for housing on the city fringe. More farmland can be kept for food production, and the impact of population growth on the city's foodbowl can be reduced.

Residents of existing urban areas may object to greater infill of these urban areas as it can change the character of their suburbs.

There is pressure to release more land on the urban fringe to create more affordable housing for Victorians. However, a 30-year supply of land for new housing is already available on the urban fringe.

Investors buy land close to the UGB in Melbourne's foodbowl, because they anticipate that the land will be rezoned for housing, which increases the value

of the land and of their investment. Frequent changes to Melbourne's UGB fuel this type of speculative investment.

The present Urban Growth Boundary (UGB) was reset in 2014. When the UGB came into place in 2002 it was not supposed to change. The Victorian parliament needs to agree any changes to the boundary. This has happened several times since 2002. Will the UGB be altered again before 2050?

Each local government has a Municipal Strategic Statement that sets out its vision and objectives for managing land use. Municipal Strategic Statements often include objectives to protect farmland. Important pieces of state government planning policy like Melbourne's metropolitan planning strategy (Plan Melbourne) and Victoria's State Planning Policy Framework have objectives to protect productive farmland.

Melbourne's foodbowl contributes around \$2.45 billion to the Victorian economy each year and around 21,000 (full time equivalent) jobs.

A joined-up policy framework (where many departments that work in the same area unite for an outcome) is required to plan for a resilient city foodbowl. Policy is needed to protect farmland, increase water access, reduce and reuse food waste, strengthen the regional food economy and attract farmers to farm in the city's foodbowl.

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*A role play:
Urban Planner*

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CASE STUDY: ADELAIDE'S ENVIRONMENT AND FOOD PRODUCTION AREA

In April 2016, the South Australian state government introduced an Environment and Food Production Area (EFPA) for Greater Adelaide as part of the Planning, Development and Infrastructure Act 2016. The main aim of the EFPA is to protect the city's foodbowl, landscape values and environmental resources from urban encroachment by creating a hard boundary to the city.

The EFPA also seeks to encourage more construction of new homes in existing urban areas in inner and middle ring suburbs to achieve a more compact city, with better access to public transport and infrastructure.

The EFPA covers an area of around 800,000 hectares of rural land around Adelaide. A new State Planning Commission will have responsibility for protecting this area from urban encroachment, and future changes to the EFPA will require the agreement of both Houses of Parliament to encourage more transparent decision making about development on the urban fringe.

Some stakeholders have expressed concern that the EFPA could drive up property prices in Greater Adelaide. However, modelling by the Department of Planning, Transport and Infrastructure (DPTI) indicates that there is currently an estimated 25-37 year supply of land for housing in fringe and township areas outside of the EFPA. The DPTI has also stressed the importance of creating more affordable living options within existing urban areas.

CASE STUDY: VANCOUVER

Vancouver has a comprehensive and world leading approach to protecting the productive capacity of land on its city fringe. The city's approach encompasses a number of different elements, including strong protection for agricultural land, measures to promote viable agriculture and incentives to encourage new farmers.

In 1973, the province of British Columbia introduced legislation to establish an Agricultural Land Reserve (ALR) after significant loss of farmland around the city. The ALR is administered by an independent commission – the Agricultural Land Commission – and protects around 4.7 million hectares of farmland through a special land use zone.

In 1996, the province also introduced the Farm Practices Protection (Right to Farm) Act (RSBC 1996), which protects farmers from 'nuisance lawsuits' arising from normal farm practices on land zoned for agricultural use.

The city's regional growth strategy, Metro Vancouver 2040, includes food as a key theme alongside issues such as 'affordable housing' and 'growth management', and includes a strategy to "promote the supply of agricultural land and promote agricultural viability with an emphasis on food production". This strategy is underpinned by a regional food system action plan, with actions that focus on investing in a new generation of food producers, strengthening the capacity to process and distribute local foods and increasing opportunities for direct marketing of local foods, in addition to protecting the city's farmland.

Vancouver has a food policy council, comprised of individuals from all sectors of the regional food system, including both government and non-government stakeholders, that works together to improve the sustainability of Vancouver's food system. It also has a city food strategy, with underlying principles that include supporting sustainable agriculture, preserving farmland resources and supporting regional farmers and food producers.

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A role play:
Property Developer

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PROPERTY DEVELOPER

Refer to worksheet: 8

Your role:

You work for a large company in the housing industry that develops new housing estates on the fringe of Melbourne. You are concerned about the impact of the government's Urban Growth Boundary (UGB) on the commercial viability of developing land on the city fringe for housing. You know that there is a high demand for affordable detached housing, and you believe that it is easier to deliver what the market wants through "greenfield developments" on the urban fringe than through urban infill development in the middle-ring suburbs (10–20 km from the CBD). You also know that the greatest profit comes from these "greenfield developments", rather than urban development infill, which is more difficult and costly to develop. You are concerned that the government may introduce stronger protection for farmland on the city fringe, which could make it more difficult to obtain land for greenfield developments.

Key facts:

Melbourne's population is estimated to be over 7 million in 2050. Housing the expanding population is a significant issue.

Plan Melbourne 2017, the latest metropolitan planning strategy, has a target to house more people in existing urban areas, rather than on the city fringe.

Urban infill development refers to intensive development of land in existing residential areas. Two or more new medium-density dwellings or apartment blocks might be constructed on sites formerly occupied by detached houses or on vacant lots. Greenfield development is the development of new housing estates (and sometimes new suburbs) on the urban fringe. It occurs on productive farmland as well as on non-productive land and habitats.

As a property developer the facts are:

- greenfield development tends to deliver higher profit margins
- urban infill development can be complex given out-dated planning codes
- it can be more difficult to deliver housing that is acceptable to the market (in location, design and price) in urban infill areas
- there is ongoing uncertainty in planning approval processes in urban infill areas
- heritage overlays add constraints to infill development in the middle-ring suburbs
- there can be resistance from local residents to infill development in the middle-ring suburbs

Property developers may buy farmland or other large tracts of land on the urban fringe and "land bank" it; that is, acquire land (often close to the UGB) and hold on to it until it can be rezoned and developed for residential use.

Property developers also build large suburban-style estates just outside the UGB, marketing to city commuters while avoiding the infrastructure levy that applies to developments inside the UGB. Thousands of housing blocks in regional towns – from Drouin in Gippsland to Wallan on the Northern Highway and Bacchus Marsh in the west – are sold as an alternative to the city's high land prices. These towns are expanding rapidly, threatening surrounding areas of food production.

"Perhaps this trend reflects that there shouldn't be any boundary at all because you've got to allow people to live where they wish," the chief of the Urban Development Institute of Australia (2010) said. "If you try to limit the market it never works, there is always a way around."

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*A role play:
Opposition
government MP*

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OPPOSITION GOVERNMENT MP

Refer to worksheet: 8

Your role:

You are a member of parliament in the opposition to the current state government. Your party has been considering the impact of Melbourne's predicted population growth to more than 7 million people by 2050. Your political party is keen to represent people who are concerned that the liveability of Melbourne will be reduced if the city keeps sprawling outwards. Your party believes that pressure on Melbourne should be reduced by encouraging people to live in other regional towns and cities in Victoria instead.

Key facts:

The Opposition Government believes that when Melbourne's population reaches 7 million the city will be unsustainable. There will be an extra 3.8 million people in Melbourne by 2051 – but only 690 000 people moving, settling or being born in the rest of Victoria. Melbourne is at risk of losing its liveability status, while the population of regional areas of Victoria is declining.

Your party believes that Melbourne's population cannot be allowed to continue to sprawl across urban fringe areas, impacting on remaining areas of food production. You want to increase public awareness of the importance of protecting fertile agricultural land on the city fringe for our future food supply.

Your party wants to encourage decentralised growth away from metropolitan Melbourne – where more than two-thirds of Victorian residents now live – and into regional cities and towns. To encourage people to live in rural and regional centres, rather than in Melbourne, your party proposes:

- introducing financial incentives (such as stamp duty or land tax concessions) for businesses to relocate
- geographically-targeted visas for new migrants (which would require people to work within a designated radius of a regional area)

- new economic/job zones, especially moving government departments to regional cities
- financial incentives and tax breaks for living in regional Victoria
- transport upgrades across regional Victoria
- an aggressive marketing campaign talking up the benefits of country towns (particularly to encourage first home buyers to relocate there).

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INQUIRY 6

How can Melbourne's foodbowl ensure a reliable food supply in future?

WORKSHEET 9

*A role play:
Economist*

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ECONOMIST

Refer to worksheets: 2, 4, 5

Your role:

You are an economic development officer in a local government area on Melbourne's fringe. As an economist, you are interested in the monetary value of goods, employment levels and the strength of the Victorian economy. The farms in your local government area provide jobs and contribute to the local economy. In addition to the jobs provided on farms, employment is created in the food processing factories that use produce from these farms and in the transport and logistics companies that deliver produce from these farms to wholesale markets and supermarkets. The farms also contribute to an attractive landscape that encourages tourists to visit your area. These tourists contribute to the local economy by staying in hotels and guest houses, and by spending money in local restaurants and shops.

Key facts:

Melbourne's foodbowl makes an important contribution to the city's regional economy, generating \$2.45 billion annually from food production and processing, and around 21,000 (full time equivalent) jobs.

The fruit and vegetable industries make the biggest economic contribution in Melbourne's foodbowl providing 43% of the total contribution of agriculture. These industries also employ the largest number of people in Melbourne's foodbowl – around 39%. Vegetable production contributes over \$400 million to the Victorian economy. In addition, other areas of the economy such as transport, wholesale distribution, tourism and hospitality also benefit from agricultural production in Melbourne's foodbowl.

Access to food from local farms encourages tourism. One of the main reasons that international tourists visit Australia is for "good food and wine, local cuisine and produce", and they particularly value fresh produce from local farms.

A recent trend has been the growth in local food sales in Australia. Farm gate sales and farmers' markets have flourished as the community supports their

local economy, increasing farm revenue, creating jobs and retaining money within the community. This helps maintain farm viability.

If consumers in Greater Melbourne were to increase their demand for local food from Melbourne's foodbowl by 10%, it could contribute an extra \$290 million per year to Melbourne's regional economy. Loss of production in Melbourne's foodbowl could contribute to rising food prices.

Revisit the footage of the Schreurs family (celery farmers talking about the economics of their family farm <http://www.abc.net.au/news/2017-04-22/growing-celery:-the-farmers-on-melbournes/8466594> (15.04 minutes)

CASE STUDY: KNOW YOUR FARMER, KNOW YOUR FOOD

The Know Your Farmer, Know Your Food initiative (KYF) was launched by the United States Department of Agriculture in 2009. It's a national initiative that aims to strengthen the connection between farmers and consumers in order to grow local and regional food economies, create jobs and increase access to healthy food. It also aims to improve the distribution system for getting local food to local consumers and businesses.

The KYF initiative includes 27 different grant and loan programs that promote local and regional food. A number of programs aim to promote the establishment of food hubs that enable small-scale local farmers to aggregate produce, and share distribution and marketing facilities, in order to sell to local businesses and institutions.

The Farm to School program encourages take up of local foods into school lunch services and aims to connect schools with local farmers. In 2013-14, schools bought almost US\$790 million in local food, and the USDA estimates that school spending on local food generated over US\$ 1 billion in local economic activity.

The USDA Economic Research Service estimates that local food systems generate 13 jobs on farm for every \$1 million in sales, and in 2012, the value of local food sales in the United States was estimated at over \$US6 billion.