



Mapping Sydney's foodsheds

Overview

Local food production in the Sydney basin provides many benefits and underpins the resilience of the city. Yet competing priorities for Sydney's fertile farmland and the impacts of climate change could threaten future supplies of fresh, local food. By mapping Sydney's current and future food production, an evidence base was created to support effective policies and innovations that seek to support continued agricultural production in the Sydney basin.

Background

The ongoing decline of commercial farming in the Sydney Basin, combined with ongoing conversion of farm land and loss of fertile soils to urban development, contributes to a steadily increasing vulnerability of Sydney's food system. The economics of agricultural production on small, fragmented parcels of land and limited access to water provide a major disincentive for a new generation of farmers to emerge. Changes to climate, especially extreme weather events, are likely to compromise future food availability, equity and quality of food supply. Changes to climate also threaten the resilience of Sydney's currently fragmented agro-ecosystems and remnant natural ecosystems.

The vulnerability of Sydney's food production systems were identified during the Towards a Resilient Sydney Integrated Regional Vulnerability Assessment (2014). A coalition of peri-urban councils, state agencies and researchers proposed a collaborative modelling exercise to better understand these risks, in the context of climate change, and enable adaptive responses.

Implementation

Researchers at the Institute of Sustainable Futures (ISF) mapped and modelled future scenarios for food production in the Sydney Basin. This involved mapping the implications of various urban growth scenarios upon the production of food. The model maps population growth according to NSW Government projections, presenting a range of land-use patterns. Utilising several diet scenarios to estimate demand, the model then maps spatially the impact of these growth scenarios on food production and the ability of the city to meet demand from food from within the Sydney Basin.

This project engaged with stakeholders from a variety of contexts to understand the implications and opportunities relating to food production and urban growth within the Sydney Basin. A workshop in July 2015 engaged stakeholders from local and state government, farmers, local residents, local community groups and peak industry bodies. A second stakeholder workshop in February 2016 engaged stakeholders from state and local government, health agencies, peak industry bodies and farmers across the Basin on implications of the modelling and opportunities for initiatives to address the challenges.



This project had a strong focus on communicating the project findings with a broad range of stakeholders and decision makers. The Sydney Food Futures <u>website</u> provides interactive maps allowing users to engage with the outputs of the modelling undertaken. A public forum

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WEB ADDRESS wollondilly.nsw.gov.au

<mark>SIZE</mark> 2,556 square kilometres

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Sydney Peri Urban Network of Councils





held as part of the Sydney Festival engaged the general community on the pressures facing agriculture in the Sydney Basin. In February 2016, a high-level policy briefing brought the challenges facing peri-urban agriculture that were identified through this project to the attention of key state government stakeholders including Department of Planning and Environment and the Greater Sydney Commission.

Outcomes

Our food system is made up of a number of complex stages and interactions, from farms and laboratories to storage and transportation, processing plants, markets, supermarkets, and finally, consumers. Mapping our food production is a way of capturing the flow of food within this system, and by mapping various scenarios for future change, we can begin to understand where the system's vulnerabilities lie.

The ISF research finds that if we continue along the path we're on, Sydney stands to lose 60% of fresh food produced in the Basin. The proportion of the city's food supplied from within the Basin could drop from 20% of total food demand down to a mere 6%. Vegetables, meat and eggs will be hardest hit: 92% of Sydney's current fresh vegetable production could be lost, 91% of meat and 89% of eggs.



Key Learnings

Sydney stands to lose many of the benefits local food production brings as peri-urban local government areas lose significant proportions of their agricultural production.

There are enormous benefits to growing fresh food in the Sydney Basin: growing perishable and high-value produce like Asian greens and eggs close to market reduces spoilage, supply chain waste and food miles, and buffers against transport fuel price shocks. Agriculture and food processing are labour intensive, providing significant local job opportunities. In fact, the benefit of Sydney's agriculture to the economy is estimated at upwards of \$4.5 billion, accounting for multiplier effects. Sydney's comparative advantage is expected to grow under a changing climate: the Sydney Basin's relatively higher rainfall and fertile soils will become even





REFERENCES

www.sydneyfoodfutu res.net

Institute of Sustainable Futures (2016) Sydney Food Futures Stakeholder Engagement Briefing hand out more suitable for growing food while Australia's major foodbowls, like Murray Darling, are predicted to become more vulnerable under climate change (ISF, 2016).

The findings of the foodshed mapping project demonstrate that the path we are on can be changed through implementing effective policies and strategies that seek to balance housing with environmental protection, health and food production (ISF, 2016). But we must be prepared to capture economic opportunities though food production and employment, while ensuring social outcomes relating to health and environmental benefits for soils and natural resource supply and security.

Creating a resilient food future for Sydney means our strategic metropolitan planning needs to value and better protect agriculture from urban sprawl. Farmers need viable commercial conditions, a fair price for produce, land security and a social license to operate. The people of Sydney need access to affordable housing, jobs, transport, water, social services and other infrastructure. But they equally need access to nutritious and affordable food, reversing the high rate of obesity and diabetes, and 'food deserts' (grocery dead zones) particularly prevalent in Western Sydney (ISF, 2016).

Contact

Name: Ally Dench Position: Executive Director Community Services and Corporate Support Phone: 02 4677 9570 Email: <u>ally.dench@wollondilly.nsw.gov.au</u>

