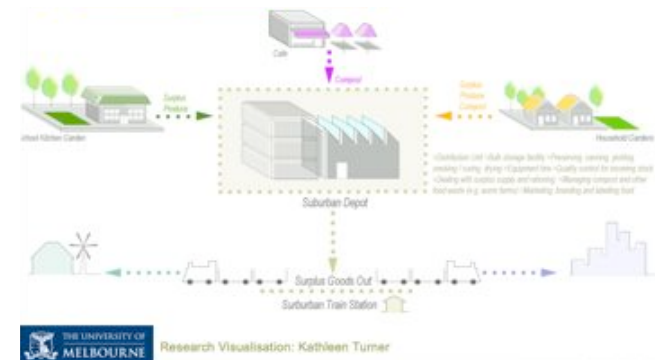


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Victorian Eco-Innovation Lab

# FOOD SUPPLY SCENARIOS

# The Victorian Eco-Innovation Lab (VEIL)

## FUTURE VISIONS, POLICY CHALLENGES, CURRENT ACTIONS

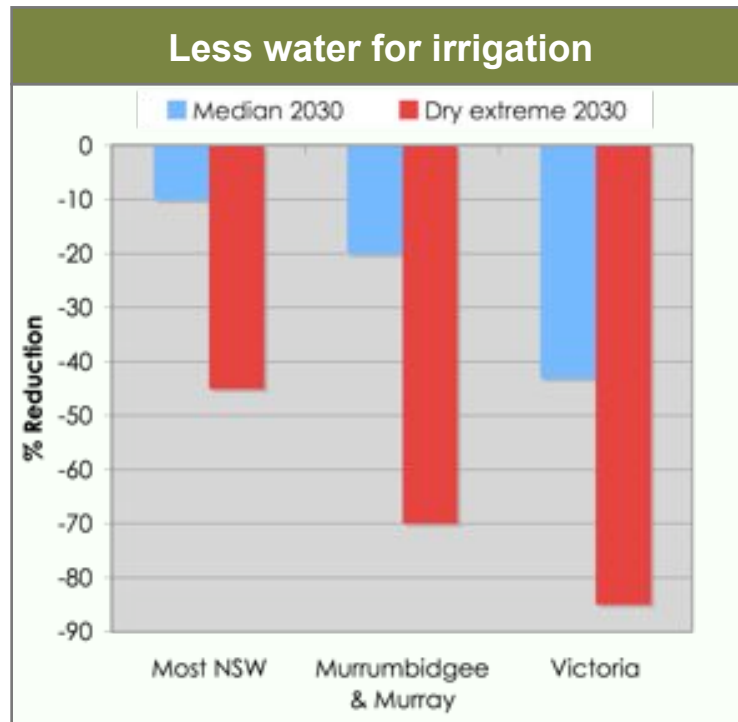


# Why are we doing this project?

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- » Healthy eating is underpinned by reliable access to affordable, nutritious food, particularly for disadvantaged or vulnerable groups
- » Changing environmental circumstances are expected to have an impact on the volume and diversity of foods produced
- » Could this affect availability and access? Could it lead to increased community vulnerability?
- » Different perspectives and complex interconnected issues
- » Lots of research gaps . .

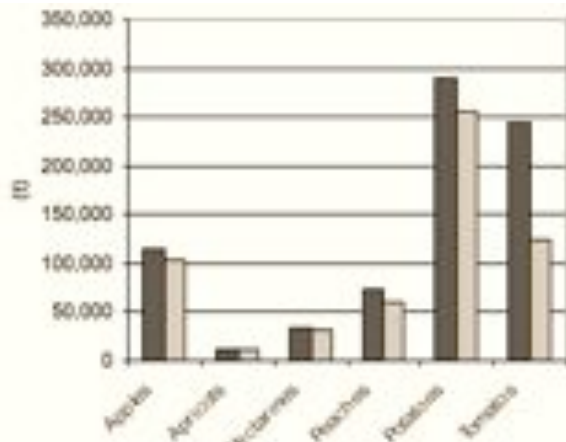
# Environmental challenges to food production



# Where have the seasons gone?

- » In 2007–08, 84% of Australian agricultural businesses experienced adverse seasonal conditions

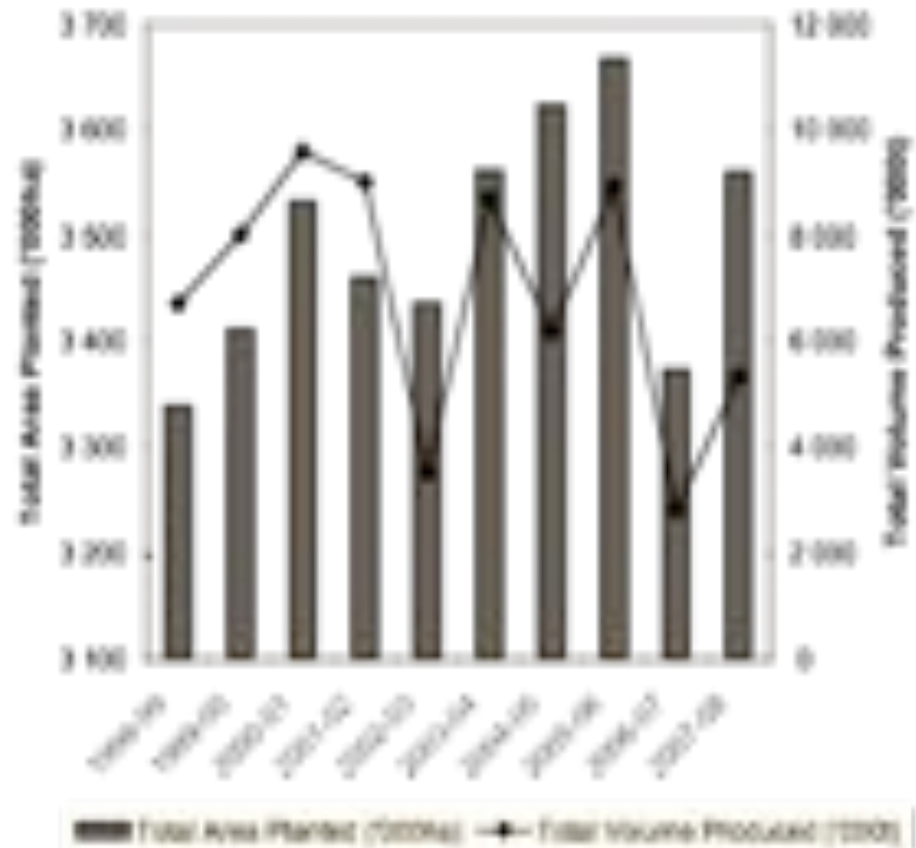
## Victorian Fruit & Veg Production



\* Apples are 06-07 & 07/08

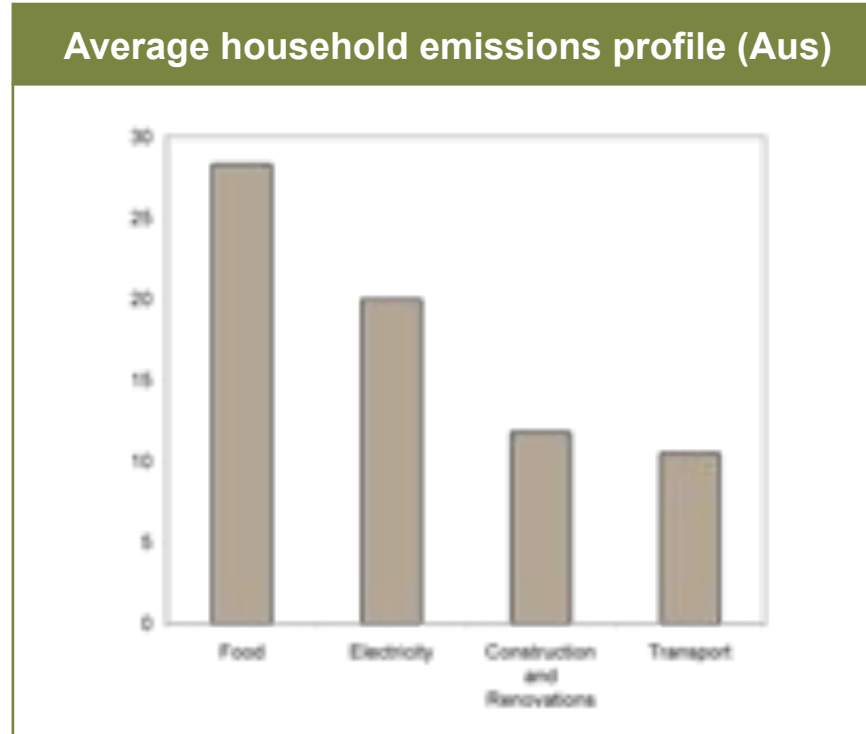
■ 05-06 □ 06-07

## Victorian Grain Crops (volume of production compared to area planted)



# We need to be aiming for zero-carbon food

- » Food accounts for 28% of our household greenhouse gas emissions
- » A carbon price will have an impact on food prices, affecting low income households in particular
- » Big reductions in emissions from food supply chains will require change at every point

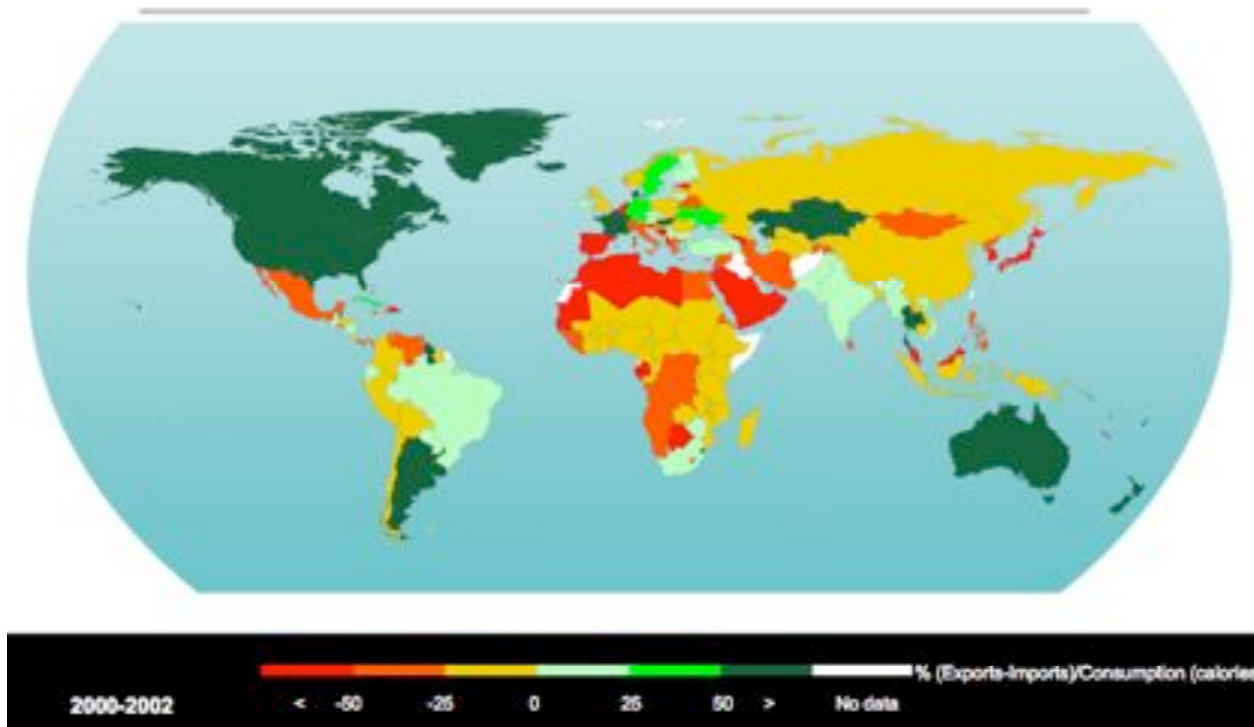


*Continued growth of greenhouse gas emissions, for just another decade, practically eliminates the possibility of near-term return of atmospheric composition beneath the tipping level for catastrophic effects. (James Hansen - NASA)*

# Perspectives on 'food security' – exhibit A

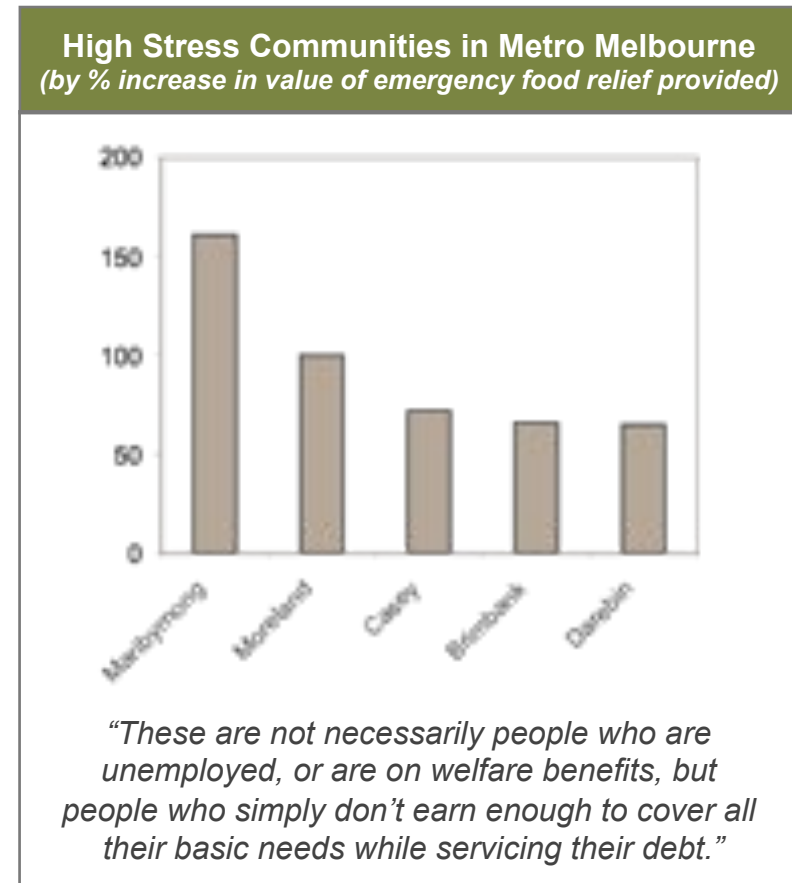
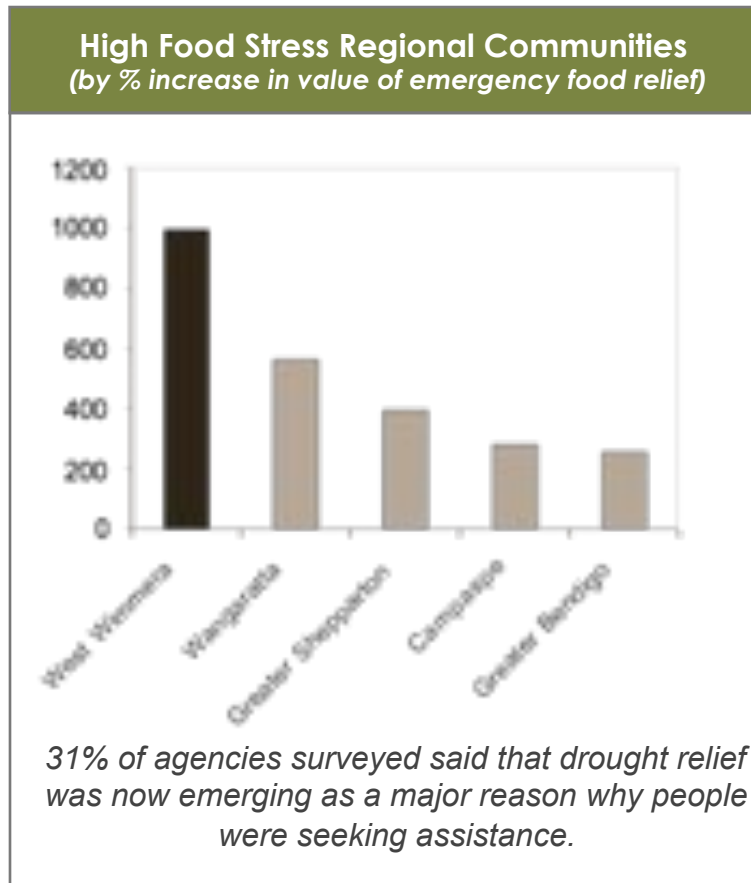
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- » We have way more than we need and can afford to buy whatever we don't produce
- » We become more 'food secure' by producing and exporting more food



# Perspectives on ‘food security’ – exhibit B

- » Increasing constraints to the physical supply (and quality) of food may escalate health inequalities, as pressures translate into increased difficulty of accessing healthy food, for more and more Victorians.





# Food Supply Scenarios

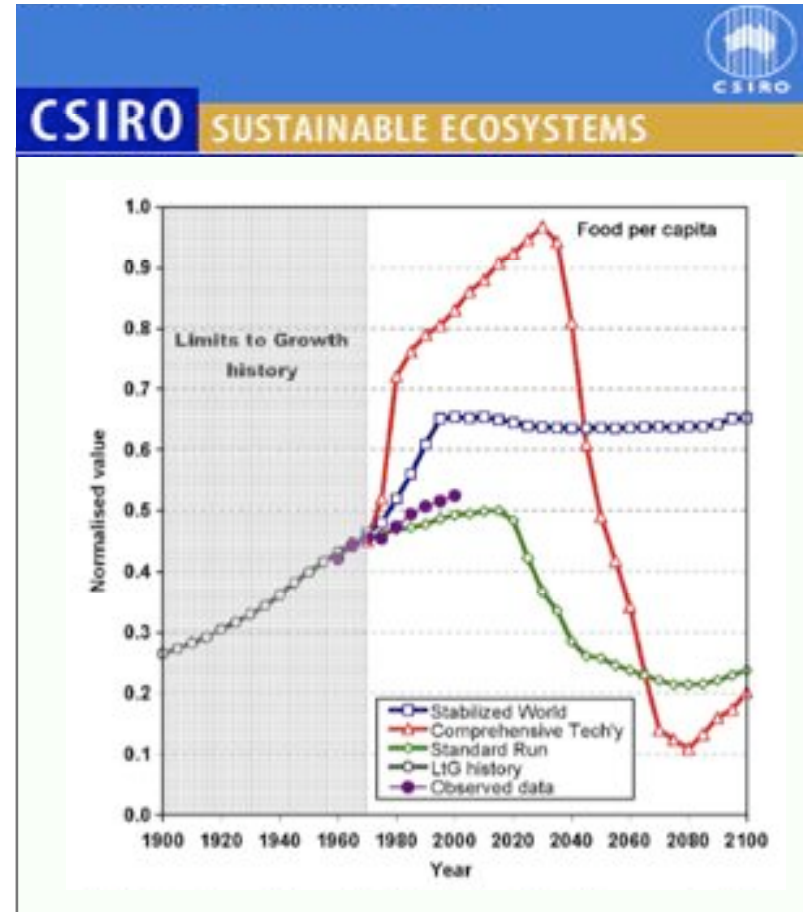
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1. Develop a CSIRO Stocks and Flows Framework model to explore impacts of environmental and resource constraints on food supplies
  2. Draw together a range of perspectives to agree on multiple plausible scenarios
  3. Explore Victoria's ability to supply a healthy, nutritious and sustainable diet under these scenarios.
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1. Provide policy recommendations and directions for future research based on this initial discovery project.

# 1: Develop the Model



- » Population, demographics
- » Water resource and supply data
- » Agricultural production statistics
- » Land use – agriculture and other land-uses including urban
- » Trade volumes, particularly source of exports and destination of imports
- » Freight volume statistics
- » Fuel and energy needs
- » Fertiliser consumption



## 2. What do we need for a nutritious food supply?

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- » Construct and quantify what a nutritious food supply looks like for Victoria
  - ... NHMRC Nutrient Reference (NRVs) and revised draft Australian Guide to Health Eating (AGHE)
  - ... Estimate the 'ideal' Victorian food supply profile (amount and variety of food serves)

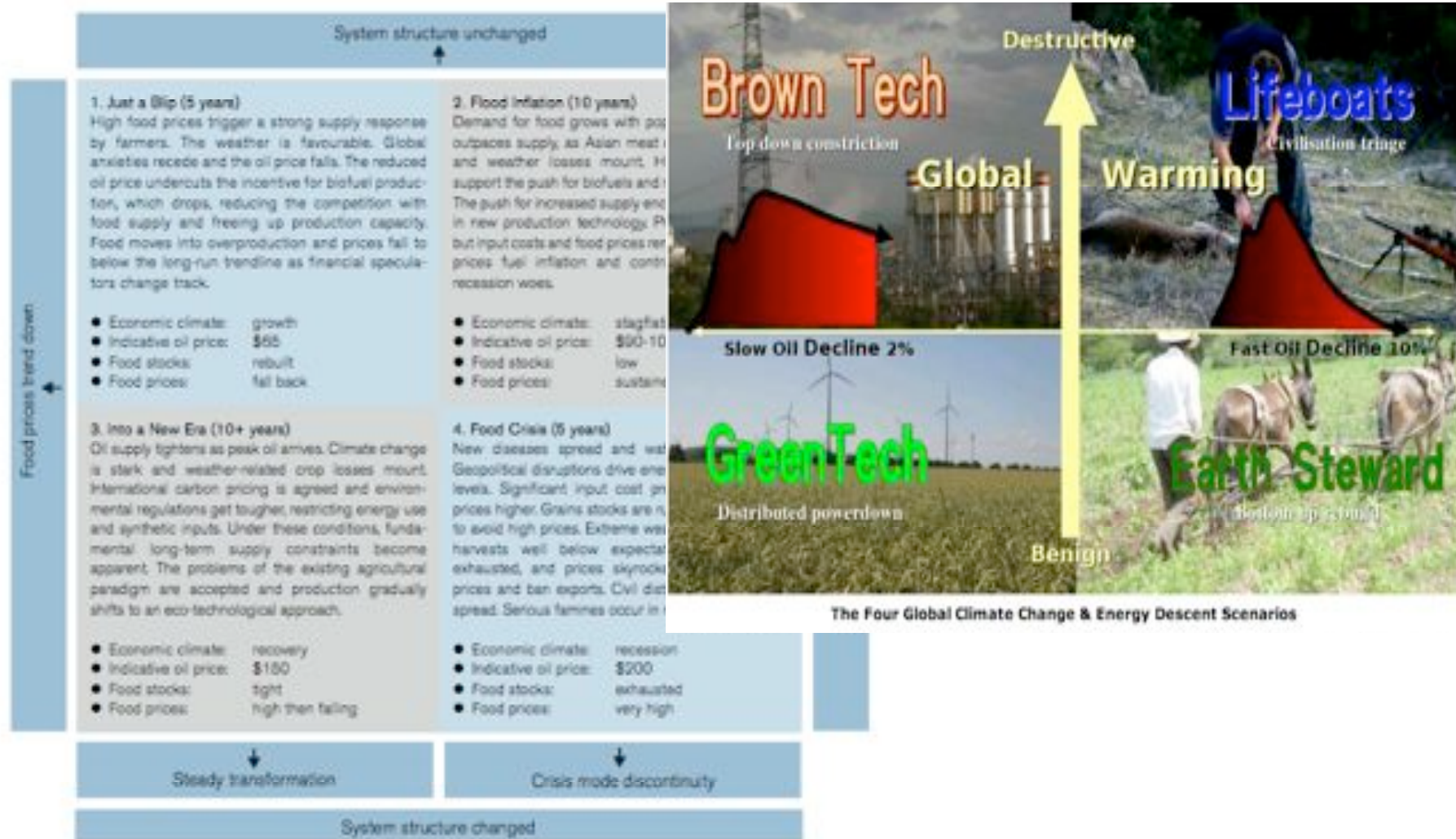


### 3. Developing a range of plausible scenarios

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- » This project is not about making predictions – it is about exploring the physical implications of different ‘unknowns’ and different choices
- » Engage stakeholders in development of a set of plausible ‘what if’ scenarios
- » The scenarios we use will be distilled from many possible futures.
  - ... want to get agreement on possibilities, complex interactions of many factors – ‘what if’
  - ... and then explore how these could play out in Victoria

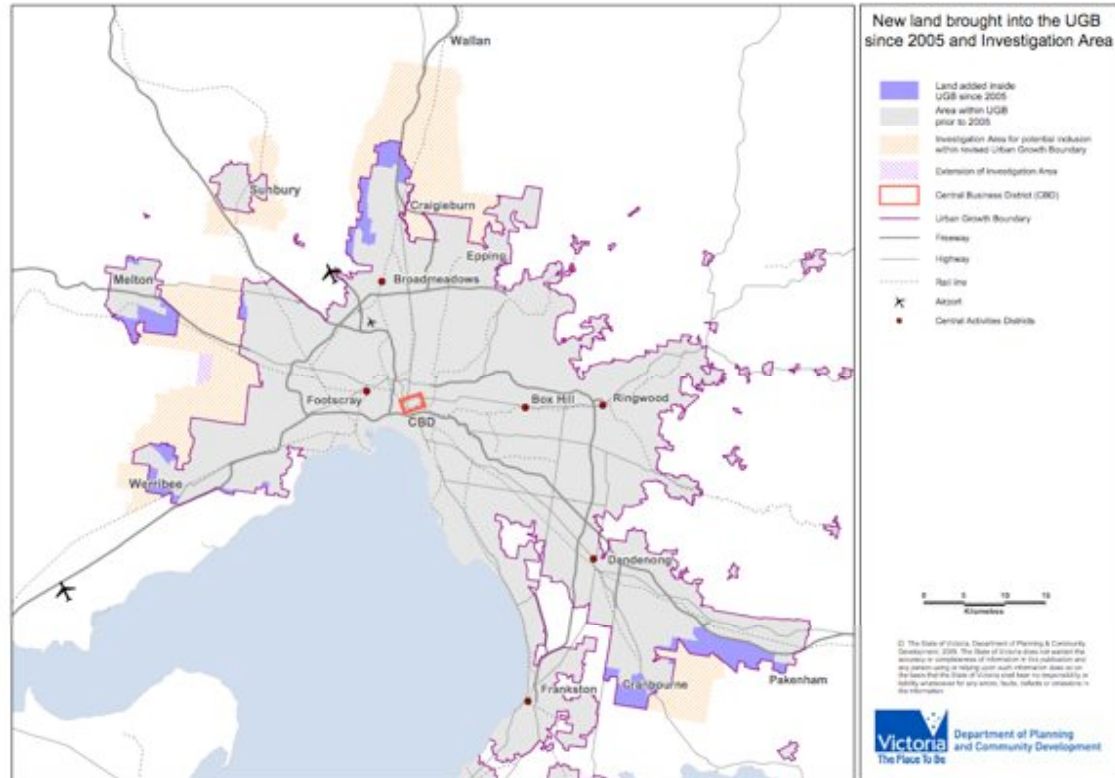
# External forces



Source: Chatham House (2008), Holmgren (2008)

# Our choices

- » Land use planning
- » Carbon pricing
- » Water policy
- » Land management
- » Transport systems



About Us

Food Security

Food economies

**No water, no food**

## 4. Pull it all together

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- » Does it matter? Are there plausible scenarios in which there are constraints to the supply of a nutritious diet to Victorians?
  - ... transfer physical scenarios into supply of food
  - ... analyse any discrepancies between supply of food and ideal
  - ... identify potential risks for nutrient intake
- » If so, can policy decisions now reduce risk? And how?
- » Identify important areas for future research

