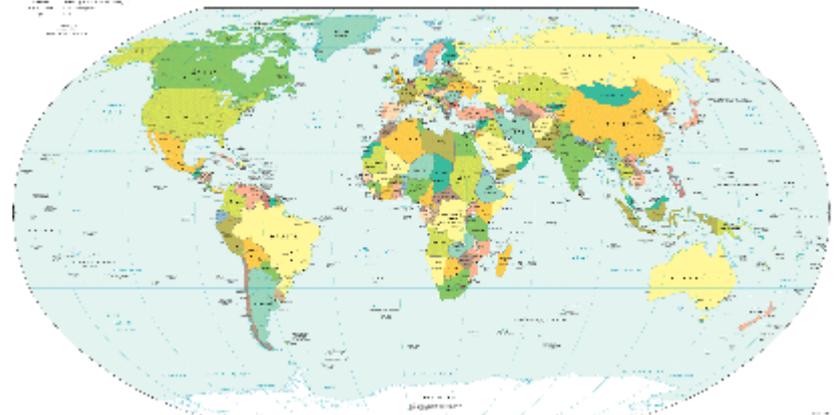


# Where does our food come from?



World Vegetation Map



- 
- Most people source their food from supermarkets
  - Most foods have travelled long distances to reach the shelf, using lots of fuel and resources
  - Supermarkets store about 3 days worth of food supply – after that, the shelves will be empty in the event of any disruption to delivery (natural disaster, fuel supply disruption etc)
  - Secondary sources (take-aways, restaurants, dairies etc) all depend on the same delivery routes

Notes on how to use these  
visual aids are on page 13

# What ever happened to this?



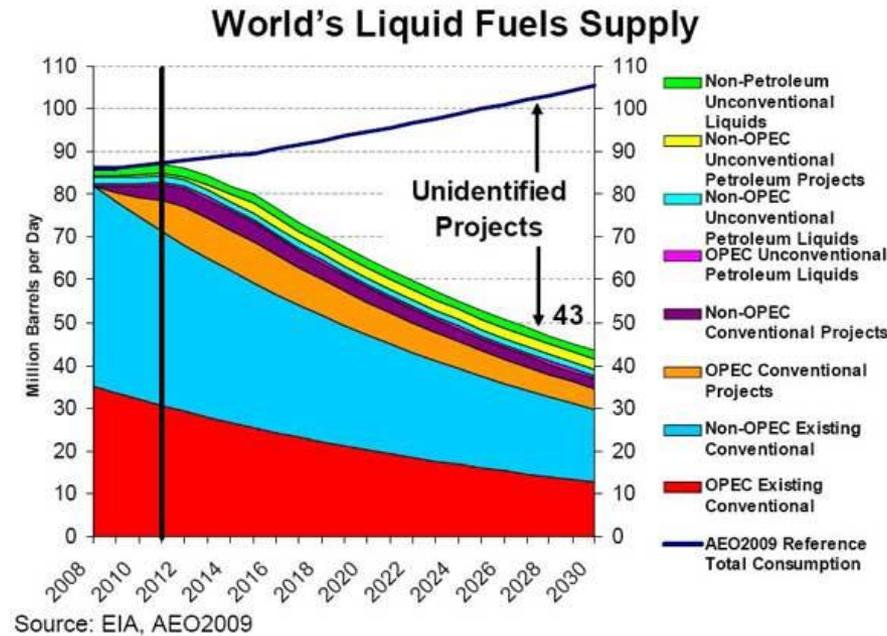
- 
- In the old days, farmers' markets and green grocers were common, selling food grown within a small radius.
  - People had home gardens. The classic Kiwi 'quarter acre section' originated based on the thought of enabling every individual to grow their own food.
  - During ongoing crises (e.g. WWII: 'Victory Gardens' in UK and US), home gardening is promoted as large scale supply might be unavailable.
  - During the Cuba crisis, Cuba reverted to urban farming – using any available urban land area for food production, e.g. turning up sidewalk pavers to make garden edging.
  - Modern cities, like Sydney / Australia now promote berm gardens and community gardens as a resilience measure.

# Why is food getting so expensive? (1)

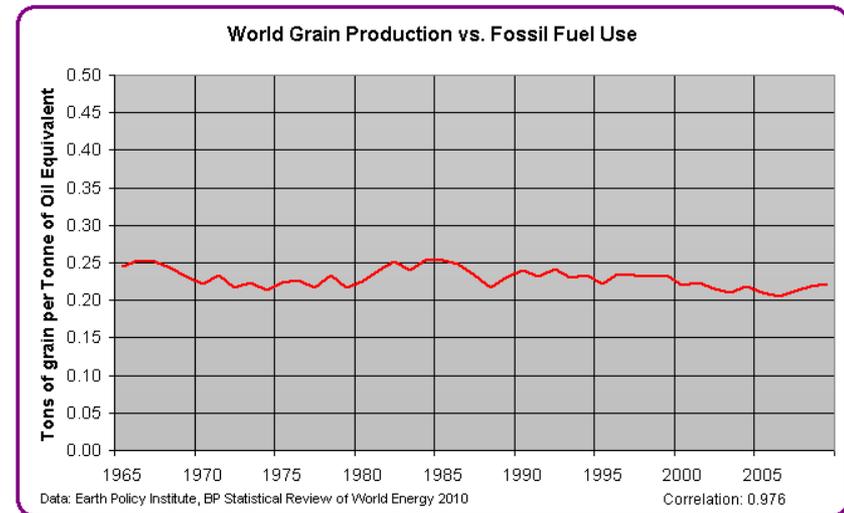


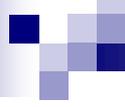
- 
- Many factors influence food prices – changing weather patterns and increased frequency of extreme weather events can lead to crop shortfalls
  - Climate destabilisation will make it harder for farmers to produce optimum harvests
  - Since the drought and flooding in the US midwest in 2011 and 2012, the bushfires in Russia in 2012 and flooding in China in 2012 we have seen extreme weather events at increasing frequency.
  - Decreasing water availability puts a limit on production capacity in many places

# Why is food getting so expensive? (2)

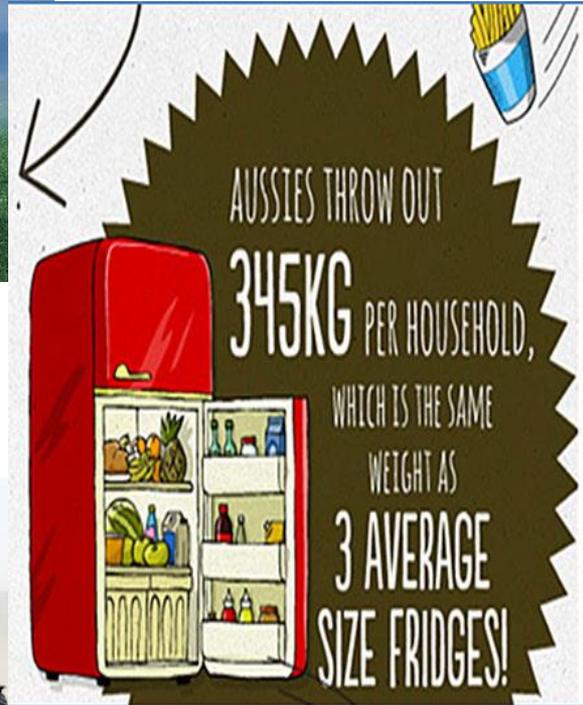


8



- 
- Fossil fuels are directly linked to grain production – increasing oil prices mean increasing food prices.
  - The international Energy Agency have confirmed that we reached the peak plateau of oil production in 2008, making on going price increases likely
  - Even taking into consideration new oil fields that have been discovered but are not yet producing and predicted future discoveries, oil production will not increase anymore

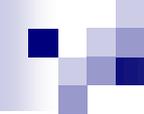
# Why is food getting so expensive? (3)

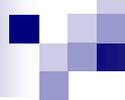


- 
- Fossil fuels are the basis for most artificial fertilizers, pesticides and herbicides.
  - Agricultural machinery runs on fossil fuels
  - They also play a part in long distance transport of food, making those winter strawberries from Europe more expensive if gas prices go up
  - On average, the food industry uses 10 calories of fossil fuel energy to produce 1 calorie of food

# Supply security: Is NZ growing enough?

Commodity	2007 Import	2007 Export
Fruit	280,157	1,283,048
Dairy	103,176	7,557,397
Vegetables	86,689	432,237
Meat	164,314	4,345,697
Fish	66,910	1,095,106
Cereals	191,769	2,604
Oil seeds	63,871	110,660
Sugar	208,932	172,510
Fat, oil	211,701	141,828
Fertilizer	418,606	5,134
Mineral fuels	6,041,364	1,458,802

- 
- NZ produces lots of food – for most foodstuffs we produce more than we consume, allowing us to export vast quantities of fruit, vegetable, meat and dairy
  - However, NZ grain and oil seed production is below our own requirements
  - To produce these quantities of food, we are reliant on imports of fertilizer and fuel.
  - How would the production picture change if these were no longer easily available?
  - The switch to organic production takes time – soil needs time to recover from fertilizer use.



# User notes on these visual aids

## Sustainable Living Food topic 2014 - Activity 6. **Group self-teaching 'food security' theme**

Download and double sided print the 12 page slide set above, so that notes are on the back of pictures. Give **six** willing learners **one** double sided sheet and invite them to show their pictures and either read out (using the notes facing them) or in their own words explain, adding their own knowledge and comments. Work in order, prompt discussion. Allow a minute for the helpers to view their pictures and scan the text, ahead of using it. May be a good topic to restart a group after a tea break?

Lead author Natalie Hormann, for SLET. Illustrations internet-sourced.  
Education use only. [Suggestions for improvement to rhys@sustainableliving.org.nz](mailto:rhys@sustainableliving.org.nz)