

### **Background brief**

# Healthy Diets Challenge

Global meat consumption increased by 58% over the 20 years to 2018 to reach 360 million tonnes. Population growth accounted for 54% of this increase and per person consumption growth accounted for the remainder. In Australia and the United States, meat consumption increased over the 20 years to 2018 because of higher poultry consumption.

Source: Australian Government Department of Agriculture



#### **Land use Change**

Aboveground changes in biomass from deforestation, and below ground changes in soil carbon



#### Farm

Methane emissions from cows and rice, emissions from fertilizers, manure and machinery



#### Animal Feed

On farm emissions from crop production and its processing into feed for livestock



#### Drocossing

Emissions from converting raw agricultural products into final food items



#### **Transport**

Emissions from the transport of food items in country and internationally



#### Retail

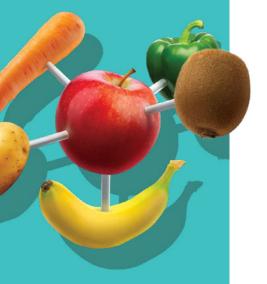
Emissions from refrigeration and other retail processes



#### Land use Change

Emsissions from the production of packaging materials, material transport and end-of-life disposal







- Beef Lamb and Mutton

  Cheese Poultry Root Vegetables

  Oo O
- Methane produced from cows, land clearing for grazing and animal feed means beef has a very high carbon footprint
- CO<sup>2</sup> emissions from most plant-based products are as much as 10-50 times lower than most animal-based products
- Nuts trees have a negative rating as carbon can be stored in the trees

www.visualcapitalist.com/visualising-the-greenhouse-gas-impact-of-each-food/

#### National Science Week 2021

Food: Different by design

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#### Vegetarians or vegan in Australia

Research conducted by Roy Morgan has found that the trend in vegetarian eating continues to grow — with **2.5 million people (12.1% of the population)** in Australia now eating all or almost all vegetarian.

The 2018 data shows a continued growth in people choosing to be vegetarians — up from 2.1 million people (11.2%) eating all or almost all vegetarian in 2016, and 1.7 million people (9.7%) in 2012.

There have been multiple scientific and market research studies on the barriers to becoming a vegetarian which can be summarized as:



Most people surveyed agreed that a benefit of a vegetarian diet is increased health benefits from fruit and vegetable consumption as well as lower fat intake leading to weight control and disease prevention.

Interestingly, more Australians are seeking to reduce their meat consumption but many still want to enjoy the taste and convenience of their favourite meals. As a result, demand for meat alternatives in easy-to-prepare, familiar formats – from sausages to meatballs – is increasing.

Still two in three Australians have not tried new generation plant-based meat as they continue to have mixed perceptions of these products, with concerns surrounding nutrition, as well as price and taste. This despite that many plant-based meat alternatives are nutritionally competitive with their conventional meat counterparts.

#### **Resources for students**

nourishing.io/

Designer fats: Nourish specialty 'animal-free' fats promise superior performance in meat and dairy alternatives (foodnavigator.com)

www.visualcapitalist.com/visualising-the-greenhouse-gas-impact-of-each-food/

food-studies.net/benefits-and-barriers-to-the-consumption-of-a-vegetarian-diet-in-australia/

www.nature.com/articles/1602387

www.v2food.com/

theconversation.com/au/topics/plant-based-diet-37268

theconversation.com/five-surprising-benefits-of-a-plant-based-diet-130902

www.dmarge.com/2021/07/plant-based-meat-nutrition-content.html

