

# Contribution Of Primary School Meals To The Greenhouse Gas Emissions In England

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## Introduction

UK food production and consumption is responsible for up to 18—30% of the total greenhouse gas emissions (GHGE). The Government Food Procurement policy has been recognised as an important tool to demonstrate the leadership to achieve sustainable healthy diets. We developed a method to quantify the GHGE of foods provided by the government, using primary school foods as an example.

## Research question

What is the contribution of primary school meals to the total greenhouse gas emissions (GHGE) in England

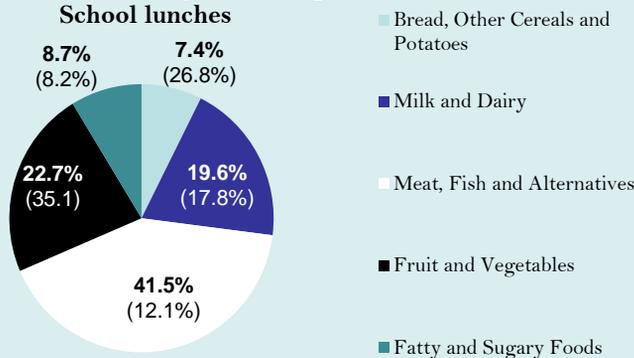
## Method

The Primary School Food Survey (PSFS) 2009 collected information from a nationally representative sample of 139 primary schools in England. For school lunches, 6,690 students and for packed lunches 3,488 students were included in the study.

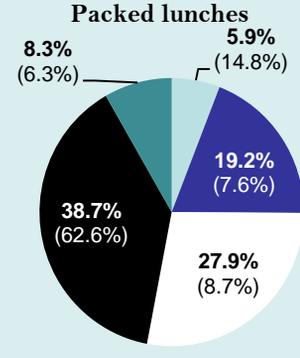
A unique GHGE value was estimated for each food code in this database, using a systematic review on GHGE of food groups. Nutritional values and GHGE values for each food code was combined to answer research questions.

## Results

### Distribution of GHGE by food categories, School lunches



### Distribution of GHGE by food categories, Packed lunches



GHGE % labelled in bold and weight distribution given in brackets (weight%)

### GHGE values per meal by school lunches and packed lunches

	Mean GHGE (KgCO <sub>2</sub> e)	Minimum	Maximum	95% uncertainty interval
School lunch	0.72	0.04	5.59	0.52 – 1.34
Packed lunch	0.70	0.34	10.99	0.58 – 0.94

Of the 4.2 million primary school children in England around 39% currently take school lunches. There are around 190 school days per year.

### GHGE of meals per year (KgCO<sub>2</sub>e)

School lunches = 223,918,754

Packed lunches = 354,201,211

## Conclusions and Next steps

The total GHGE due to primary school meals in England per year is 578,119,965 KgCO<sub>2</sub>e .This is equivalent to more than 578,000 economy class return journeys between London and New York.

Next step is to compare GHGE values of healthy school lunches vs unhealthy lunches.

