

Reducing Food Waste in Schools

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Outline



Understanding food waste in schools and why is important?

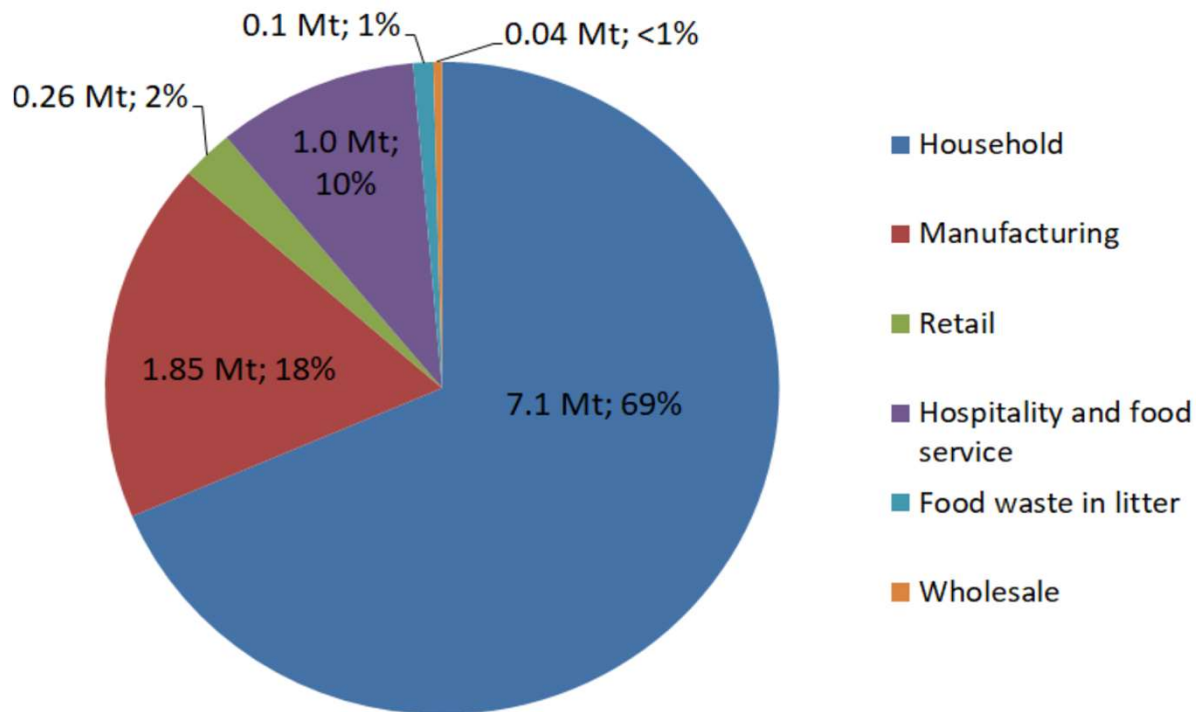


Case study example



Institutional challenges in reducing school food waste.

Extent of Waste in the UK



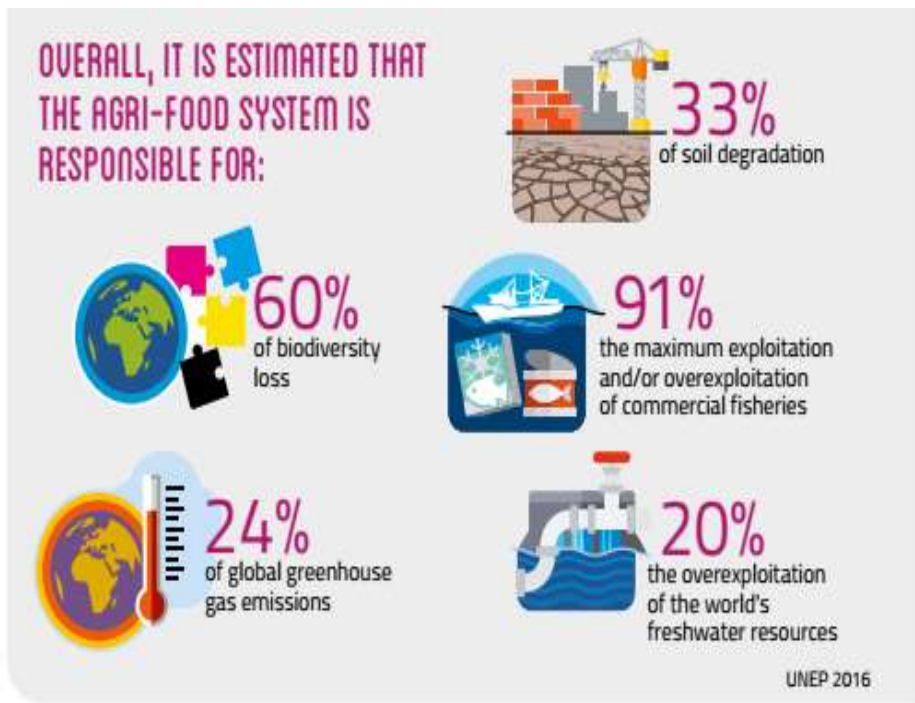
Total food waste arising in the UK
by sector (post-farm-gate) =
10 million tonnes

- 70% of FW intended for consumption (30% 'inedible parts')
- Total value of £20 billion a year
- Central government spending for defence 2019-2020 is £29 billion

<https://obr.uk/forecasts-in-depth/brief-guides-and-explainers/public-finances/#spending>

WRAP 2019 <http://www.wrap.org.uk/sites/files/wrap/Food%20Surplus%20and%20Waste%20in%20the%20UK%20Key%20Facts0.pdf>

Why Reducing School Food Waste Matters?

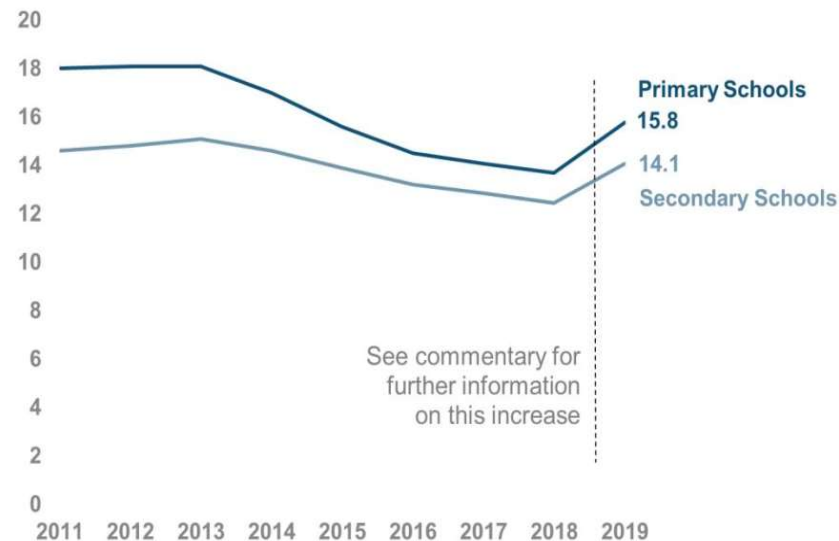
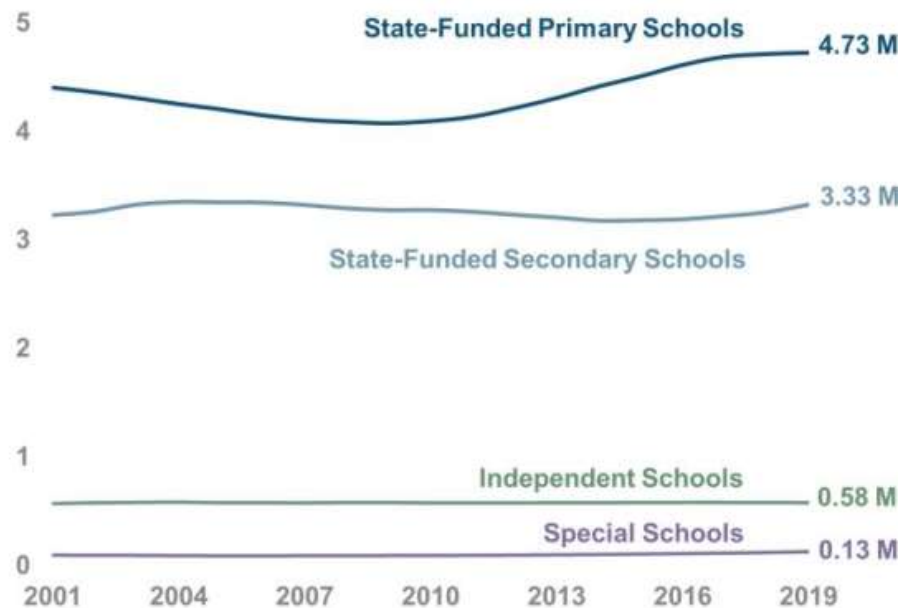


- The embedded energy from growing, transporting, storing and preparing food is also wasted
- The money spent on buying and preparing the food is wasted.
- Costs are incurred in waste treating and disposal
- Children are not gaining the nutritional benefit of the wasted food.

Understanding food waste in schools



Millions of pupils in schools, 2001-2019



- A total of 8.82 million pupils in schools in England (2019)
- Schools are significant source of food waste generation.
- Provides opportunity to drive change and reduction

Source : ONS (2019)

Understanding food waste in schools

2007/2008
WRAP produce
the first report
into food
waste in
England
schools

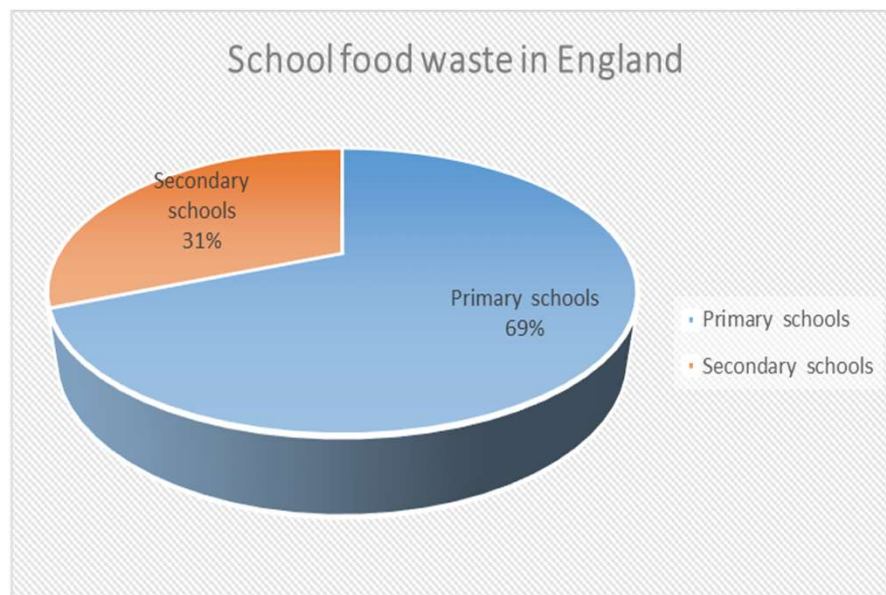
- Primary schools: food waste account for $\frac{1}{2}$ of all waste
- Secondary schools: food waste account for $\frac{1}{3}$ of all waste

But report did
not look into :

- Nature of food waste - types of food waste, and point of waste arising
- Why food was wasted
- What intervention works in reducing FW

Understanding food waste in schools

WRAP commissioned further study in 2011



<i>School type</i>	<i>Tonnes</i>
Primary schools	55,408
Secondary schools	24,974
Total	80,382

- Food waste was found to be statistically significantly different by school type:
 - primary schools producing **72 grams** /pupil/day
 - secondary schools **42 grams** /pupil/day.

FAO & The International Food Waste Coalition : *Do good: Save food!* - SKOOL pilot (2015-2017)

Result shows that the average per student food waste in primary education

- 110g per meal, i.e. 22% of the weight of the meal
- 19.3 kg per year
- Annual cost of around € 125

Understanding food waste in schools

Figure 1: Primary school food waste composition (% by kg sorted)

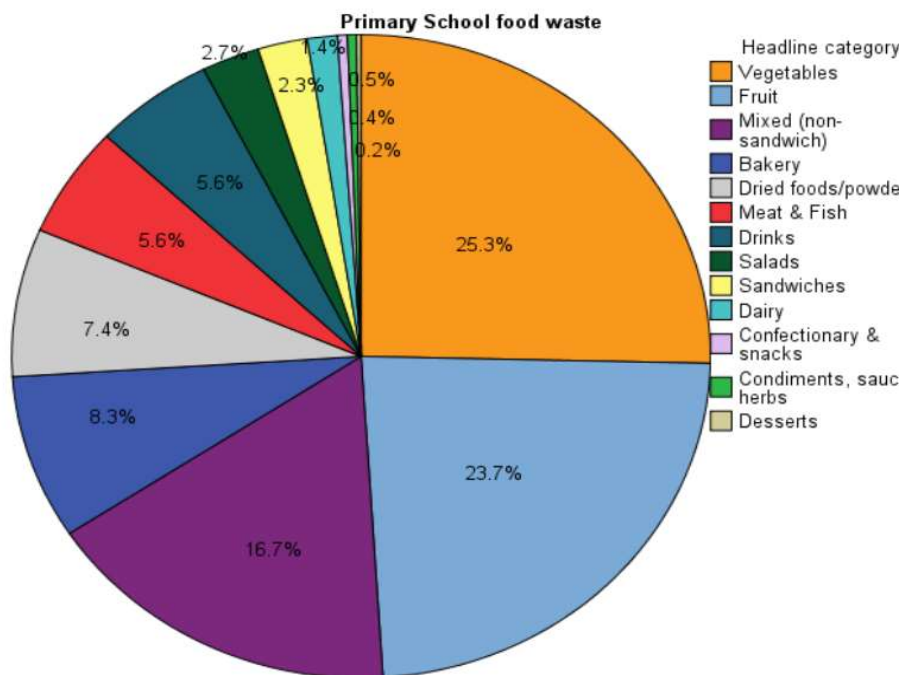
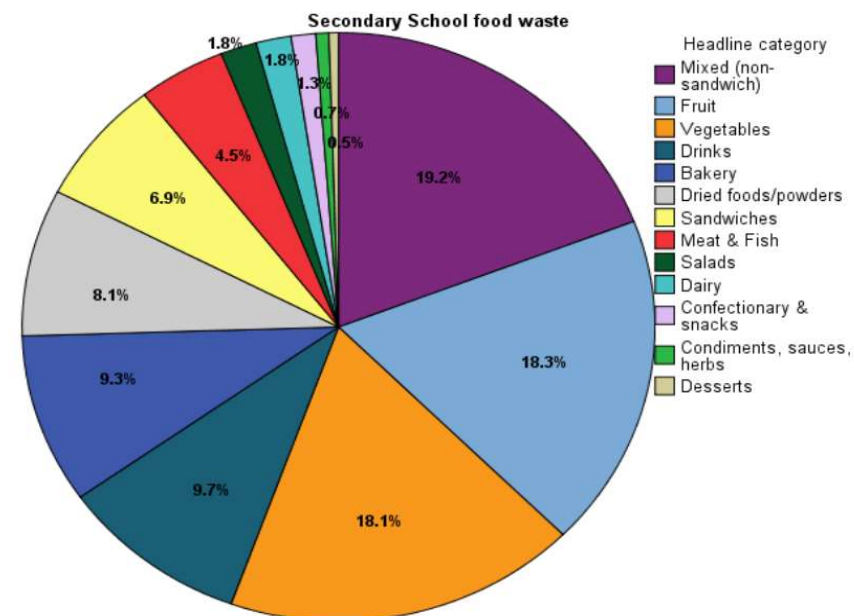
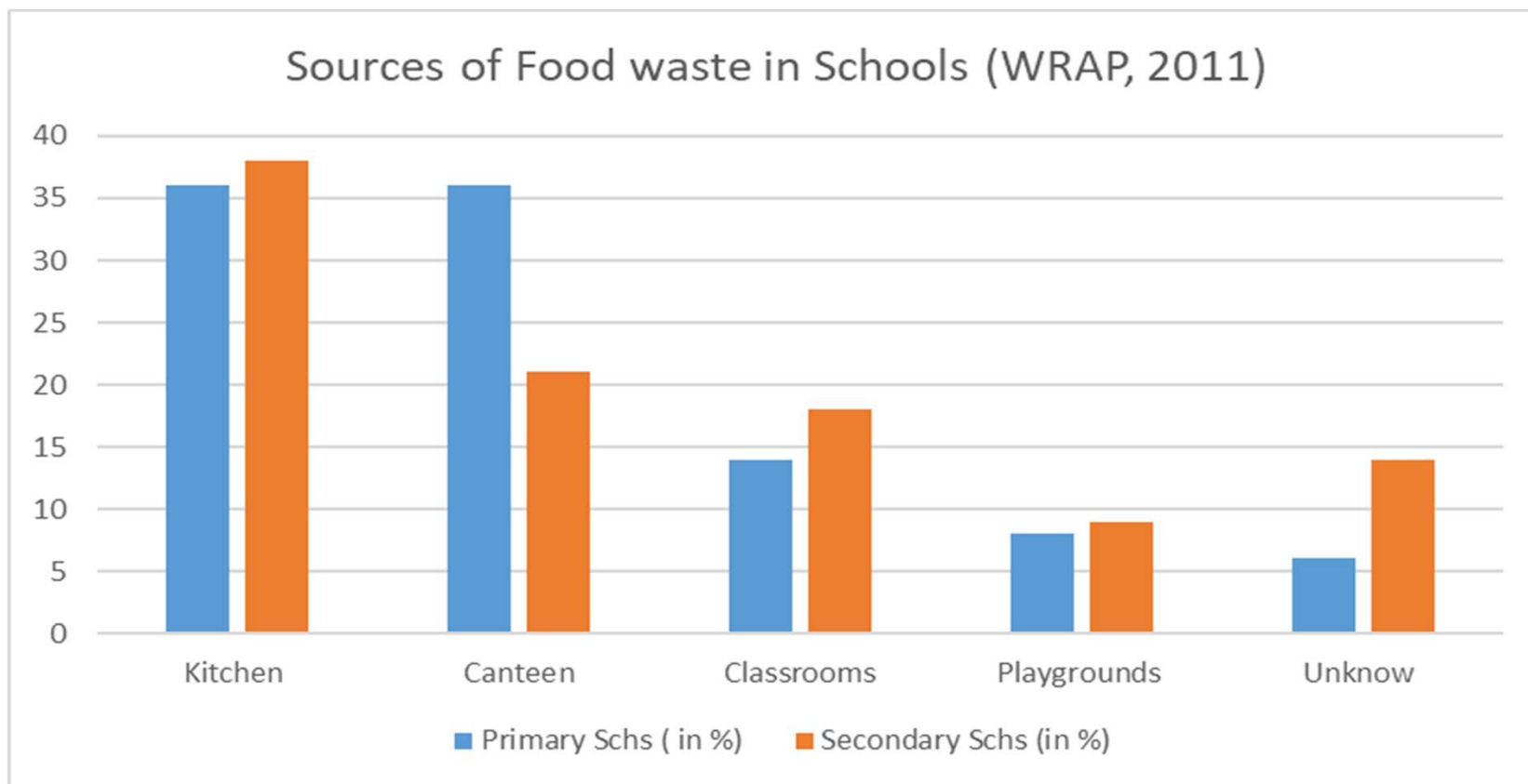


Figure 2: Secondary school food waste composition (% by kg sorted)



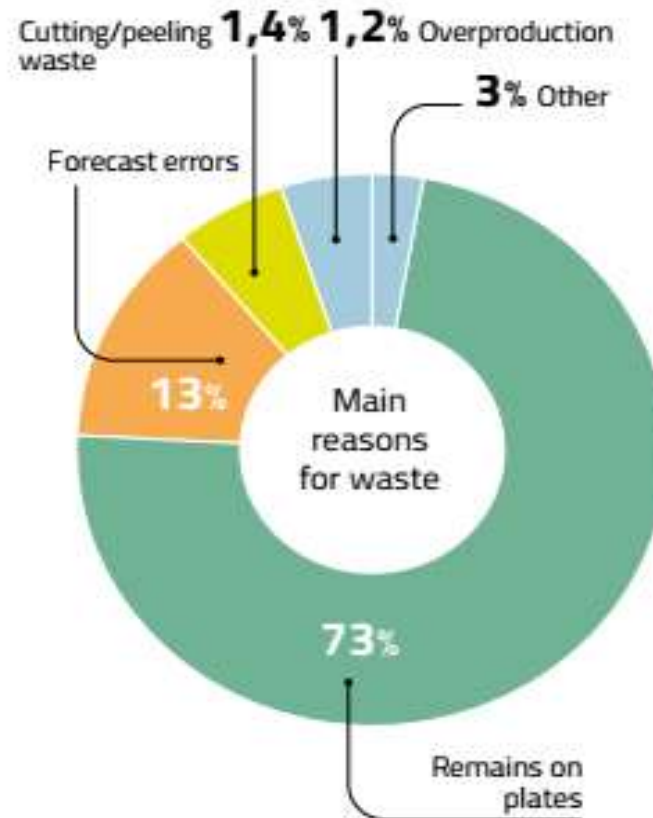
WRAP (2011)

Understanding food waste in schools



Understanding food waste in schools

SKOOL
project
2015-2017



Case study: Sheffield Primary School

Project Aim :

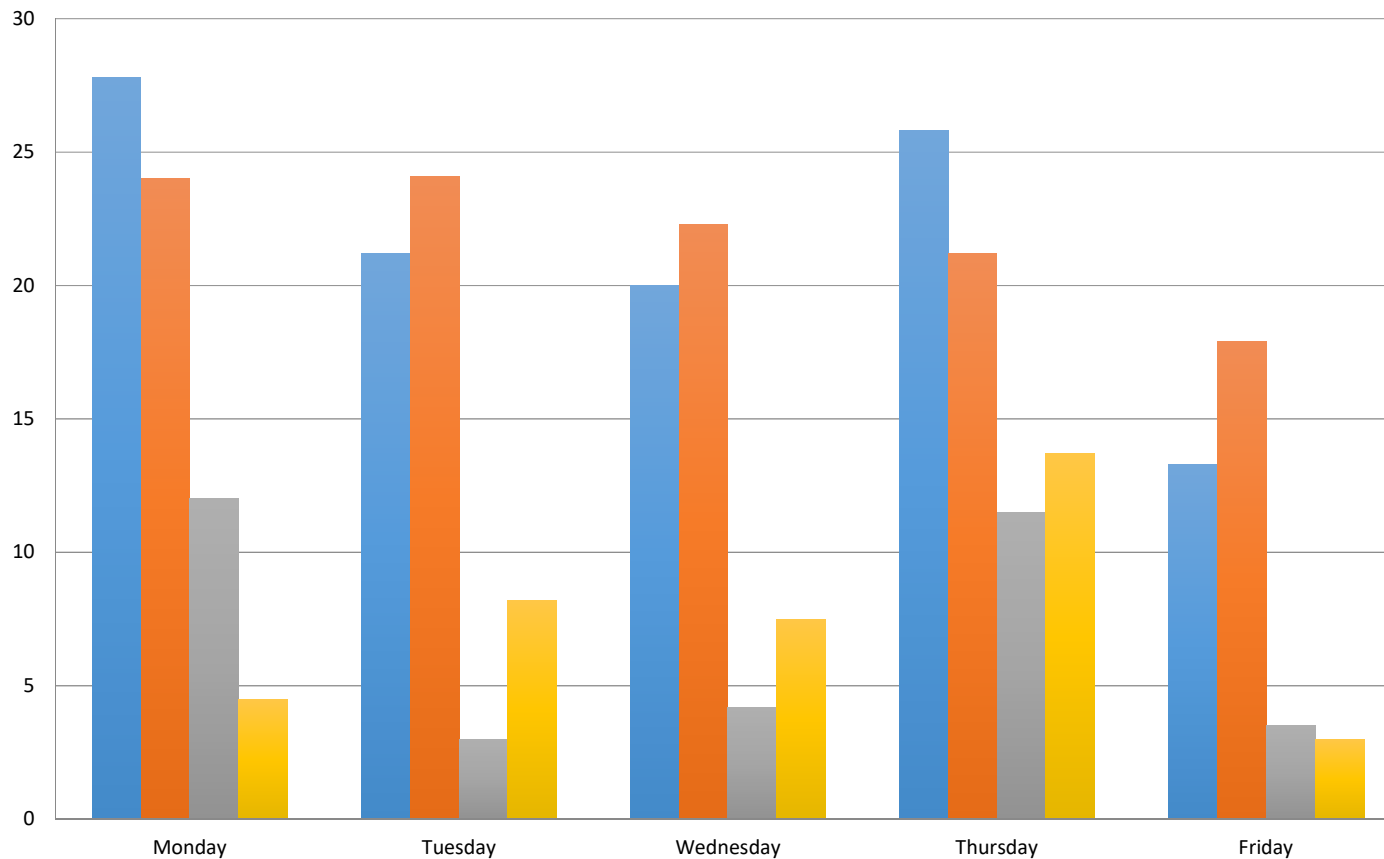
- Raise awareness among pupils about the issues of food waste
- Understand how much food is wasted
- Understand what type of food is wasted
- Why food waste occur

Project Activity :

- 2 weeks of FW measurement
- Assembly talk /presentation
- Food miles workshop with KS2 classes
- Food waste posters
- Pupils/cook dialogue



Total waste (kitchen & plate)



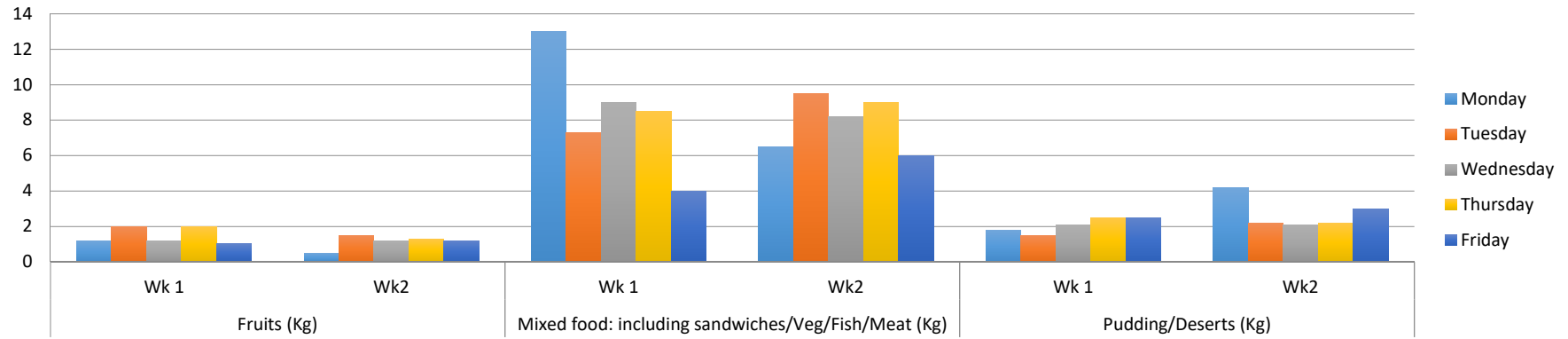
In a year FW = 5510 kg

Kitchen = 1406 kg

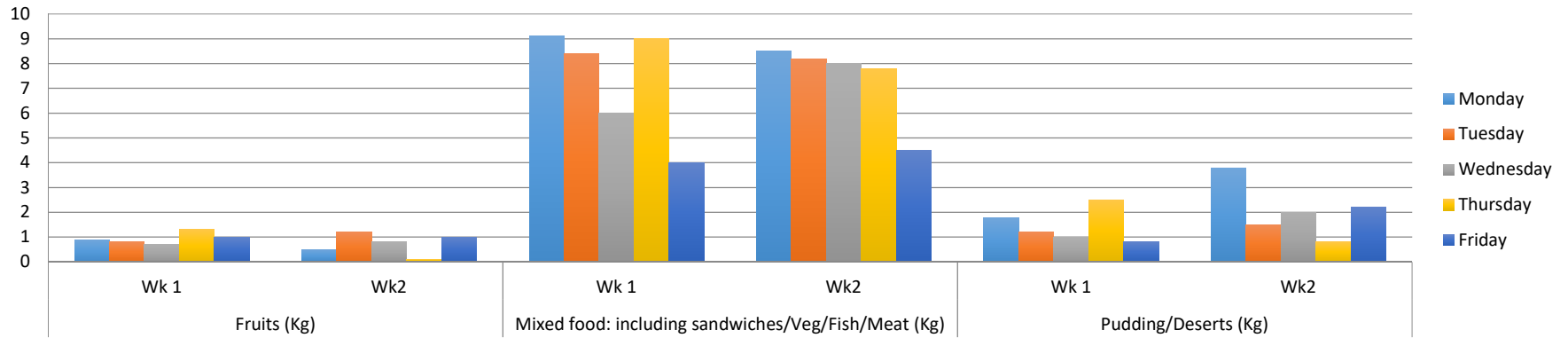
Pupils = 4104 kg

- Pupil's food waste- All categories Wk 1
- Pupil's food waste- All categories Wk2
- Kitchen Waste - Only mixed food Wk1
- Kitchen Waste - Only mixed food Wk 2

KS1 food waste across categories



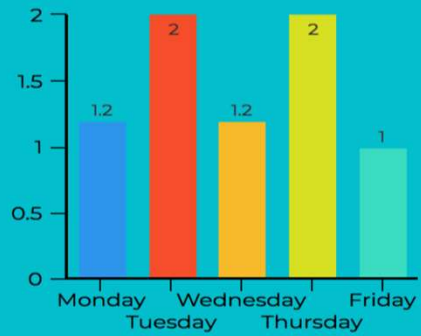
KS2 food waste across categories



2

Fruits Waste per Day

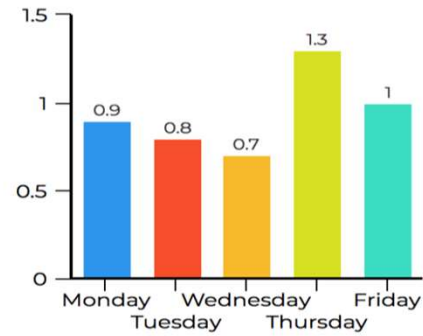
Example Week 1



Lower Dining Hall

- Most fruits - apples, banana, pears that comes with the sandwich were not eaten.

VS



Upper Dining Hall

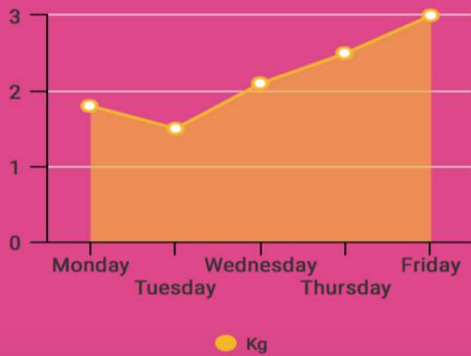
- Disliked banana and apples.

KS1

KS2



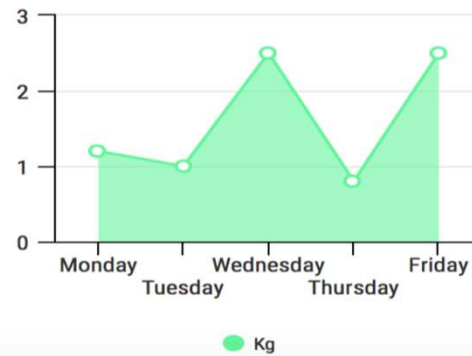
4 Pudding/Desert Waste per Day



Lower Dining Hall

- Most pupil disliked the cake, yogurt and fruit jelly

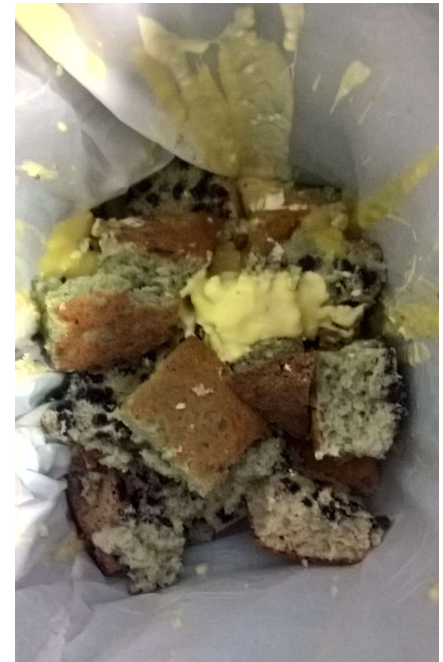
KS1



Upper Dining Hall

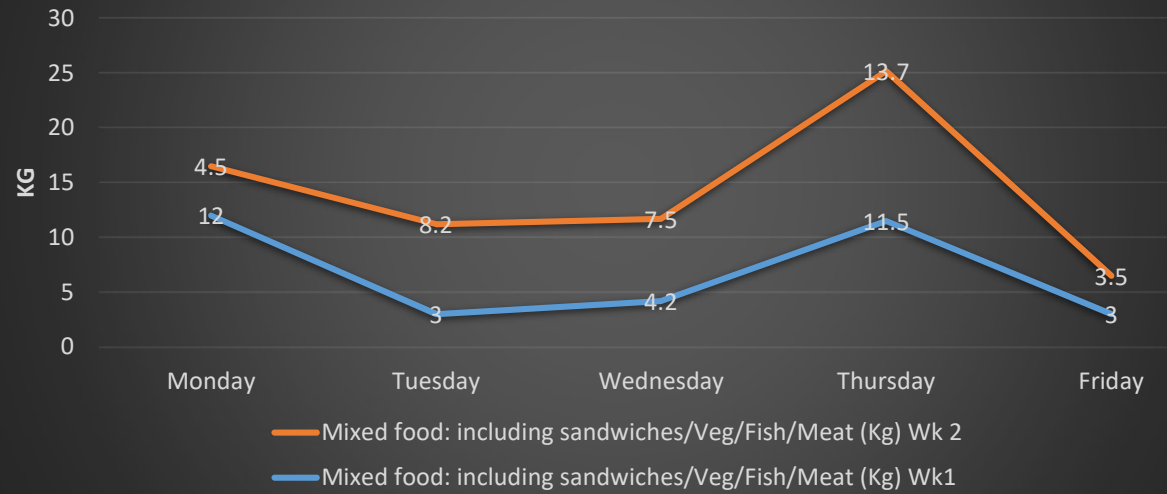
- Jelly and yogurt not like by some pupil

KS2

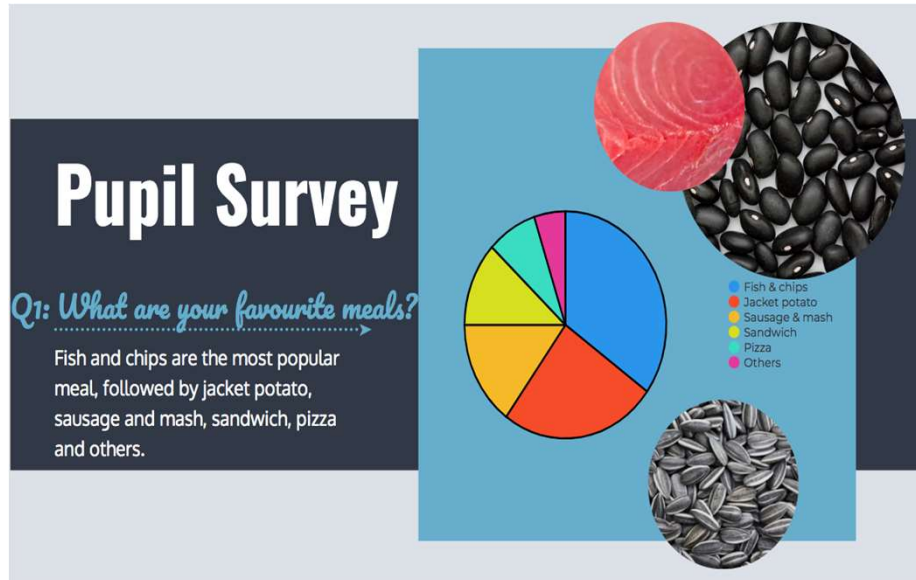




Kitchen Waste - Food cooked but not served (thrown away)



Understanding Why Pupil Wasted Food



Pupil Survey

Q3: Are your portion size...?

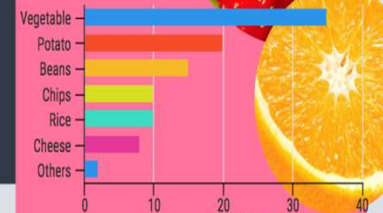
Most of Pupil think their portion size is just right.



Pupil Survey

Q4: If portion sizes are too big, what sort of food do you leave?

Most of pupil will leave Veggies, potato, beans, etc.



Understanding Why Pupil Wasted Food




Behavioural Reasons

Food prepared but not served:

- Some meal options are less popular
- Pupils buy a cheaper snack rather than a full meal (specific to secondary)

Food served but not eaten:

- Pupils are not hungry by lunch time
 - Food is unfamiliar
 - Food looks unappealing
 - Pupils don't want to eat healthy foods
 - Strange combinations of foods
 - Fussy eaters.
 - To finish meals quickly - to socialise/play with friends
- 

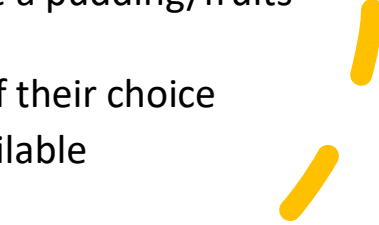
Institutional Challenges



Causes of food prepared but not served:

- Lack of flexibility to adapt centrally planned menus to meet the preferences of pupils in individual schools
- Children served with all three cause meals once order is placed
- Kitchens over-cater to ensure pupils have the meal option
- Limited opportunities for re-using unserved food
- Absence of ordering systems for school meals (particularly in secondary schools)
- Second helpings disallowed

Causes of food served but eating

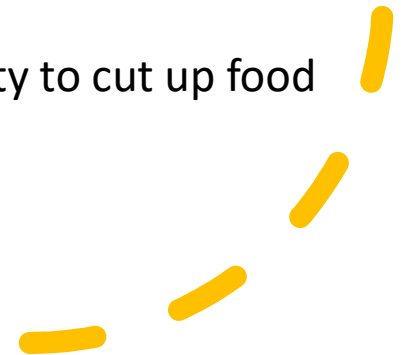
- Inflexible portion sizes leading pupils being overwhelmed with food
 - Fixed food combinations, e.g. pupils must have a pudding/fruits whether they want one or not
 - Sometime pupils do not get the meal option of their choice
 - Pupils do not know what meal options are available
 - Pupil may not be hungry at lunch time
- 
- A decorative graphic consisting of several thick, yellow, curved lines arranged in a semi-circular pattern on the right side of the slide.

Institutional Challenges



Some situational challenges:

- Unpleasant canteen environment, e.g. noisy, crowded;
- Shorten / rushed mealtimes due to long times queuing / to attend club activities
- Being hurried along to allow other pupils into the dining hall
- Sometimes dining halls needs to be cleared for afternoon lessons
- Practical difficulties with eating - inability to cut up food with cutlery provided



Institutional Challenges Affecting Progress

Actors in school food provision system do not understand why it is important to reduce food waste or how to do so

Some national regulations and associated guidance relating to school food could lead to food being wasted, or limit the opportunities to reduce waste

The specifications are not properly adapted (quantities, recipes, rotation of menus, seasonality,

Lack of effective interactions between the stakeholders

Way Forward

- Food waste (food systems approach) should be in-cooperated in the school curriculum
- Service providers make school food waste reduction an integral part of their business
- Collaboration among stakeholders across school food value chain: from production to school plate
- Service providers should work with their schools to understand specific local challenges



*Collaboration Guide
Do Good : Save Food!*





Asante Sana
