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UK perspectives on food waste and COVID-19

Food Loss & Waste International Workshop | The day after: Food waste prevention after the pandemic

20th January 2021

Dr Christian Reynolds

Centre for Food Policy, City, University of London

@sartorialfoodie

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Who am I? Christian Reynolds

Senior Lecturer at the Centre for Food Policy

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STFC Food Network+
N8 AgriFood
University of South Australia
UNIVERSITY OF ABERDEEN
The University Of Sheffield. Institute for Sustainable Food.
UK Data Service

Focus: healthy sustainable diets and food consumption (including waste)

Contents lists available at ScienceDirect

Food Policy

journal homepage: www.elsevier.com/locate/foodpol

Review

Review: Consumption-stage food waste reduction interventions – What works and how to design better interventions

Christian Reynolds[a,b,*], Liam Goucher[c], Tom Quested[b], Sarah Bromley[b], Sam Gillick[b], Victoria K. Wells[d], David Evans[e], Lenny Koh[c], Annika Carlsson Kanyama[f], Cecilia Katzeff[g], Åsa Svenfelt[f], Peter Jackson[a]

Public Health Nutrition: 22(8), 1503–1517 doi:10.1017/S1368980018003774

Healthy and sustainable diets that meet greenhouse gas emission reduction targets and are affordable for different income groups in the UK

Christian J Reynolds[1], Graham W Horgan[2], Stephen Whybrow[1] and Jennie I Macdiarmid[1,*]

[1]The Rowett Institute University of Aberdeen, Aberdeen AB25 2ZD, UK: [2]Biomathematics & Statistics Scotland, Aberdeen,UK

Previously: Food waste politics/history, social sciences approaches

Just about to publish: Sustainability and cooking (16% of UK food GHGE!)

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Today

- Background
- UK, COVID-19 and household Food waste
- 10 country pilot study
- Future projects – university students and apps to reduce food waste

"Food insecurity, food waste and cooking confidence of UK consumers in COVID-19 lockdown" Armstrong et al under review *British Food Journal*

Background

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WRAP – Measurement and interventions since 2008

LOVE FOOD hate waste

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Final Report

Household food waste: restated data for 2007-2015

This report restates existing estimates for the amounts of food waste produced by UK households between 2007 and 2015. The information has been restated to align it with new international standards that WRAP helped to develop.

Project code: CIT012-004
Research date: July 2017 - January 2018 **Date:** 22 May 2018

COVID-19 other reports and data

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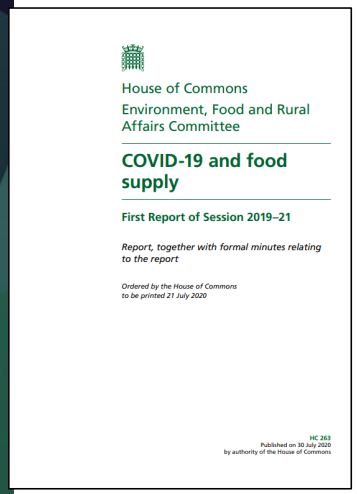

House of Commons
Environment, Food and Rural Affairs Committee

COVID-19 and food supply

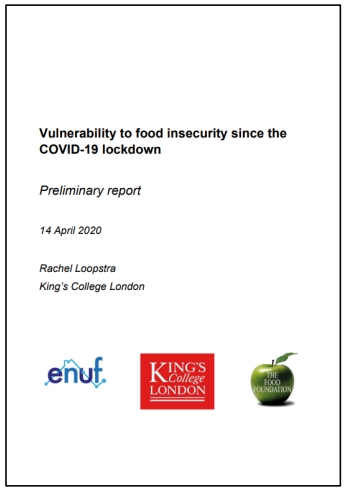
First Report of Session 2019–21

Report, together with formal minutes relating to the report

Ordered by the House of Commons to be printed 21 July 2020

HC 263
Published on 30 July 2020
by authority of the House of Commons

Online 17,000+ 3+ waves, Food security Qs in April 2020, Food bank use in April and May.

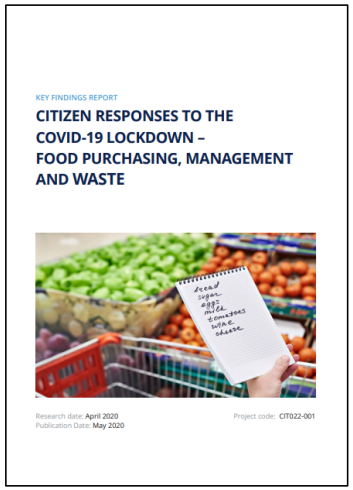

Vulnerability to food insecurity since the COVID-19 lockdown

Preliminary report

14 April 2020

Rachel Loopstra
King's College London

Online survey of 4343 adults in Great Britain conducted on 7th-9th April by YouGov Plc

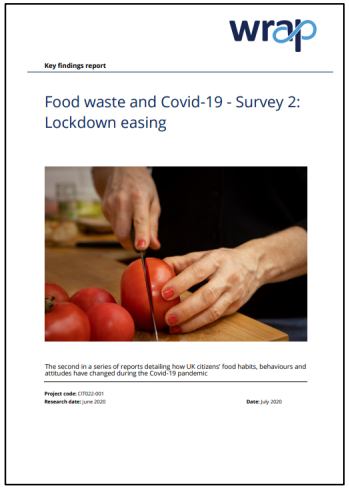

KEY FINDINGS REPORT

CITIZEN RESPONSES TO THE COVID-19 LOCKDOWN – FOOD PURCHASING, MANAGEMENT AND WASTE

Research date: April 2020
Publication Date: May 2020
Project code: CIT022-001

Online survey **06-09 April 2020** , 4,197 interviews, nationally representative sample of UK adults aged 18+

Online survey 2000 adults, 9th - 14th April 2020.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Key findings report

Food waste and Covid-19 - Survey 2: Lockdown easing

The second in a series of reports detailing how UK citizens' food habits, behaviours and attitudes have changed during the Covid-19 pandemic

Project code: CIT022-001
Research date: June 2020
Date: July 2020

Online survey 17-23 June 2020 with a nationally representative sample of 4,000 UK adults aged 18+

Understanding Society
THE UK HOUSEHOLD LONGITUDINAL STUDY

Note: 23rd March UK lock down.

COVID-19 as a moment of change

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Vulnerability to food insecurity since the COVID-19 lockdown

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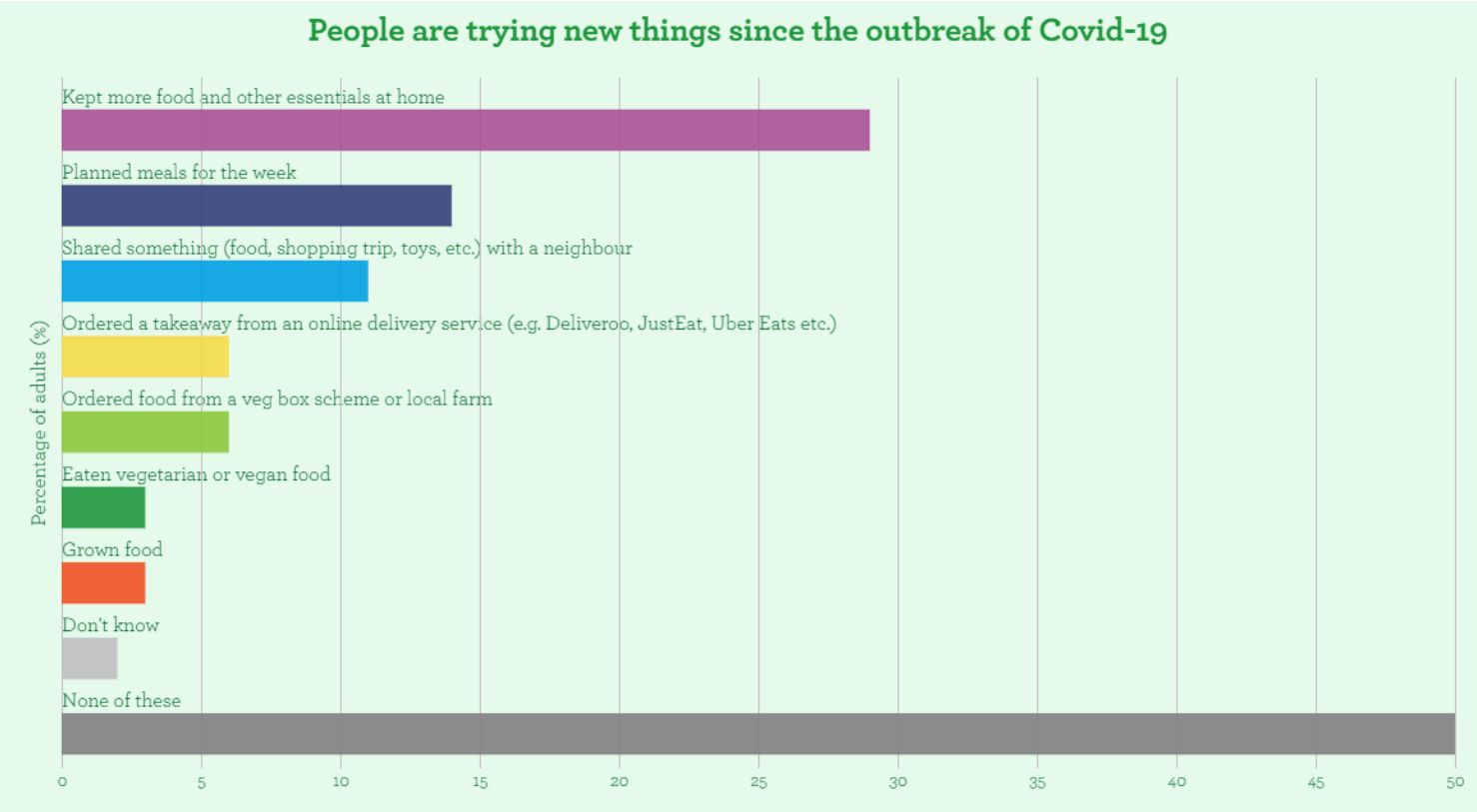

COVID-19 as moment of decreased food waste

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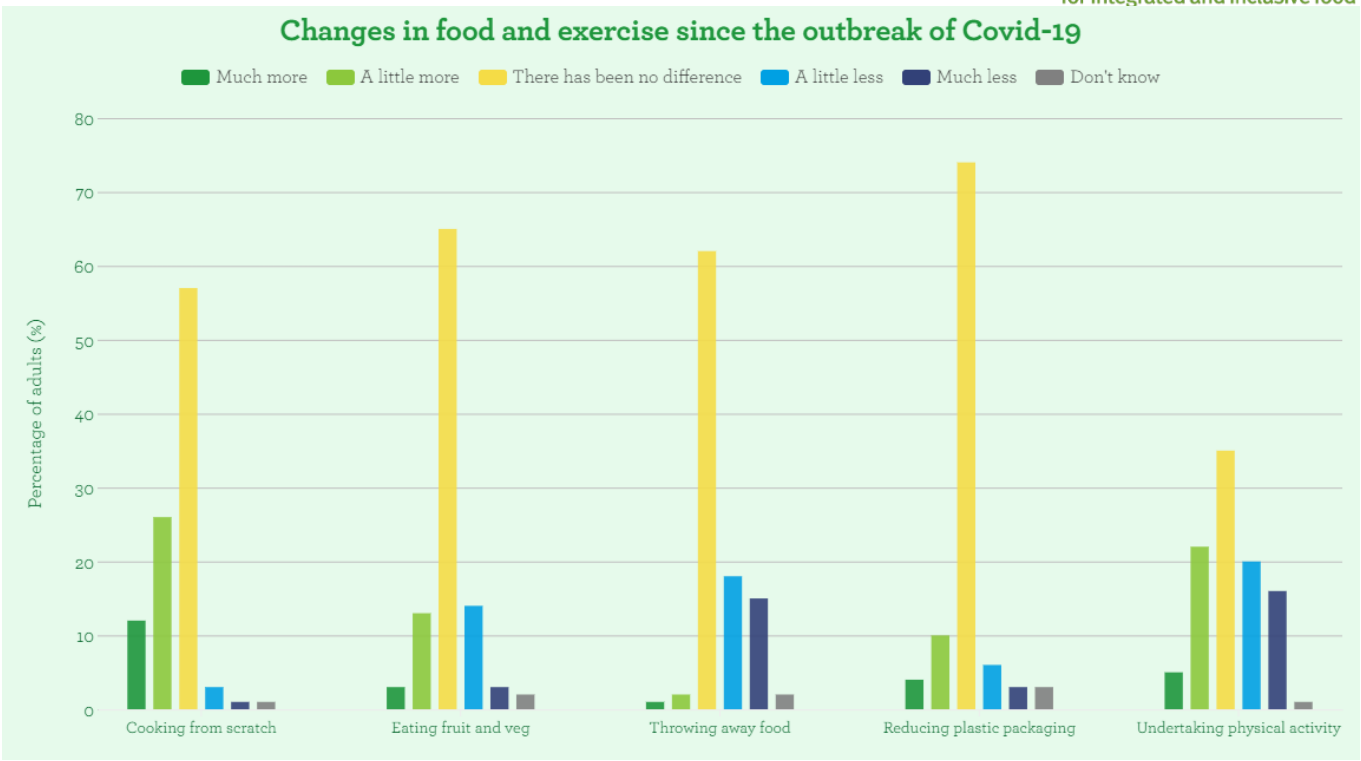

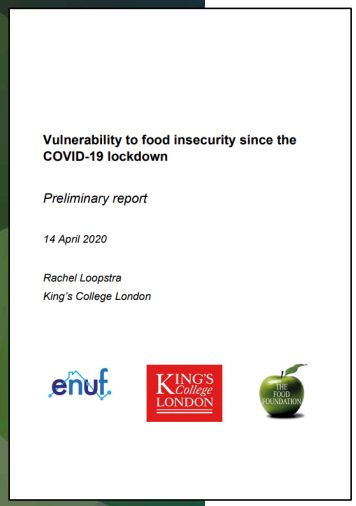

Vulnerability to food insecurity since the COVID-19 lockdown

Preliminary report

14 April 2020

Rachel Loopstra
King's College London

Online survey of 4343 adults in Great Britain conducted on 7th-9th April by YouGov Plc

33-48% of UK consumers reporting less food waste following lockdown

COVID-19 as moment of increased food waste

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THE BLACK SALTIRE#FBSI
@80_mcswan
Follow

#PanicBuying has resulted in mass food waste
This is evidence
Foodbanks would have given your right arm for this lot
Let this be a lesson panic buying is not helping
#COVID19

3:32 PM - 28 Mar 2020

49 Retweets 79 Likes

15 49 79

Visit #OurCowMolly 11am - 5pm Wed, Fri, Sat & Sun
@OurCowMolly

Replying to @BiostatPL @NikiRust and 10 others

We delivered this milk into store with 10 days on its date when they had zero milk of their own, then two arla wagons of milk arrived & simply to keep the display plan right most of ours sat in the back & was wasted. Over ordering by major supermarkets is causing major food waste

11:28 PM · Apr 5, 2020 from Our Cow Molly Dairy Ice Cream · Twitter for iPhone

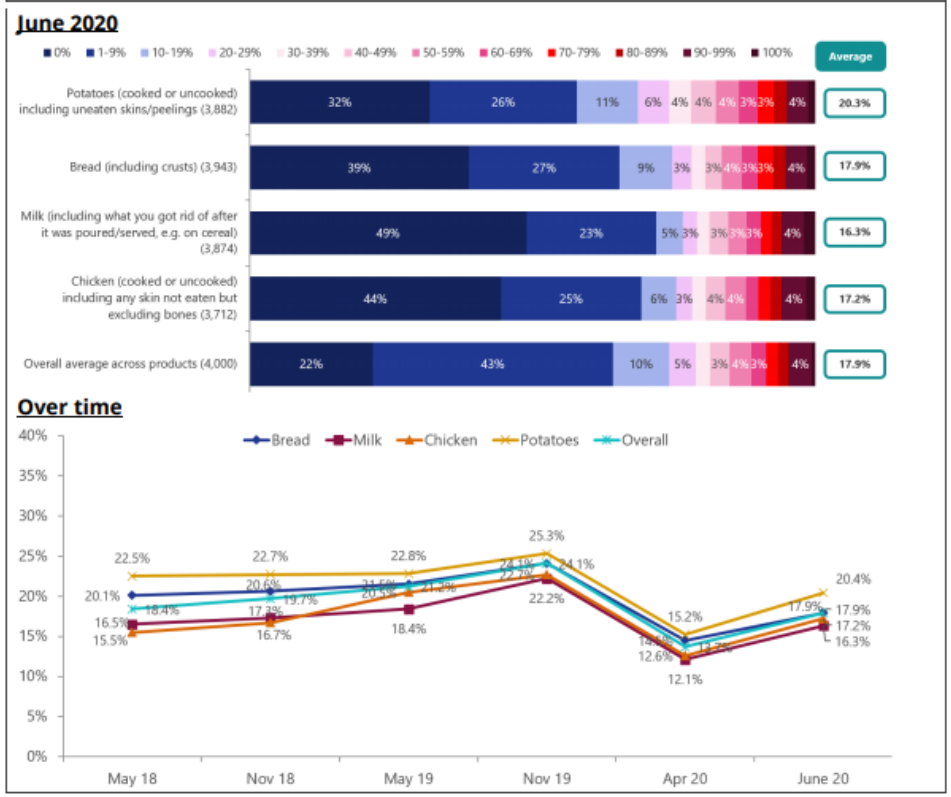
1 Retweet 1 Quote Tweet 5 Likes

UK specific self reported food waste

Figure 7 – Levels of food waste: by product

Q. Thinking about the last time you bought [food type], approximately what percentage ended up being uneaten and thrown away (whether in a compost bin, ordinary bin, council food waste collection, or down the sink)?

Base: UK adults aged 18+ with any responsibility for food shopping and/or preparation in the home – who buy and eat each item (base sizes in brackets). April 2020



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COVID-19 as a moment of change – the long term trends

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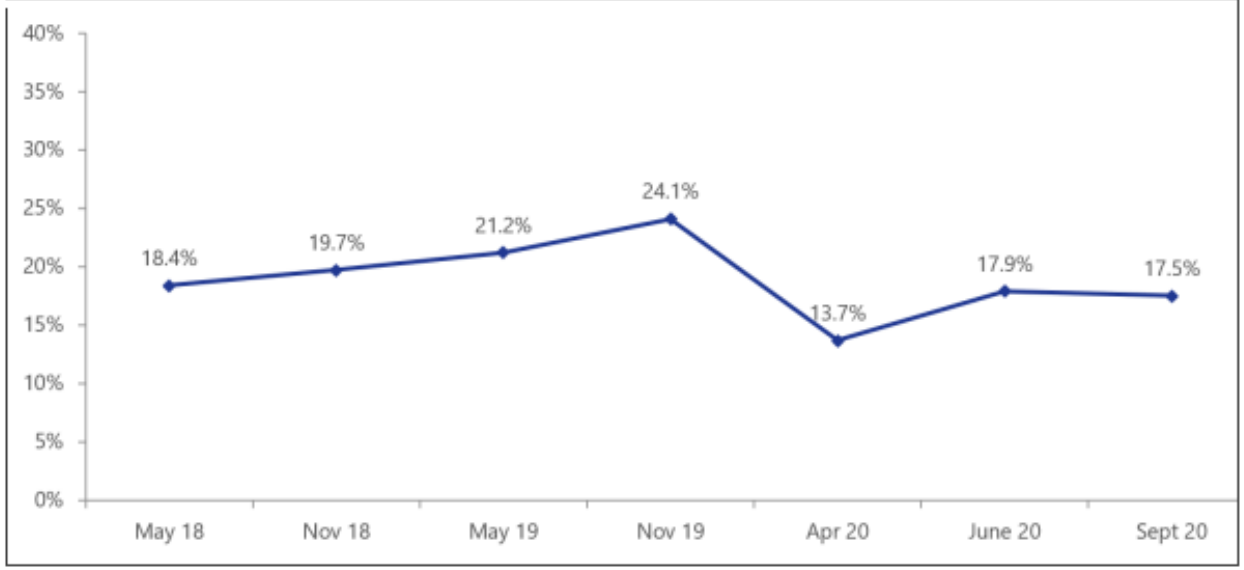
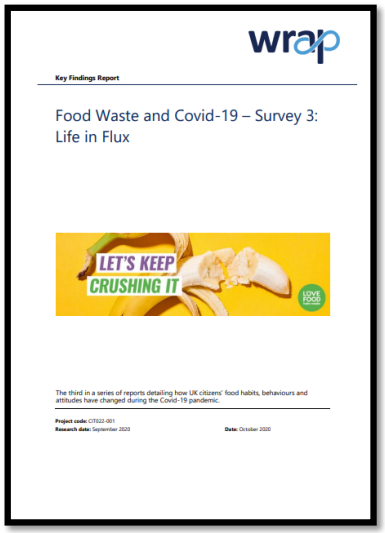
Figure 7 – Levels of food waste: by product

Q. Thinking about the last time you bought [food type], approximately what percentage ended up being uneaten and thrown away (whether in a compost bin, ordinary bin, council food waste collection, or down the sink)?

Base: 4,119 UK adults aged 18+ with responsibility for food shopping and/or prep. September 2020

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Key Findings Report

Food Waste and Covid-19 – Survey 3: Life in Flux

The third in a series of reports detailing how UK citizens' food habits, behaviours and attitudes have changed during the Covid-19 pandemic.

Project code: CT022-001
Research date: September 2020
Date: October 2020

Online survey Apr, June, Sept 2020 with a nationally representative sample of 4,000 UK adults aged 18+

Food waste has increased by 31% from the initial lockdown period, moving toward pre-lockdown levels as restrictions ease

https://wrap.org.uk/sites/files/wrap/Food-waste-and-Covid-19%E2%80%93Survey-3-Life-in-Flux.pdf

March to June 2020 pilot Cooking and food waste

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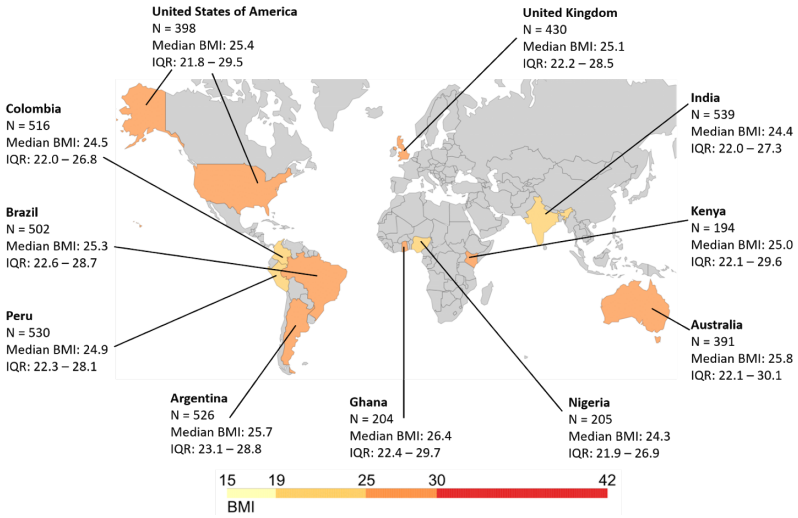

Self reported purchased food %
Self reported cooked food %
Packaging, cooking confidence etc.
10-15 common foods

"Food insecurity, food waste and cooking confidence of UK consumers in COVID-19 lockdown" Armstrong et al under review *British Food Journal*

UK results

- Average of 9% of the featured **purchased** foods are self reported thrown away. More green leaves (13%), carrots (11%), potatoes (11%) and sliced bread (11%) is thrown away than beef (7%) and chicken (7%).
- 7% of **cooked** featured food, are self reported thrown away. A greater percentage of polenta (9%), green leaves (8%) and white rice (8%) are thrown away than beef (6%), chicken (5%) and bread (roll 5%, slice 6%).
- Household income was weakly associated with waste, higher income households report more cooked and purchased food waste.
- Households with children report more purchased and cooked waste

Country specific self reported food waste Pilot survey - Chicken

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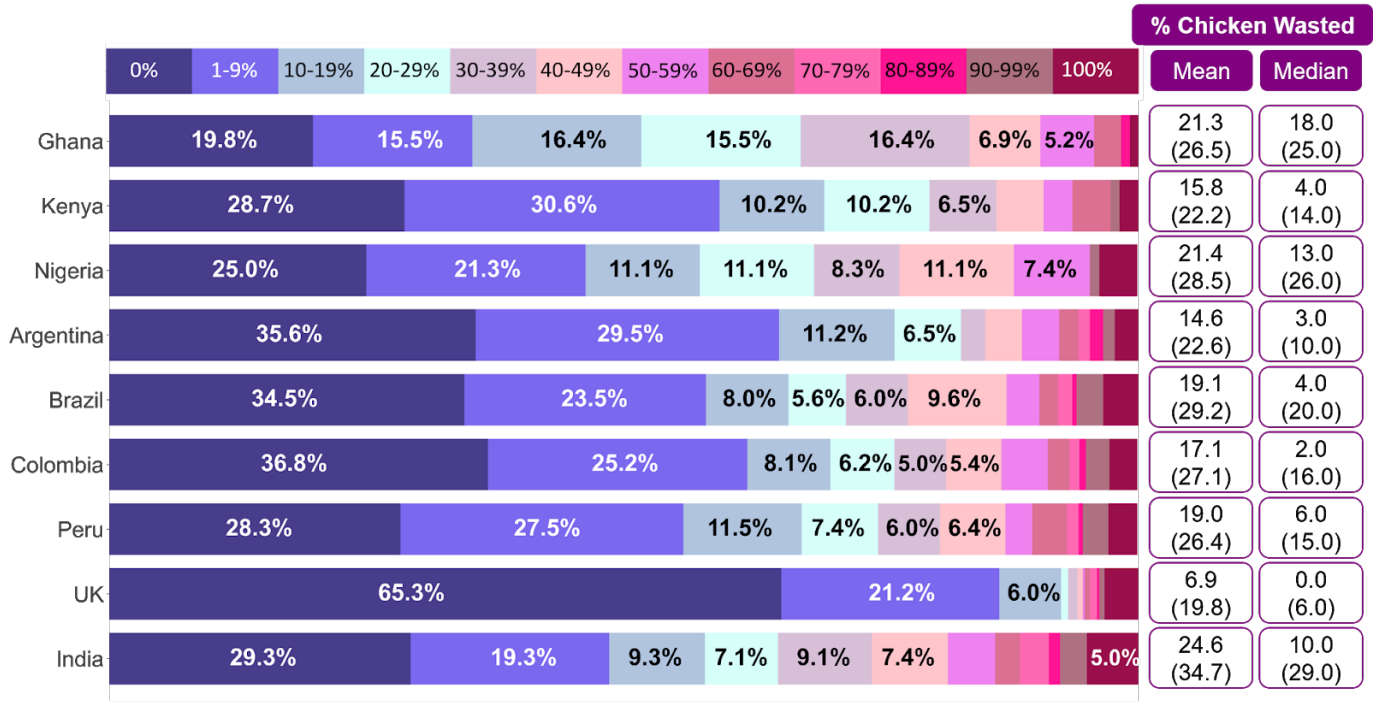
'Thinking about the last time you bought the following food (Chicken), approximately what percentage of the amount you bought ended up being uneaten and thrown away (please include all food that was not eaten - e.g. put in a bin, compost bin, down the sink, given to animals etc) -



Country specific self reported food waste Pilot survey - Rice

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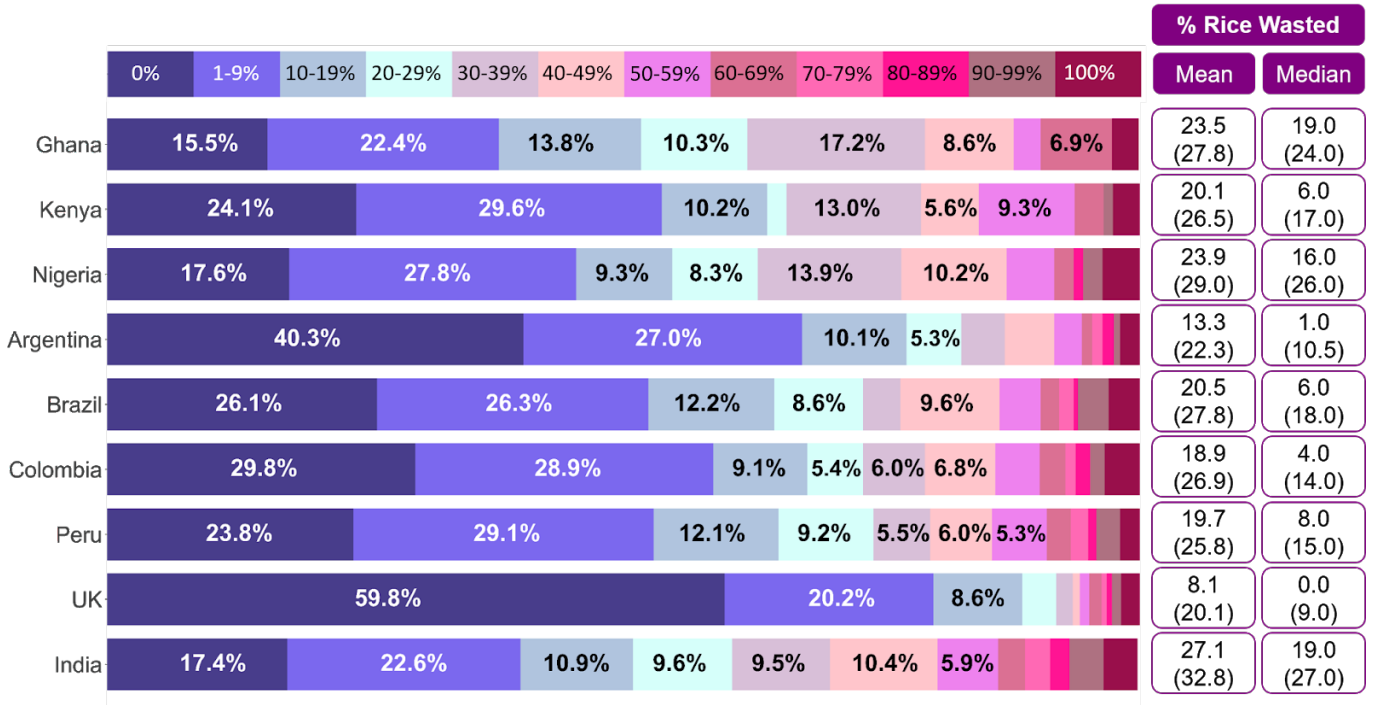
'Thinking about the last time you bought the following food (Rice), approximately what percentage of the amount you bought ended up being uneaten and thrown away (please include all food that was not eaten - e.g. put in a bin, compost bin, down the sink, given to animals etc) -



Final thoughts

- COVID-19 and lockdown measures has resulted in large changes in food habits.
- Immediate increases in waste (in system), BUT decreases in self reported household waste (overall).
- What next is important:

We will be testing food waste reduction apps with students (2021-2022).

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Please email if you have questions.

I am happy to talk further!

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Current solutions and interventions

Macro interventions up to 24% pp average avoidable FW reduction (But probably 7-15%)

- Consumption focus
  - Willingness to change? – Education.
  - Love Food Hate Waste.
- Supplier focus
  - Packaging and sales changes.
  - Re-directing edible food ~~waste~~ (food rescue – French legislation?).
- Government
  - Food waste recycling policy.

Micro interventions (53%-83% pp avoidable FW reduction)
Intense interventions hard to replicate at scale.
Woman's institute 2007, Worcestershire 2011,
West London 2012, Leicestershire 2013,

Source: Parry, A. et al., 2014. *UK food waste – Historical changes and how amounts might be influenced in the future*, WRAP Banbury, UK.

Mention schools menu redesign work!

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Peer reviewed interventions and food waste

- Nudges – reducing plate size, providing social cues. 20% ↓in FW *Kallbekken, (2013)*
- Changing canteen menus, ↑ consumption, 18% ↓ in vegetable FW *Schwartz et al (2015)*
- Weight/ of plate changes the amount of food eaten and wasted *Williamson et al (2016)* **
- Information based campaigns, *Schmidt (2016), Manomaivibool et al (2016) Devaney, Davies (2016)***
- Social media campaign – as effective as traditional campaigns *Young et al (2017)* **
- Cooking workshops *Dyen, Sirieix (2016)* **
- Fridge cameras *Ganglbauer, et al (2013)* **

***** Self reported results.***

Self reported results generally give lower estimates of food waste compared to waste compositional analysis. For diaries – one of the more accurate methods – around 40% less food waste is reported compared to waste compositional analysis. *Høj (2012)*

Measuring food waste via caddies or photos gives similar results to diaries. *Van Herpen (2016)*

Reynolds et al (2019) Food Policy