Waste into Wellbeing

Understanding carbon benefits and its wider significance

April 2023

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- increase your B Corp Impact Assessment (BIA) scores
- meet tendering or funding requirements related to environment & carbon
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Environmental certification

Carbon footprinting

Training on environment & carbon

Consultancy on environment & carbon

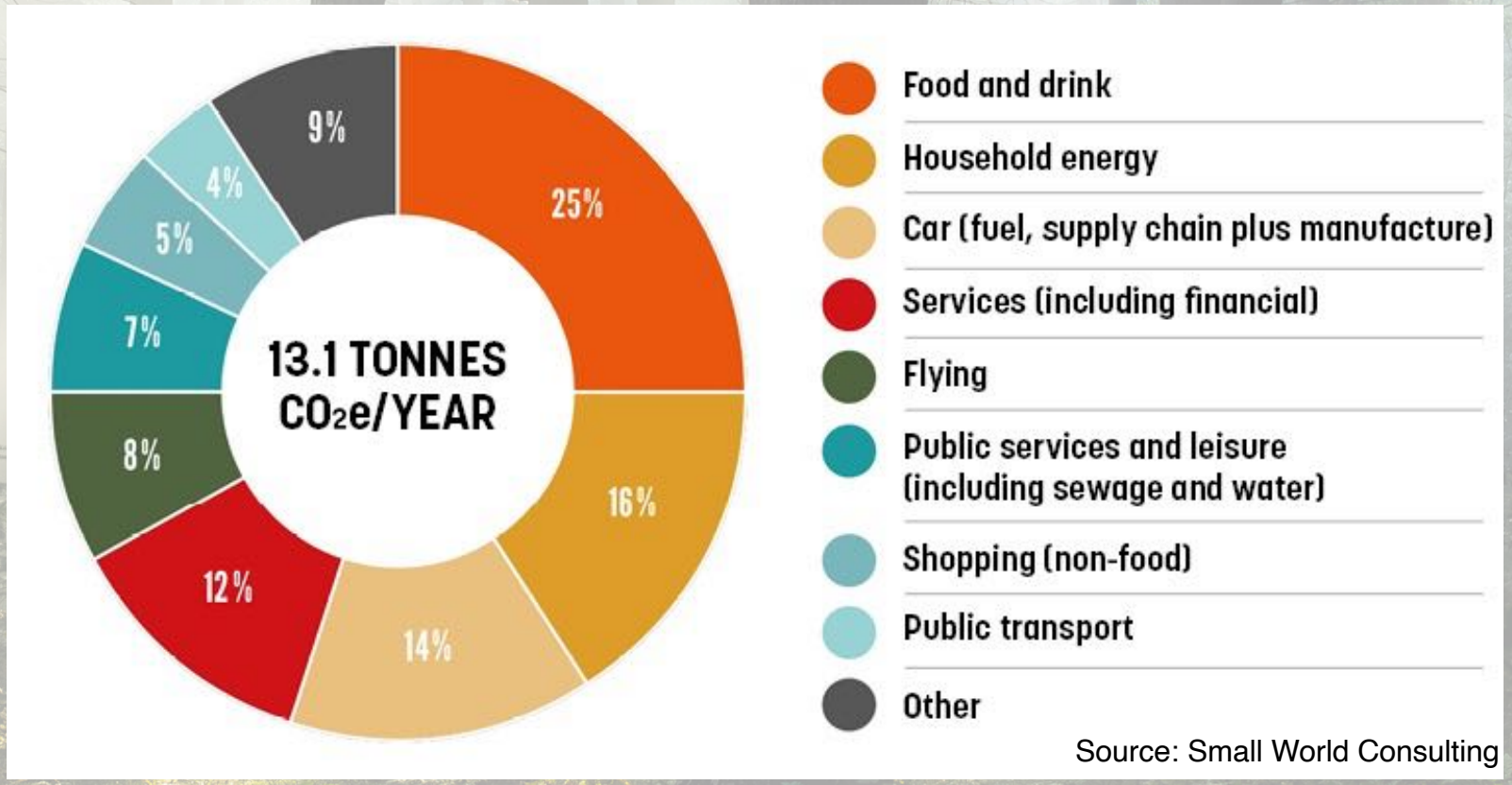
Buildings & energy assessments

Contents

- Introduction
- A (very!) brief introduction to carbon footprinting
- Direct carbon savings from Waste into Wellbeing
- Why the indirect carbon benefits are far greater
- Why its significance may be greater still

Carbon footprint

- A measurement of all of the greenhouse gases that an entity is responsible for, e.g.
  - A person
  - A business
  - A product
  - A flight or holiday
- Here's the footprint of the average person in the UK



Source: Small World Consulting

The two main methods for measuring carbon

ACTIVITY-BASED METHOD

SPEND-BASED METHOD

Activity-based method

- Using data on activity – electricity used, miles travelled, food sent to landfill
- ‘Emissions factors’ tell us how much carbon different types of activities produce
- Activity data x Emissions factor = Carbon emissions
- For example:

Activity data	X	Emissions factor	=	Carbon emissions
10,000 miles travelled in petrol car		0.3kg CO_2e per mile		3,000 kg CO_2e (3 tonnes)

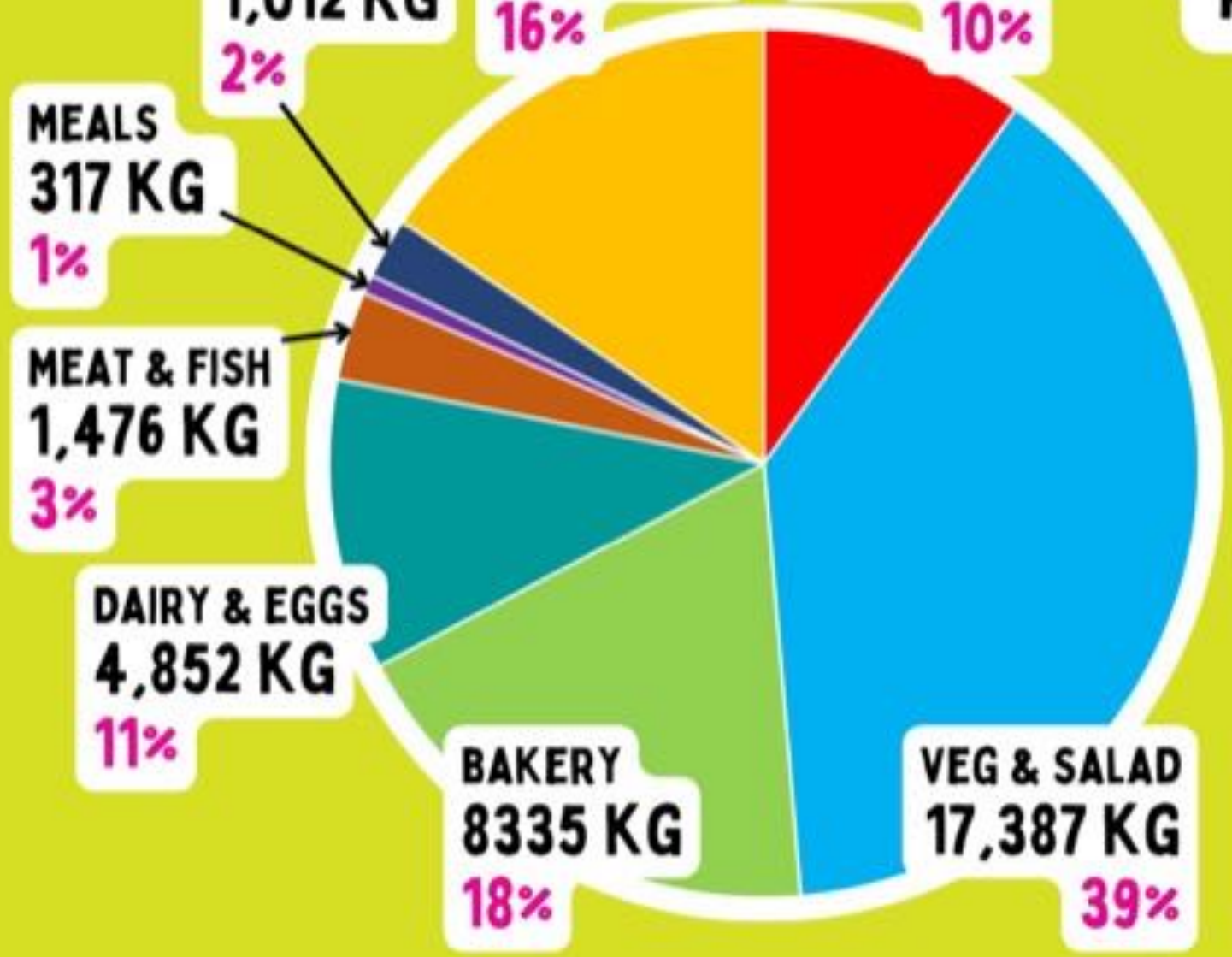
Spend-based method

- Using data on spending
- ‘Emissions factors’ tell us how much emissions spending in different categories produces
- Spend data x Emissions factor = Carbon emissions
- For example:

Activity data		Emissions factor		Carbon emissions
£10,000 spent on advertising	X	0.2kg CO_2e per £ spent	=	2,000 kg CO_2e (2 tonnes)

SURPLUS FOOD RE-DIRECTED 2022

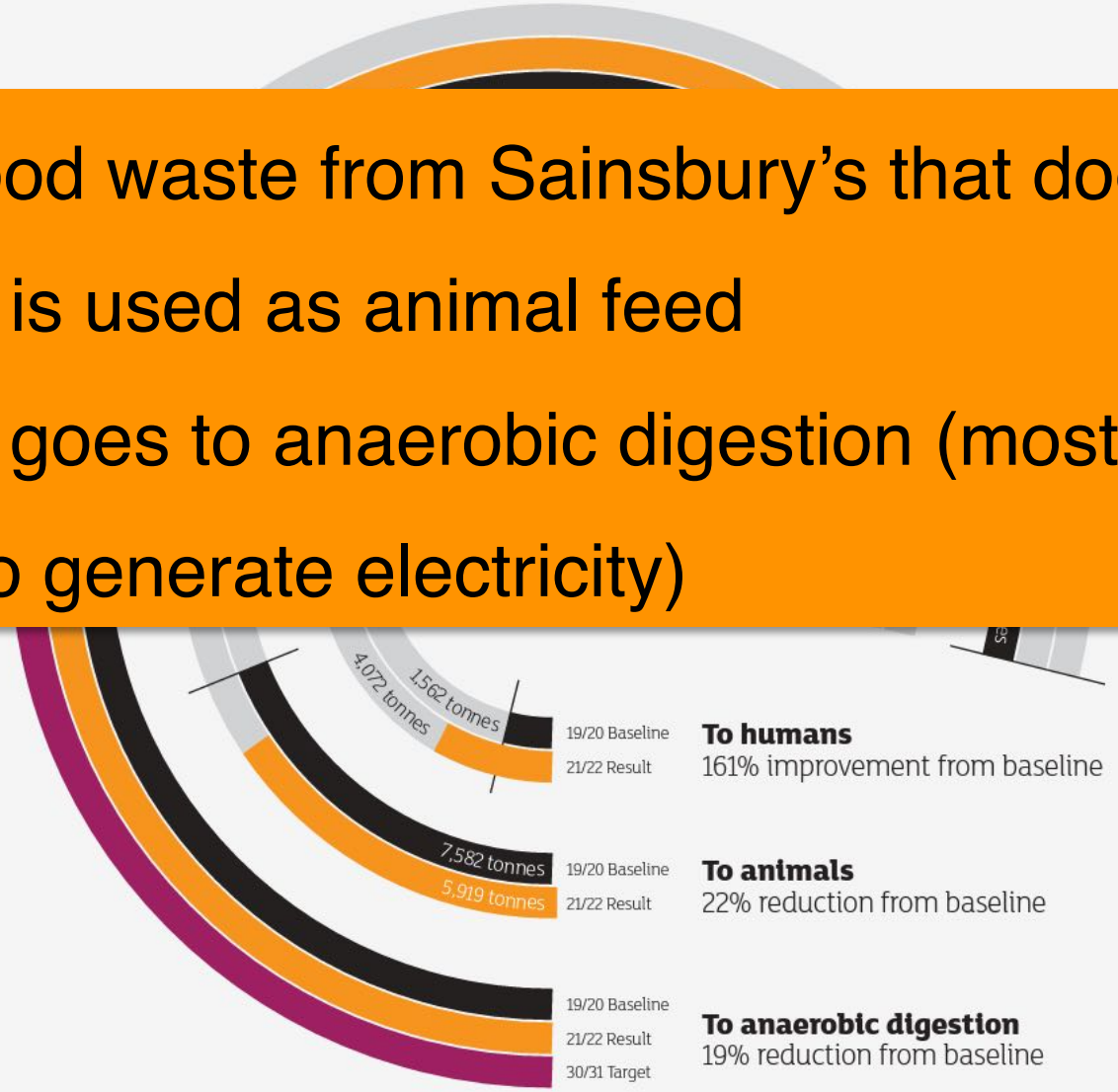
23.6 TONNES IN TOTAL



WASTE INTO WELLBEING

Better for the planet

Food Waste



25,483 tonnes
of food waste used for

Of the food waste from Sainsbury's that doesn't go to humans:

- 18.6% is used as animal feed
- 81.4% goes to anaerobic digestion (most of the resulting 'biogas' is used to generate electricity)

5,919 tonnes
of food waste was used for animal feed
(a **25%** reduction from last year)
This year we also trialled using surplus produce for animal feed.

		Composting	Landfill	Anaerobic digestion
		Total kg CO_2e per unit	Total kg CO_2e per unit	Total kg CO_2e per unit
Refuse	Household residual waste			
	Organic: food and drink waste	8.911	626.856	8.911
	Organic: garden waste	8.911	578.940	8.911
	Organic: mixed food and garden waste	8.911	587.326	8.911
	Commercial and industrial waste			

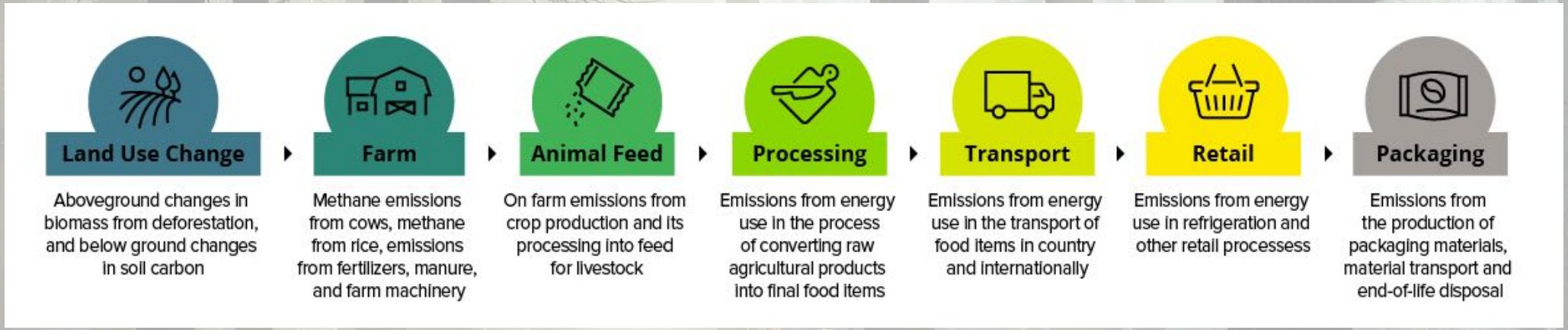
		Unit	Re-use	Open-loop	Closed-loop	Combustion	Composting	Landfill	Anaerobic digestion
			Total kg CO_2e per unit	Total kg CO_2e per unit	Total kg CO_2e per unit	Total kg CO_2e per unit	Total kg CO_2e per unit	Total kg CO_2e per unit	Total kg CO_2e per unit
		tonnes		0.9847	0.985			1.234	
		tonnes		0.985	0.985	21.2802			
		tonnes						5.913	
		tonnes		0.985	0.985			1.234	
		tonnes		0.985				1.234	
		tonnes		0.985	0.985			1.234	
		tonnes			0.985			1.234	
		tonnes			0.985			1.264	
		tonnes			0.985			17.577	
		tonnes			21.280	21.280			
		tonnes			21.280			71.950	
		tonnes			21.280				
		tonnes			21.280	21.280	8.911	828.014	
		tonnes			21.280	21.280		1,041.785	
Other		tonnes		21.280	21.280	21.280		8.883	
	Clothing	tonnes			21.280	21.280		444.925	
Refuse	Household residual waste	tonnes				21.280		446.204	
	Organic: food and drink waste	tonnes				21.280	8.911	626.856	8.911
	Organic: garden waste	tonnes				21.280	8.911	578.940	8.911
	Organic: mixed food and garden waste	tonnes				21.280		587.326	8.911
	Commercial and industrial waste	tonnes				21.280			
Electrical items	WEEE - fridges and freezers	tonnes		21.280					
	WEEE - large	tonnes		21.280		21.280			
	WEEE - mixed	tonnes		21.280					
	WEEE - small	tonnes		21.280					
	Batteries	tonnes		21.280					
Metal	Metal: aluminium cans and foil (excl. forming)	tonnes		21.280	21.280				
	Metal: mixed cans	tonnes		21.280					
	Metal: scrap metal	tonnes		21.280					
	Metal: steel cans	tonnes		21.280					
Plastic	Plastics: average plastics	tonnes		21.280					
	Plastics: average plastic film	tonnes							
	Plastics: average plastic rigid	tonnes							
	Plastics: HDPE (incl. forming)	tonnes							
	Plastics: LDPE and LLDPE (incl. forming)	tonnes							
	Plastics: PET (incl. forming)	tonnes							
	Plastics: PP (incl. forming)	tonnes							
	Plastics: PS (incl. forming)	tonnes							
	Plastics: PVC (incl. forming)	tonnes							
Paper	Paper and board: board	tonnes							
	Paper and board: mixed	tonnes							
	Paper and board: paper	tonnes			21.280	21.280	8.911	1,041.785	

Direct carbon savings

- If we assume that 70% of the food waste handled would have ended up in AD, 20% in landfill and 10% as animal feed
- 16.5 tonnes of food waste would otherwise have ended up going to Anaerobic Digestion – generating 147kg CO_2e
- 4.7 tonnes would have otherwise ended up going to landfill – generating 2,959kg CO_2e
- Total 3.1 tonnes CO_2e
- Equivalent to driving 11,320 miles in an average-sized petrol car

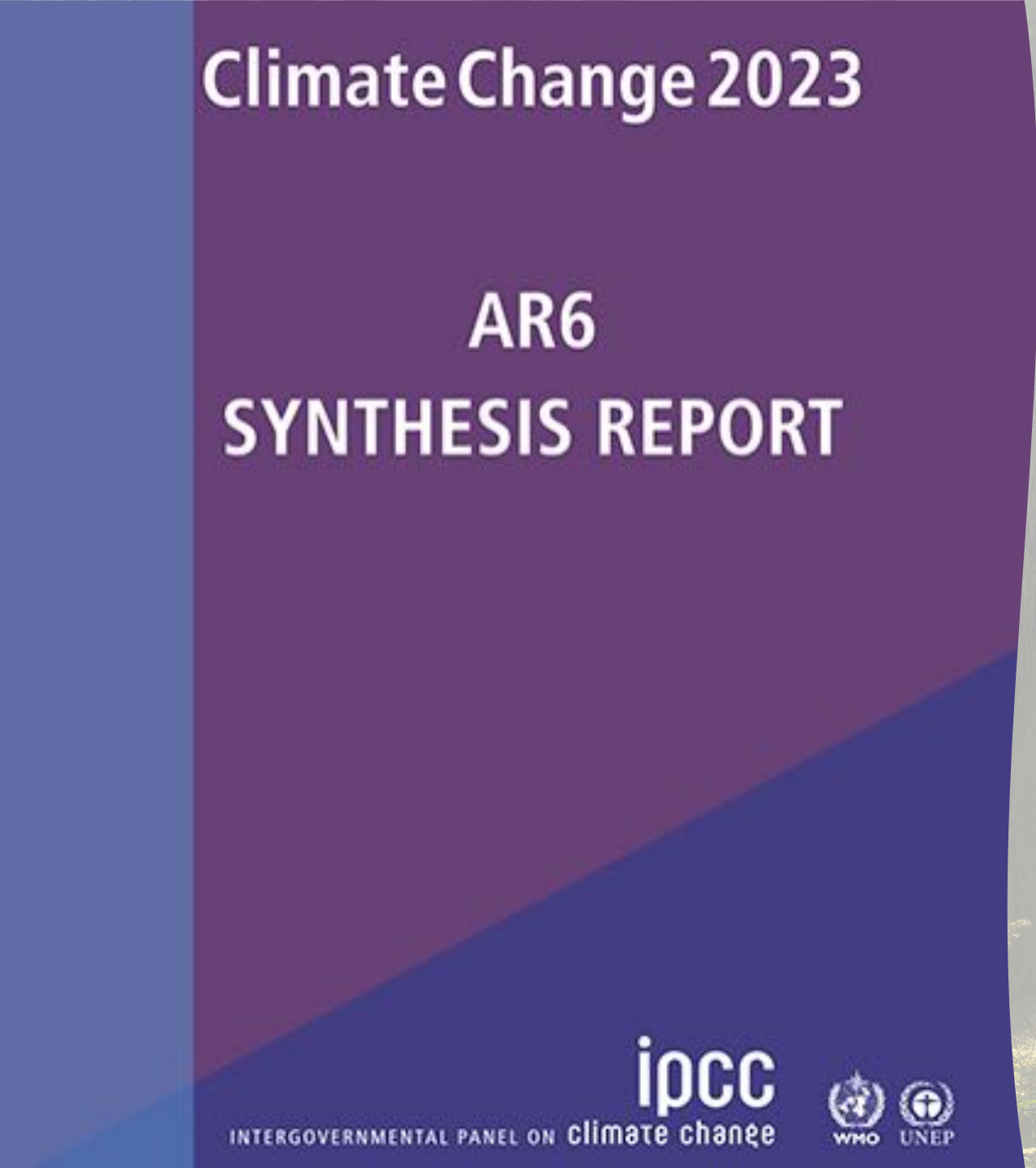
The real carbon benefits are far greater

- The food contains huge amounts of embodied carbon



- 87 tonnes CO2e for the food collected by Waste into Wellbeing (BEIS, 2022)
- We can feed animals and generate electricity in a much lower carbon way than by using food waste
- Disrupting a system that allows high carbon food to be fed to animals and generate electricity is where the biggest carbon benefits lie
- But quantifying that is for someone cleverer than me!

“We live in a time of multiple overlapping crises: we have a health emergency; we have a housing emergency; we have an inequality emergency; we have a racial injustice emergency; and we have a climate emergency, so **we’re not going to get anywhere if we try to address them one at a time. We need responses that are truly intersectional.”** (Naomi Klein)



"The solution [to the climate emergency] lies in climate resilient development. This involves **integrating measures to adapt to climate change with actions to reduce or avoid greenhouse gas emissions in ways that provide wider benefits**."

(IPCC Sixth Assessment Summary Report, March 2023)

Waste into Wellbeing

- The project is primarily climate-focused
- But it would appear to deliver some wider outcomes very well:
  - Food poverty
  - Health
  - Fuel poverty
  - Community / wellbeing

- If SLACC were solely focused on the climate emergency they would risk limiting:
  - Their supporter base – those facing any of the more immediately pressing emergencies are likely to be disinterested in supporting you
  - Their impact – the most effective action on climate also delivers wider benefits – better jobs, reductions in poverty, improvements in health & wellbeing


“Climate justice is multitasking”


Thank you
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