



**Cabot
Institute**
for the Environment

SOCIALLY JUST FUTURE CITIES

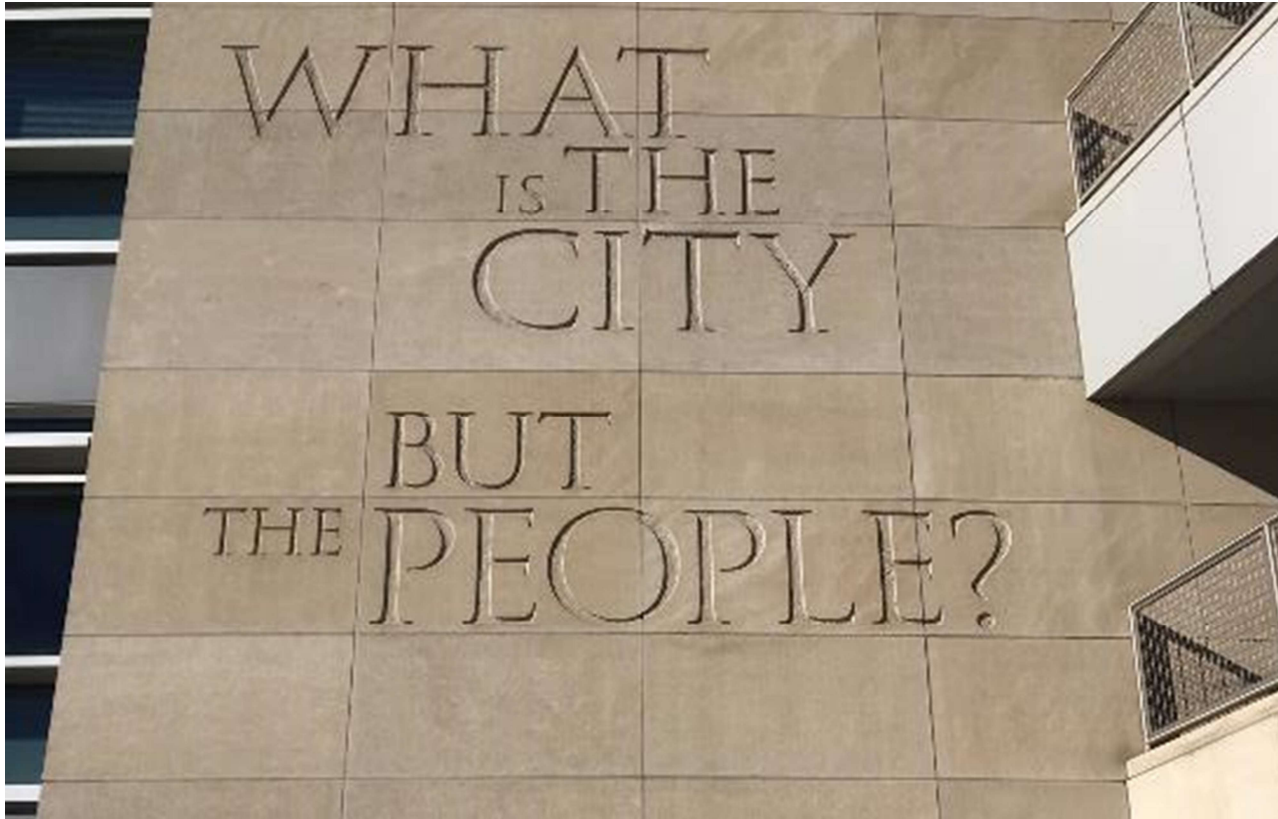
Dr Ges Rosenberg

Cabot Institute Co-Lead for City Futures

Research Fellow in Engineering Systems and Design,
Department of Mechanical Engineering website: www.esdi.ac.uk

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Asking the right questions



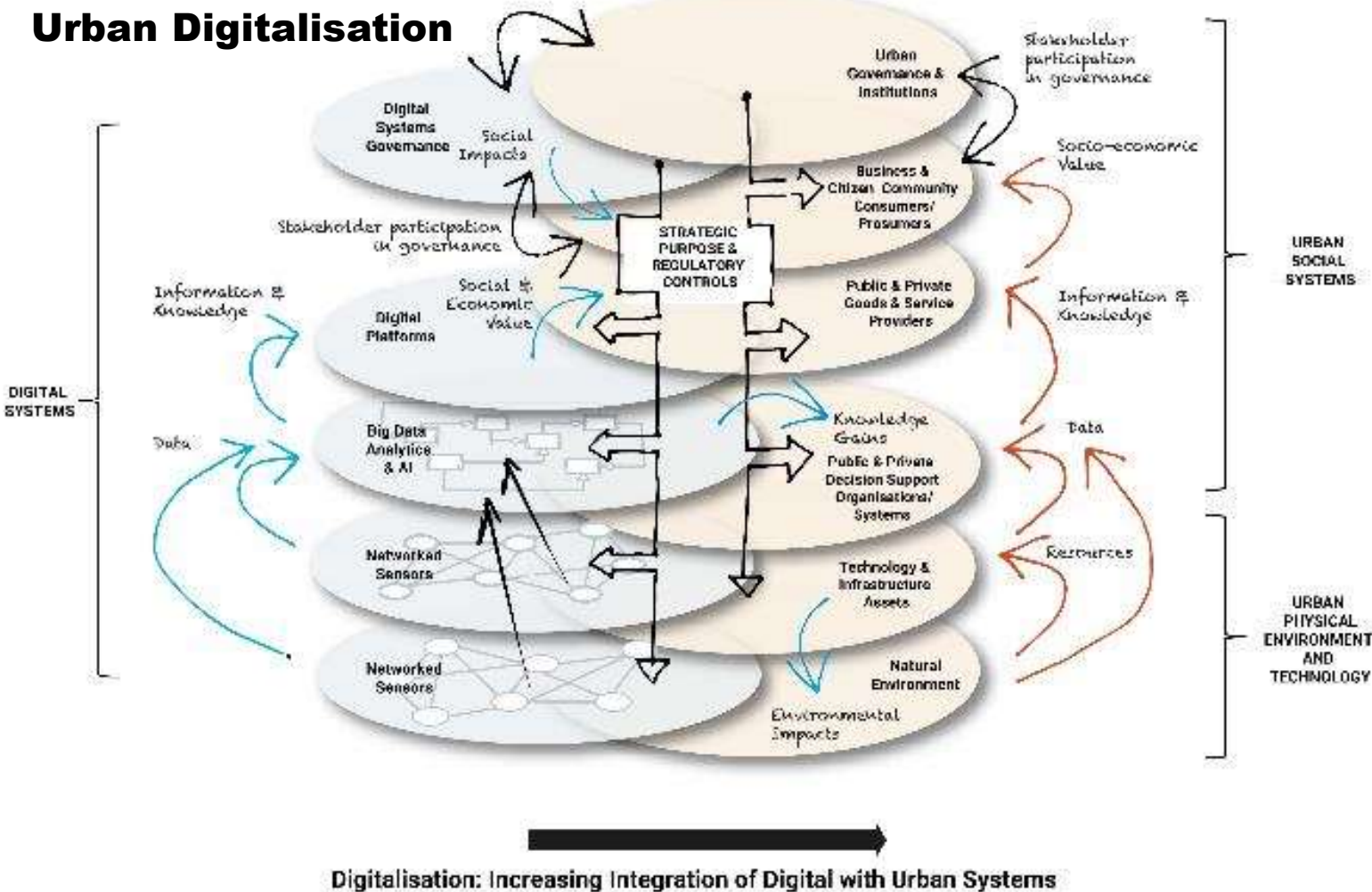
- Spanning boundaries: systems thinking
- Empowering participation: 'Co-X' (Co-laboratories, Co-production, Co-design, etc.)
- Inter/Transdisciplinary Research

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Digitalised 'Smart' Systems

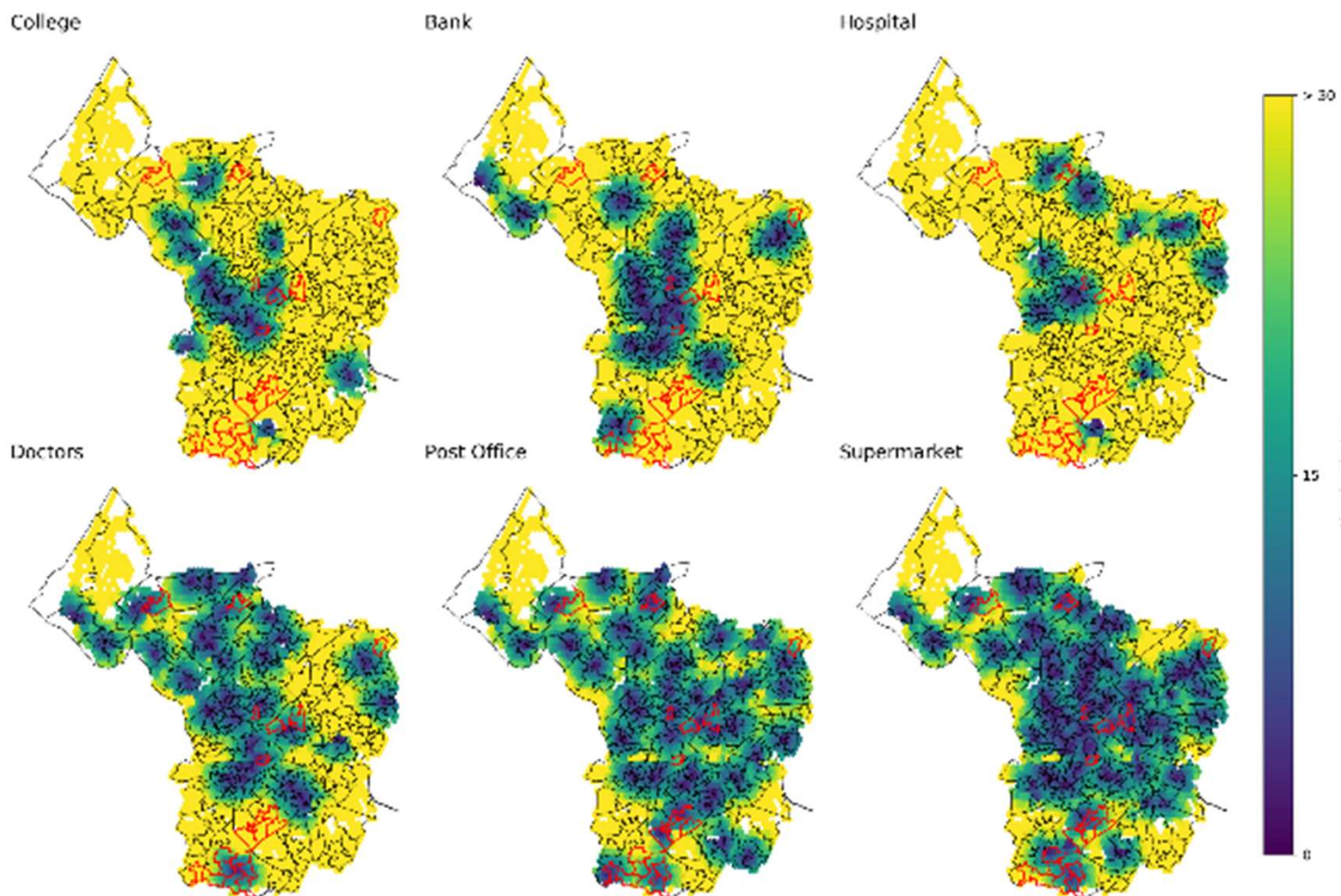
Analogue 'Intelligent' Systems

A Framework for Urban Digitalisation



- Socio-technical transition: overlaying digital on urban analogue systems
- Responsible innovation: balancing social value and distribution, biodiversity and climate change responses, and sustainable business models

How accessible are local services?

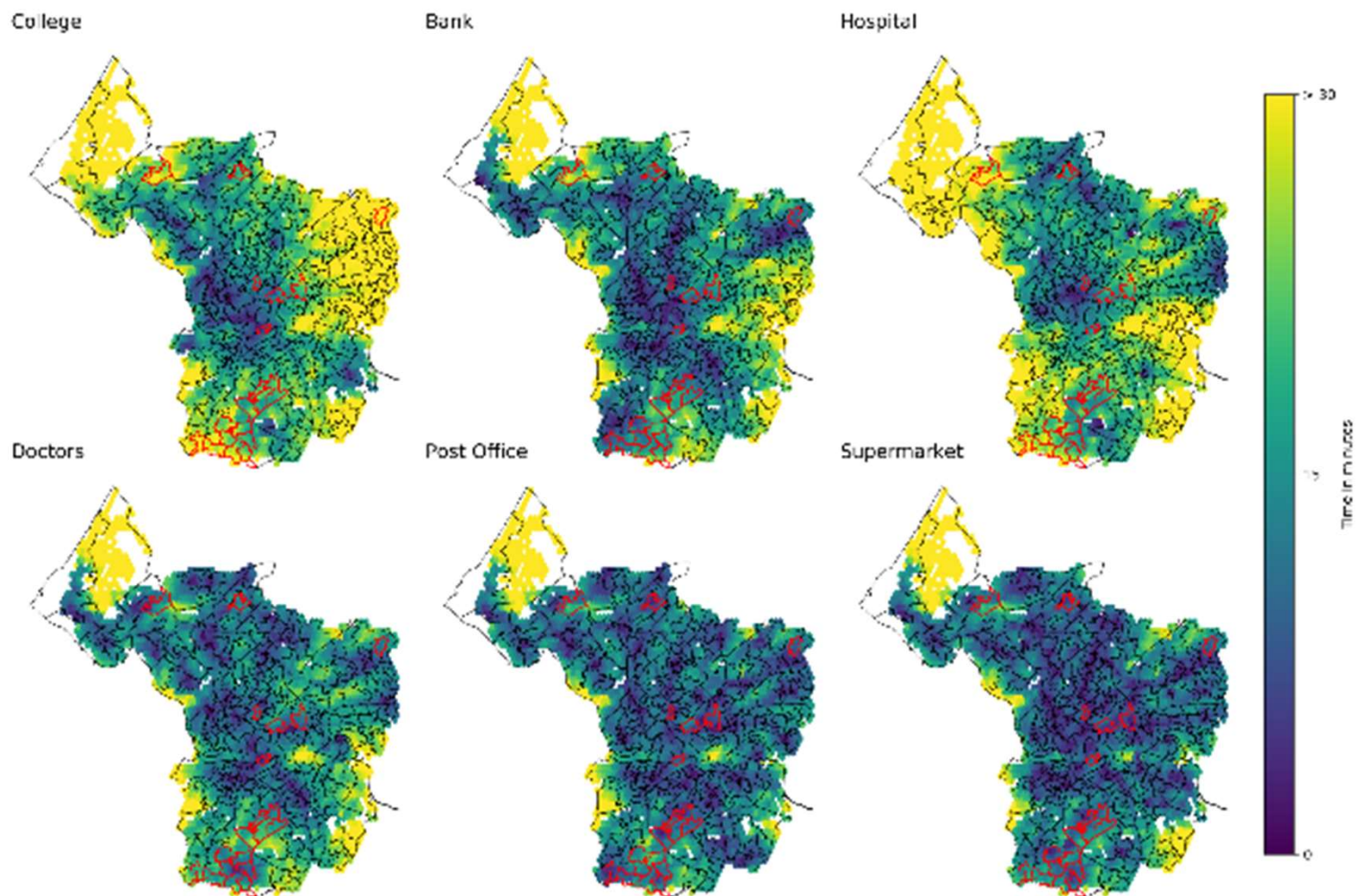


- Modelling transport mobility and accessibility
- **Pedestrian** Travel Time To Nearest Amenities in Bristol

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Bristol's 20 most deprived wards highlighted in red

How accessible are local services?

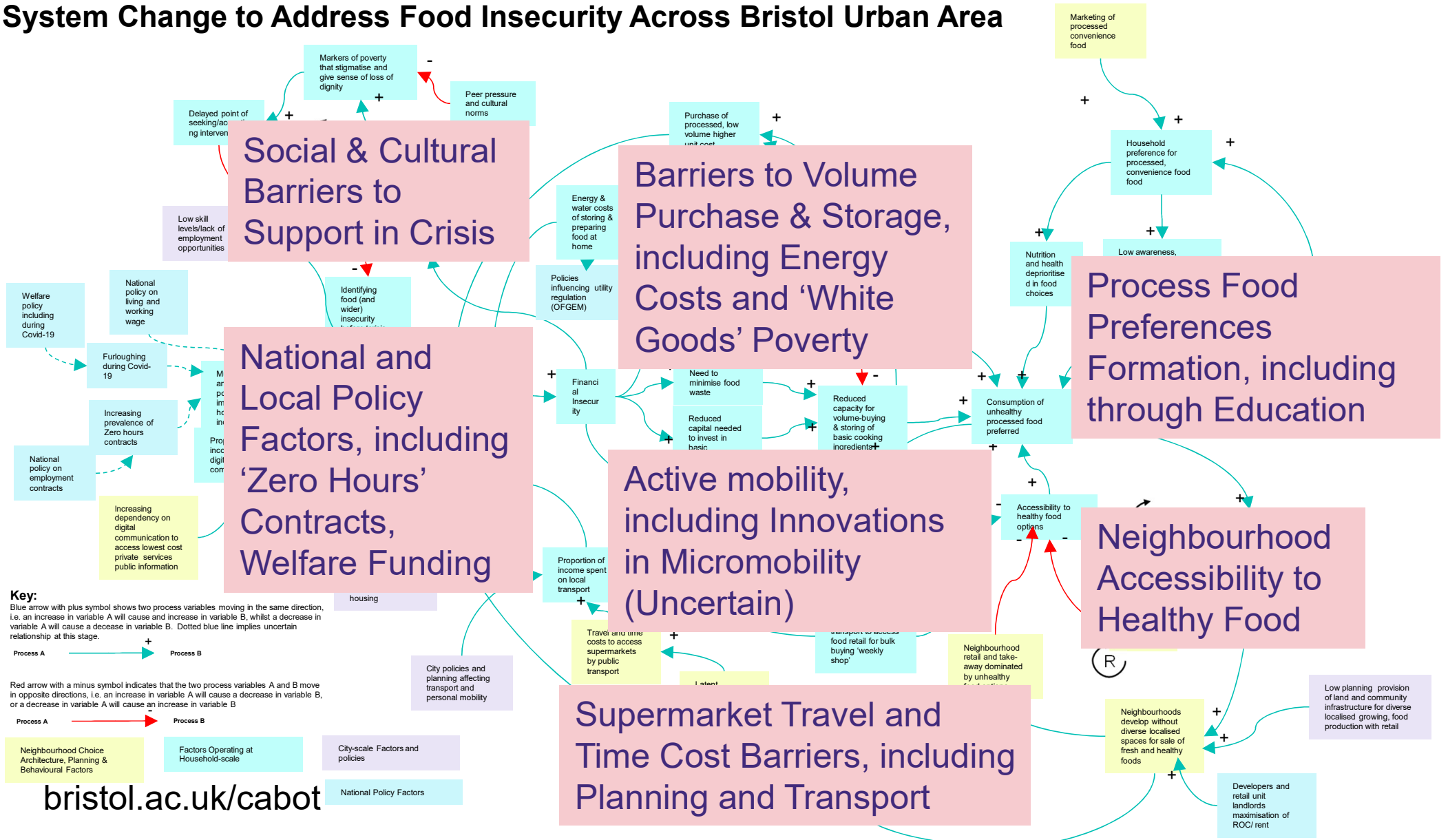


- Modelling transport mobility and accessibility
- **Pedestrian and Bus** Travel Time to Nearest Amenities in Bristol
- **Effects of innovations in micromobility?**

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Bristol's 20 most deprived wards highlighted in red

System Change to Address Food Insecurity Across Bristol Urban Area



What do we mean by City Futures?



City Futures Mapping report by Weichen Zong and Alice Quigley:

- Literature Review
- Pure system and other data sets

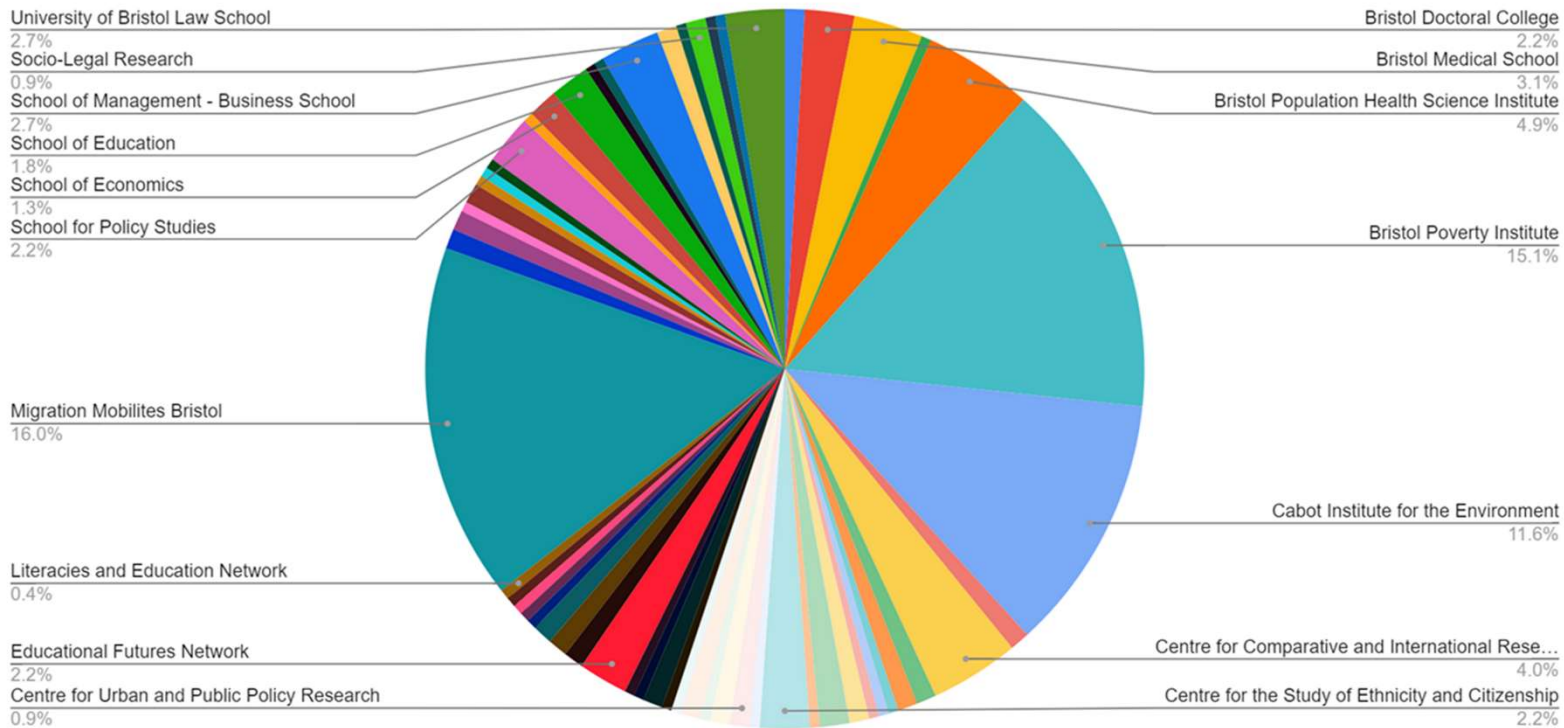
“Research to understand cities, their histories, societies, populations, governance and infrastructures, and transitions towards an inclusive, healthy, sustainable, resilient and productive city.”

Index	Topic category
C1	adaptation and resilience
C2	art and culture
C3	city futures (multiple)
C4	decarbonisation, renewables, energy efficiency, governance
C5	ecology
C6	education
C7	food production, consumption, waste
C8	health
C9	inclusive cities
C10	infrastructure (including sustainable transport, currency, construction)
C11	labour
C12	pollution
C13	smart cities
C14	society and governance
C15	sustainable urban development (including urban planning)
C16	systemic change

To ask the right questions...



Chart 1: Other research affiliations



- Open conversations across disciplines and with multiple communities
- Scaffold these conversations and generate new ideas and collaborations

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Socially Just Future Cities: Contexts

David Gordon

Director

Bristol Poverty Institute &
Townsend Centre for International Poverty Research
University of Bristol, UK

e-mail: dave.gordon@bristol.ac.uk

Socially Just Future Cities

Bristol Poverty Institute & Cabot Institute city futures theme

H1.030, Arts Complex

12th June 2024

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69p

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Prince Andrew's ex-wife agreed to meet his lawyers

Mystery of Rebekah Vardy's missing messages

Cost of living crisis: extra 1 million UK children set to go hungry

Chris Brown: Vardy live in 'luxury penthouse'

Barbie: 'I'm not a doll'

Barbie: 'I'm not a doll'

Barbie: 'I'm not a doll'

Sun **HOLDS** **£9.50**

NHS hits breaking point

OUR NHS DYING

THIRD WORLD A&E

11-hour wait for 999 ambulance

HOSPITALS JUST CAN'T COPE

THE CRISIS WORST FOR TEN YEARS

Helping blunder led to melt

£98bn NHS BUDGET BUT...

DAILY EXPRESS

Most inspiring Fast Diet success stories ever

Helping blunder led to melt

11-hour wait for 999 ambulance

Helping blunder led to melt

More changes to global environment as multilateral cooperation between all nations that's why taking the world's top newspaper with more than 30 newspapers and media organizations' news pages from 2019 to present a common view about what needs to be done to stop global warming and the most serious of them: climate change becomes irreversible.

It's time to act

The Guardian

Tory councils warn Sunak on stark risk of bankruptcy

I know Rishi's financial situation

Green ferry in diesel crisis

Salmond's chip of destiny

12 PAGES OF PUZZLES

Sunday Mail

GET YOUR FREE INSIDE

70p A DAY

Scandal of hungry kids forced into care

Green ferry in diesel crisis

Salmond's chip of destiny

DAILY Mirror

Al-Fayed dies at 94

GOVERNMENT OF FAILURE

Thousands of children now told they can't go back to school because buildings are falling down. Can't the Tories get ANYTHING right?

WHAT A MESS

Discover the power to lower prices on page 2.

Mirror

THANKS FOR NOTHING

THE TIMES

Cost of living surges: and Sunak squeezes poorest

The Daily Telegraph

'The biggest fall in living standards on record'

Biggest fall in living standards since 1950s

DAILY EXPRESS

THE FORGOTTEN MILLIONS SAY:

WHAT ABOUT IT?

Daily Mail

What Rishi's Spring Statement means for your family finances

THE TIMES

Burns century sets Ashes alight

No river safe for bathing

Britain's best gardens to visit this summer

Eat!

Estimated Deprivation & Hunger in Bristol: September 2022

constituency	Missed a payment on a household bill	Cut back on the amount of hot water, heating or electricity that me or my household use	Cut back on food spending	Missed meals or gone without food
Bristol East	10	56	52	14
Bristol North West	9	57	45	13
Bristol South	9	54	48	16
Bristol West	11	50	43	13
Bristol Average	10	54	47	14

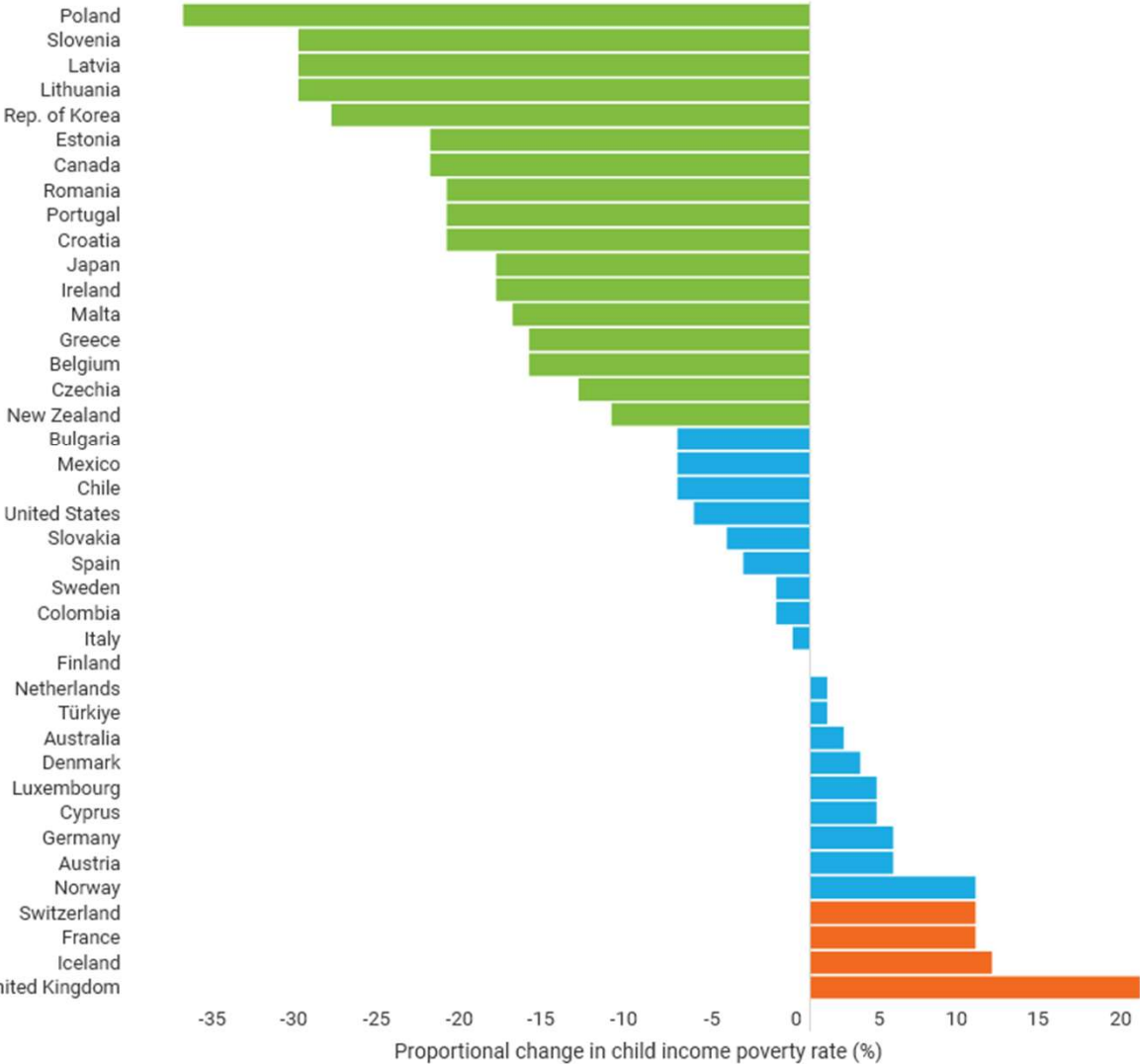
The Bristol Quality of Life Survey (2023/24) found that;

- 34% reduced spending on other essentials due to high energy prices
- 31% were worried about being able to keep their homes warm in winter
- 13% money problems stopped them getting involved with their community
- 9% financial circumstances prevents them from leaving their home
- 8% suffered from moderate/severe food insecurity in 2022/23 and in 2023/24

Opinium conducted a poll of 10,495 GB adults from 26-30 September 2022 designed to be representative of the national population - https://www.opinium.org.uk/sites/default/files/MRP_Tables.xlsx
 Bristol Quality of Life Survey 2023/24 (3,928 Bristol respondents) <https://www.bristol.gov.uk/council-and-mayor/statistics-census-information/quality-of-life-in-bristol>

Change in child income poverty rates

Percentage of reductions and increases in child income poverty rates in 39 countries, 2014–2021.



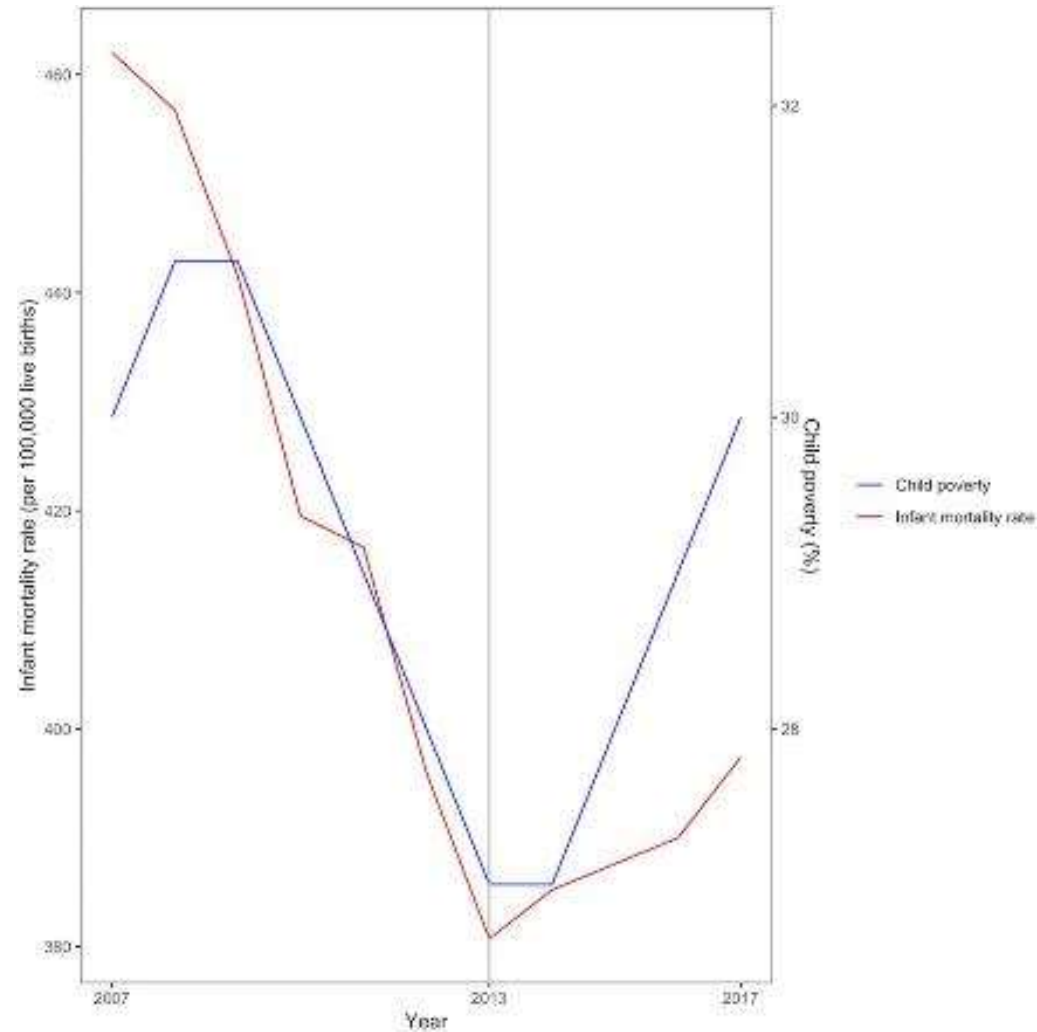
“I am very proud of the record of this Government and previous Conservative-led Governments over the past decade of significantly reducing the number of people living in poverty and reducing income inequality.”

Rishi Sunak (17th May 2022)

<https://hansard.parliament.uk/Commons/2022-05-17/debates/208CFEE9-63DC-4B83-A0DD-36AFA3C2EDD9/ReducingEconomicInequality>



Change in Infant Mortality and Child Poverty in England, 2007 to 2017



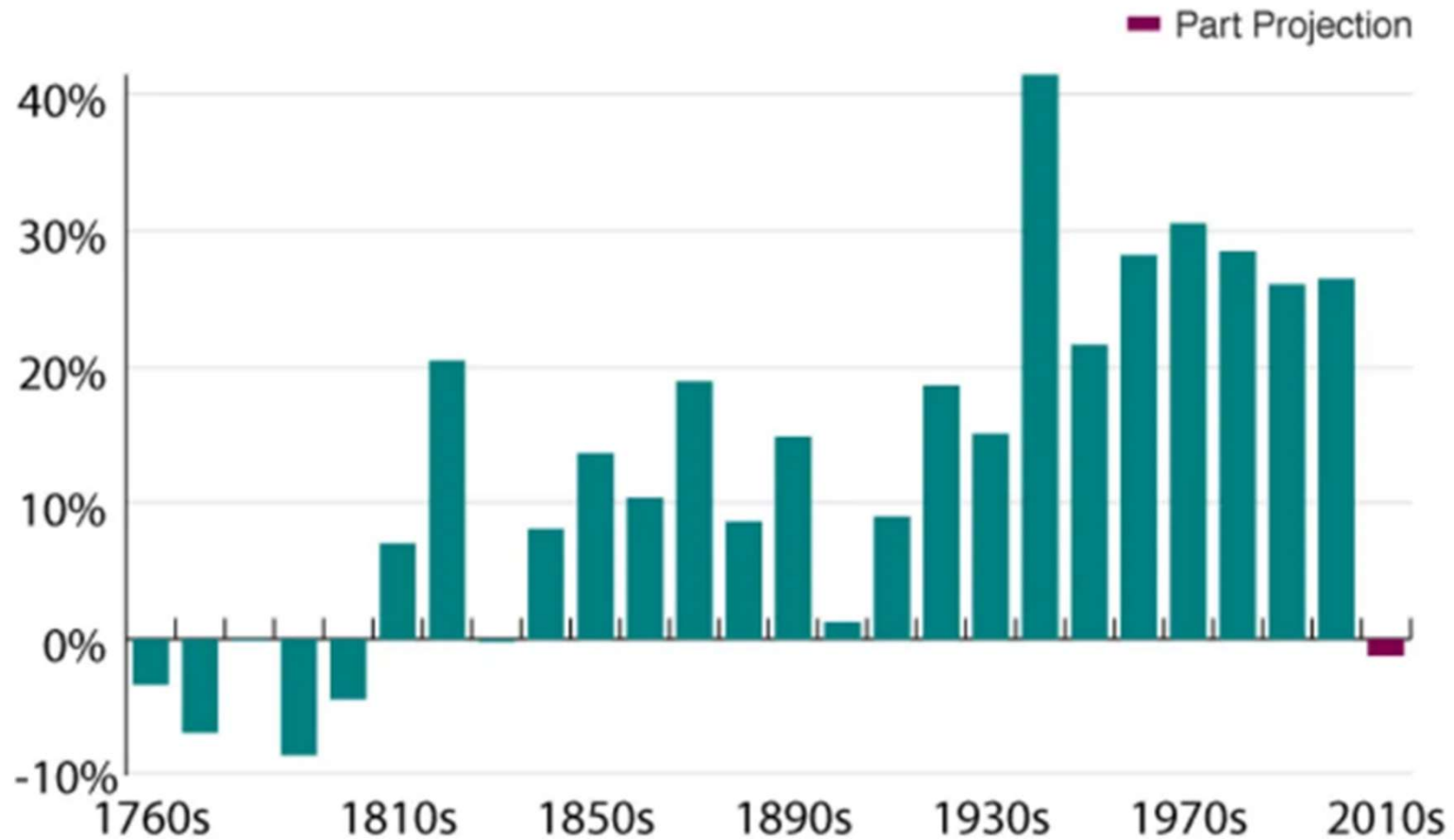
“The unprecedented rise in infant mortality in England has disproportionately affected the poorest areas of the country, leaving the more affluent areas unaffected.”

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Taylor-Robinson et al (2019) Assessing the impact of rising child poverty on the unprecedented rise in infant mortality in England, 2000–2017. *BMJ Open* ;9:e029424. doi: 10.1136/bmjopen-2019-029424

Earnings Growth in 2010s was the lowest since the Napoleonic Wars

Earnings growth between decades



*Inflation adjusted

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Source: Resolution Foundation analysis of ONS, OBR & Bank of England data

BBC

The £540 Billion Pound UK Austerity Spending Cuts: 2010-2019

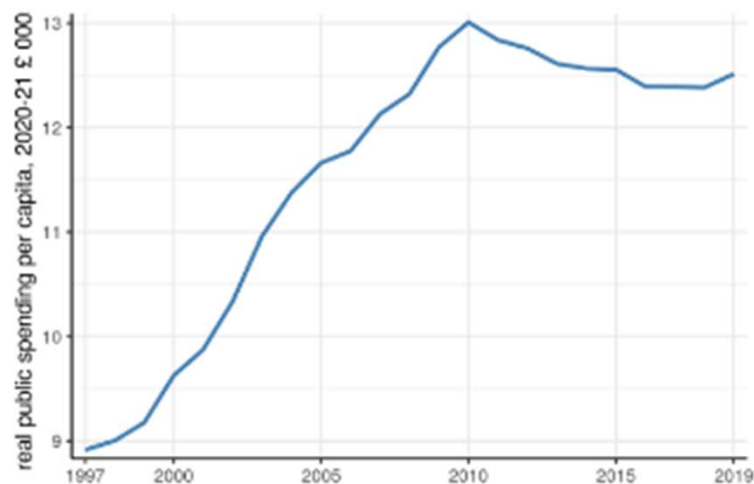


Figure 3. Government current spending per person, £000s in 2020-21 prices.

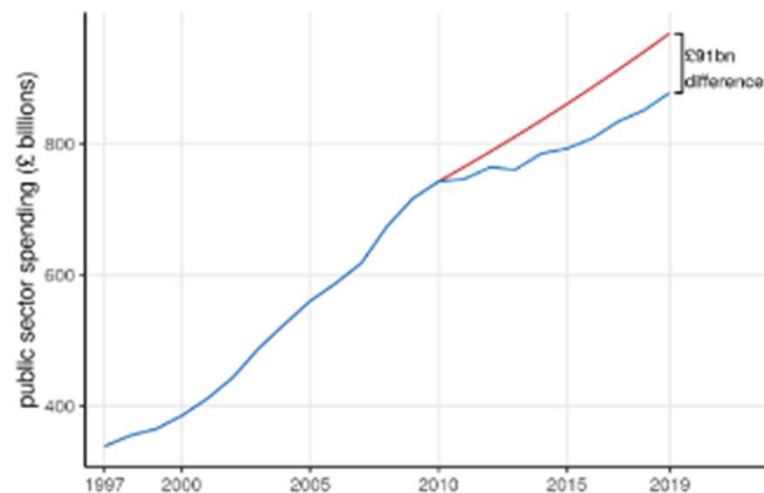
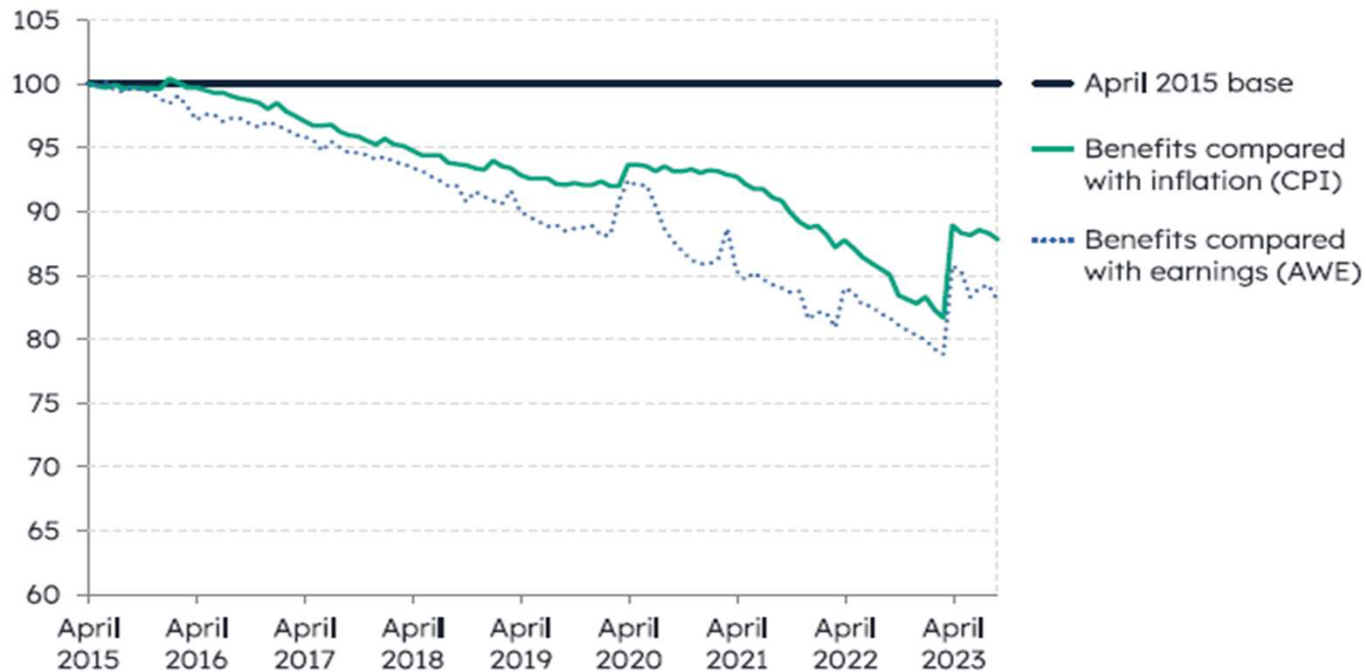


Figure 13: Public sector spending counterfactual (actual in blue; 3% growth balanced budget scenario in red).

The cost of austerity spending cuts in public spending growth, came to **£91bn** of lost public expenditure in the final year of the austerity programme, or **£540bn** over 2010-19.

Between April 2015 (the last year before the benefits freeze) and the start of the Covid-19 pandemic, the value of benefits consistently declined. Although it increased when inflation and earnings fell at the start of the pandemic and the benefits freeze ended in 2020, it remains below pre-pandemic levels

Ratio of benefits to earnings or inflation



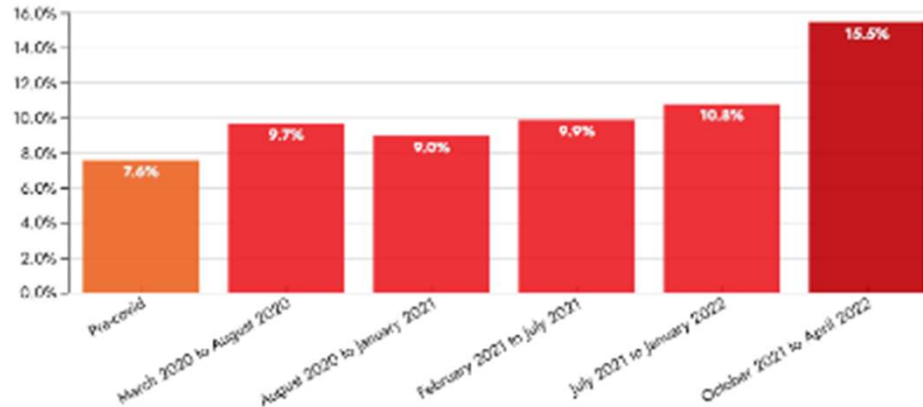
Source: DWP abstract of statistics and ONS inflation and wage data

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Source: *UK Poverty 2024*, Joseph Rowntree Foundation. <https://www.jrf.org.uk/uk-poverty-2024-the-essential-guide-to-understanding-poverty-in-the-uk>

Food Insecurity in the UK has doubled since 2018

Percentage of households experiencing food insecurity*:



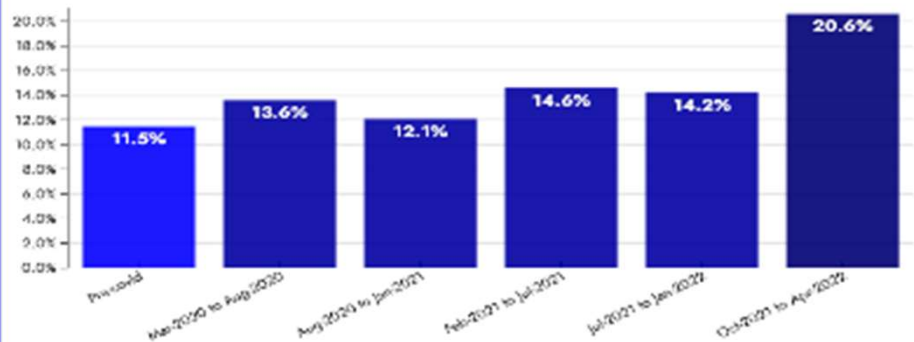
*Food insecurity during the pandemic [6-month recall period] compared with pre-Covid [12-month recall period].
Pre-covid source: Food Standards Agency, Food and You Survey 2018. Re-analysed to allow direct comparison.



In January 2024, 15% of households experienced Food Insecurity

1 in 5 households with children have experienced food insecurity in the past six months

Percentage of households with children experiencing food insecurity*:



*6-month recall period.
Pre-covid source: Food Standards Agency, Food and You Survey 2018. Re-analysed to allow direct comparison.

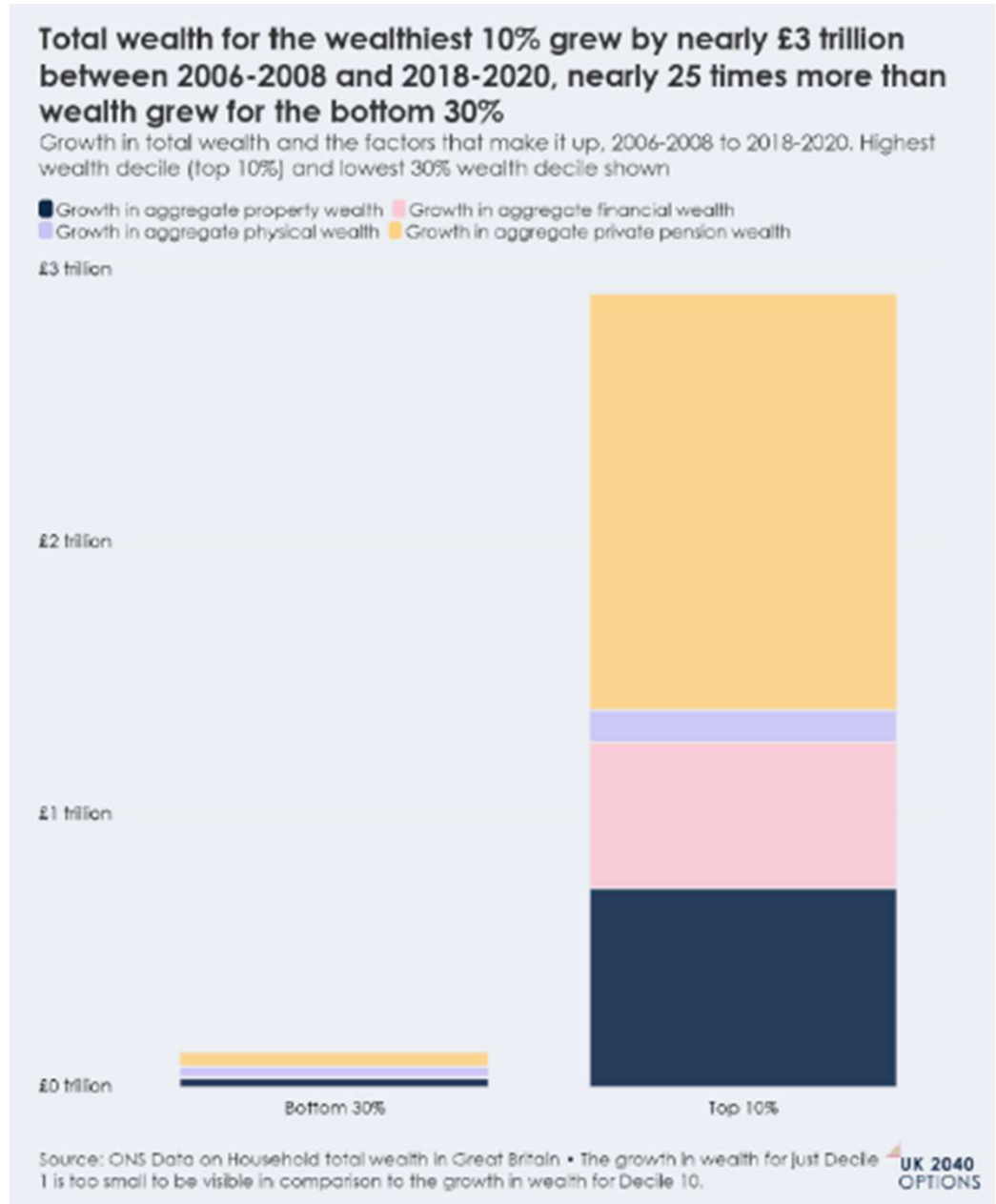


In January 2024, 20% of households with children experienced Food Insecurity

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<https://foodfoundation.org.uk/initiatives/food-insecurity-tracking#tabs/Round->

The Growth of Wealth Inequality in the UK: 2006/08 to 2018/20

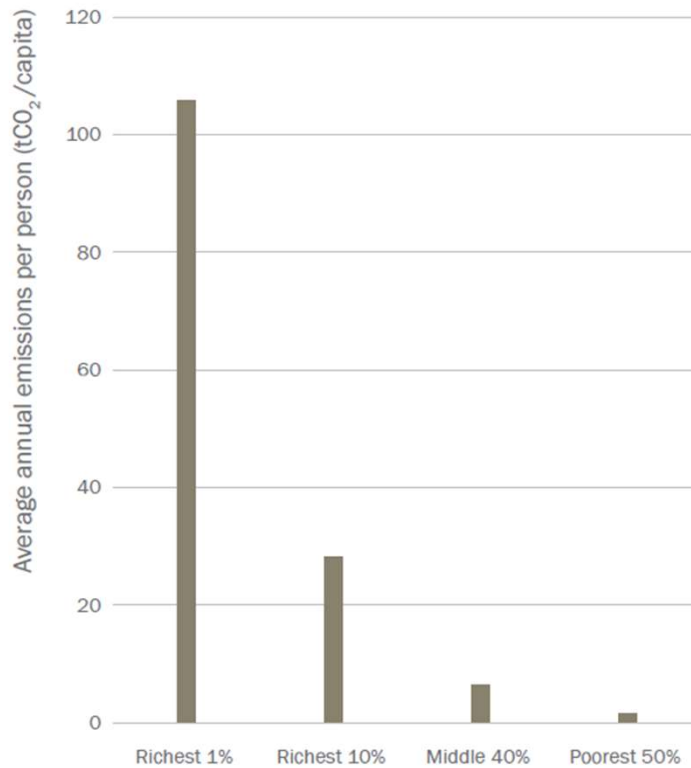


The Problem of Riches

“what thoughtful rich people call the problem of poverty, thoughtful poor people call with equal justice a problem of riches”

Tawney, R. (1913, p10) *Poverty as an industrial problem*, inaugural lecture, reproduced in *Memoranda on the Problems of Poverty*, London: William Morris Press.

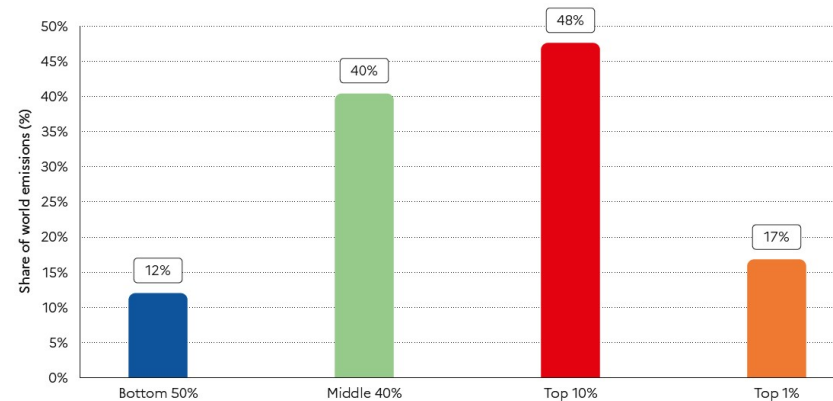
Distribution of Global Household Carbon Emissions



Source: WIL 2022.

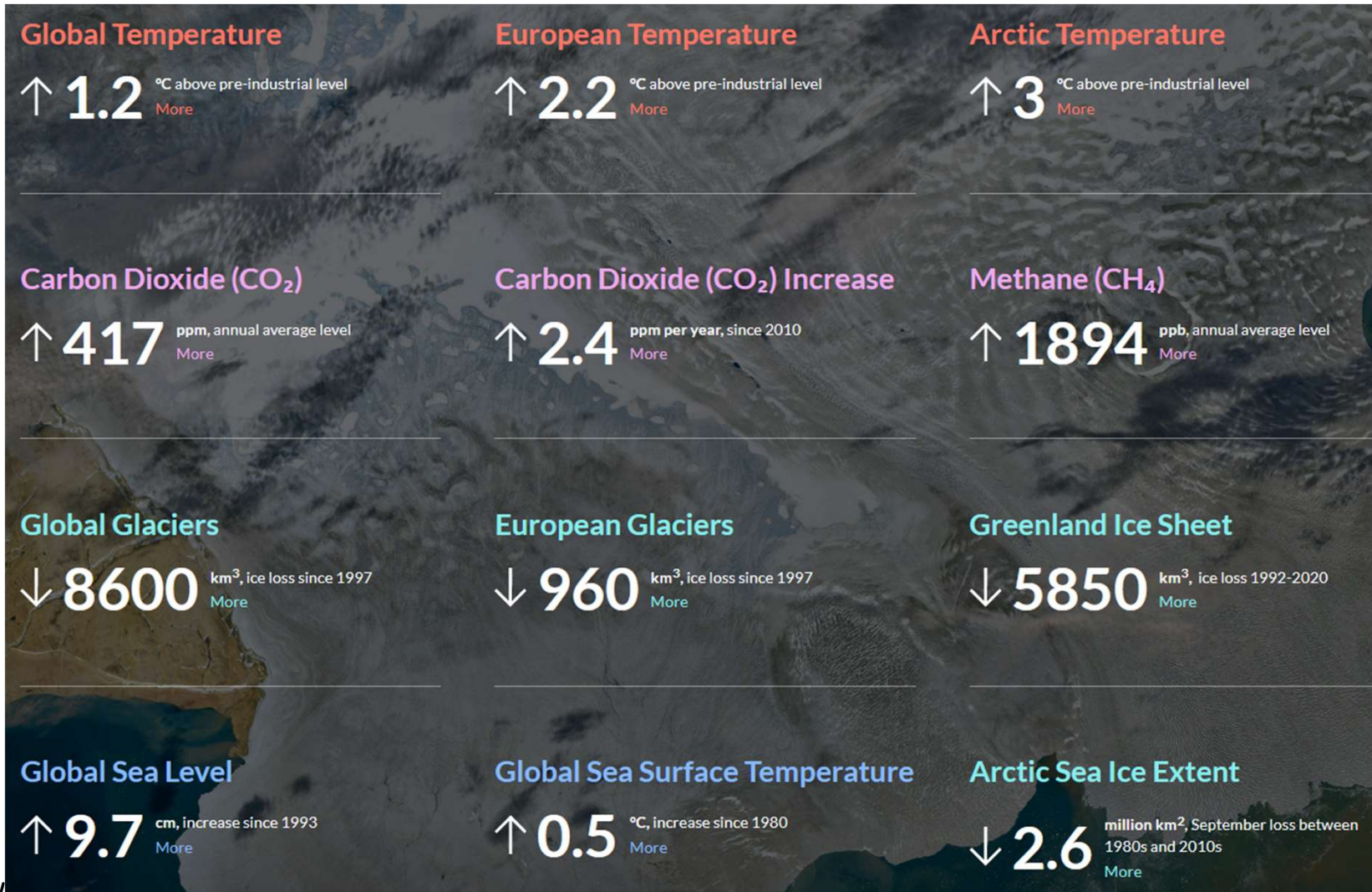
Notes: Per capita carbon footprints include emissions from domestic consumption, public and private investments, and new imports of carbon embedded in goods and services from the rest of the world.

The richest **80 million** people (Top 1%) produce more household carbon emission than the poorest **4 billion** people (Bottom 50%)



Interpretation: Personal carbon footprints include emissions from domestic consumption, public and private investments as well as imports and exports of carbon embedded in goods and services traded with the rest of the world. Modeled estimates based on the systematic combination of tax data, household surveys and input-output tables. Emissions split equally within households. **Sources and series:** wir2022.wid.world/methodology and Chancel (2021).

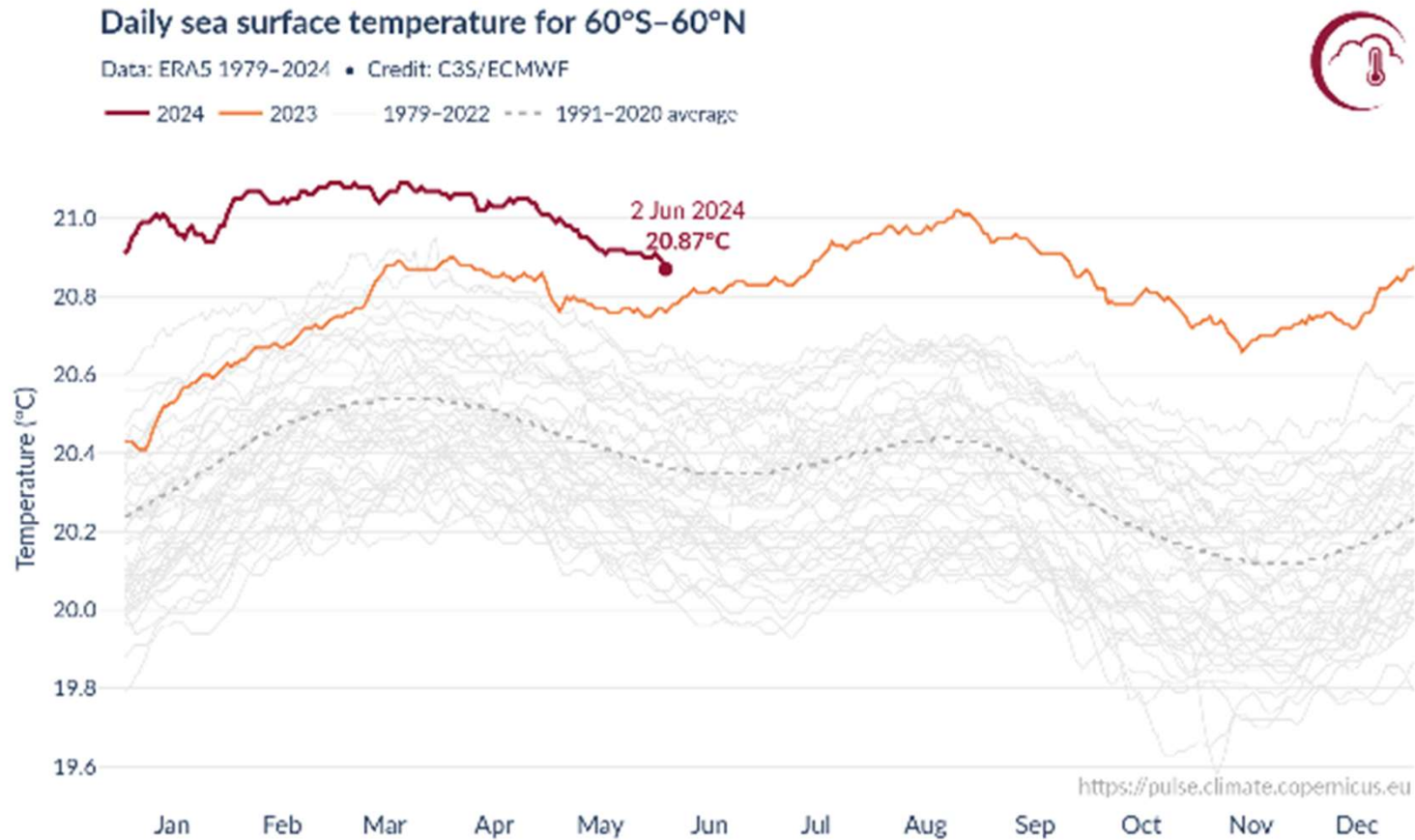
Key Climate Indicators 2024



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Source: <https://climate.copernicus.eu/climate-indicators>

The Sea Surface Temperature in January 2024 was 1.52°C above the 1850-1900 pre-industrial average



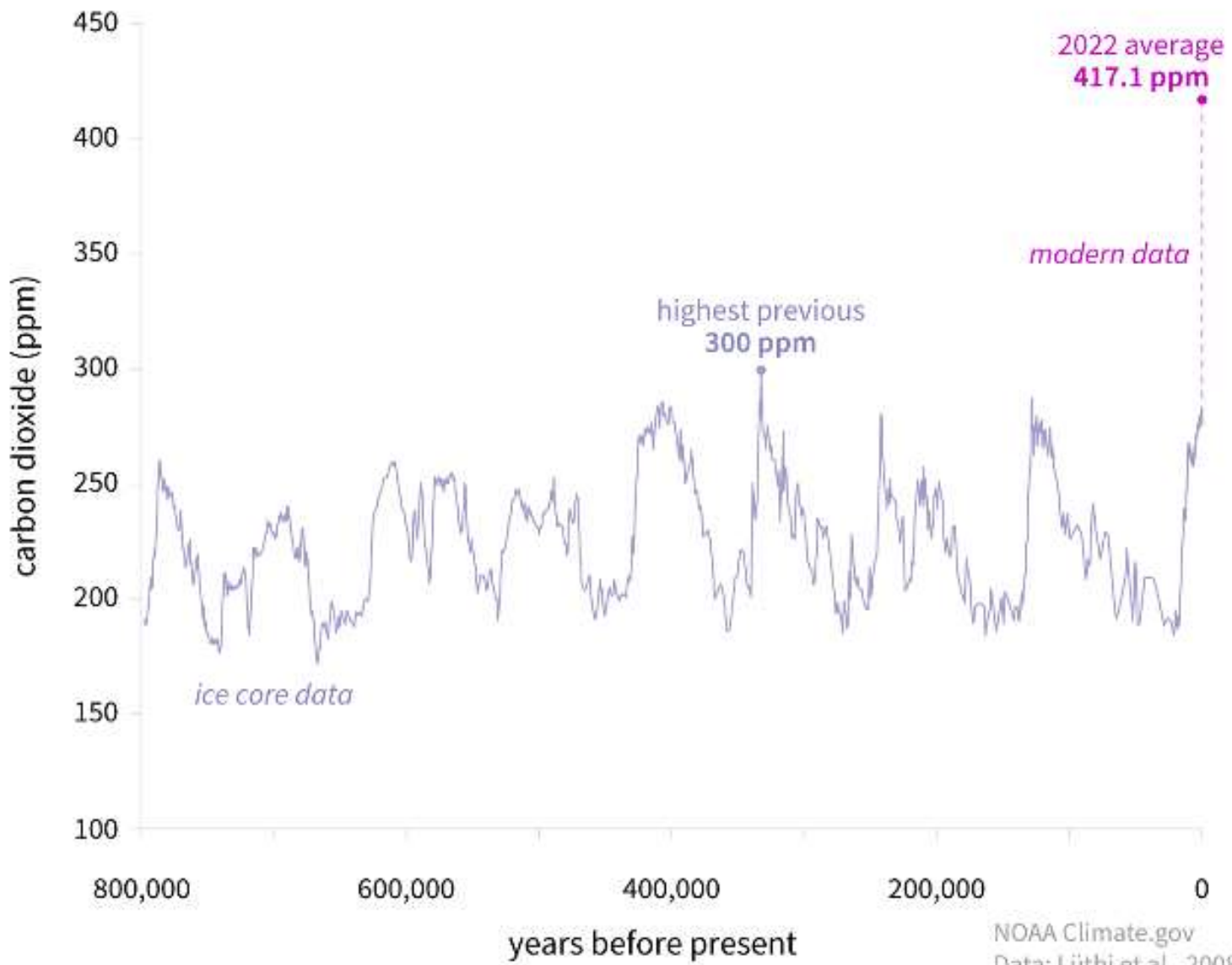
PROGRAMME OF
THE EUROPEAN UNION



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<https://pulse.climate.copernicus.eu/>

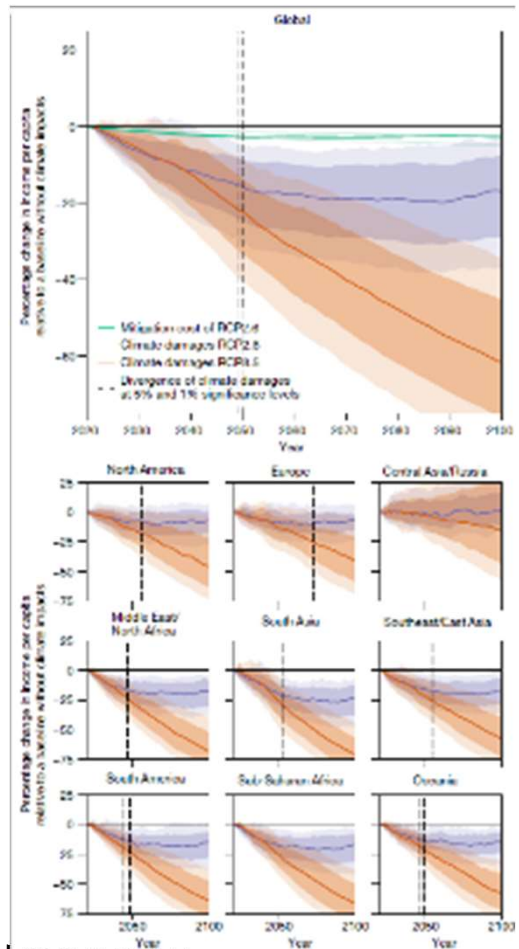
CARBON DIOXIDE OVER 800,000 YEARS



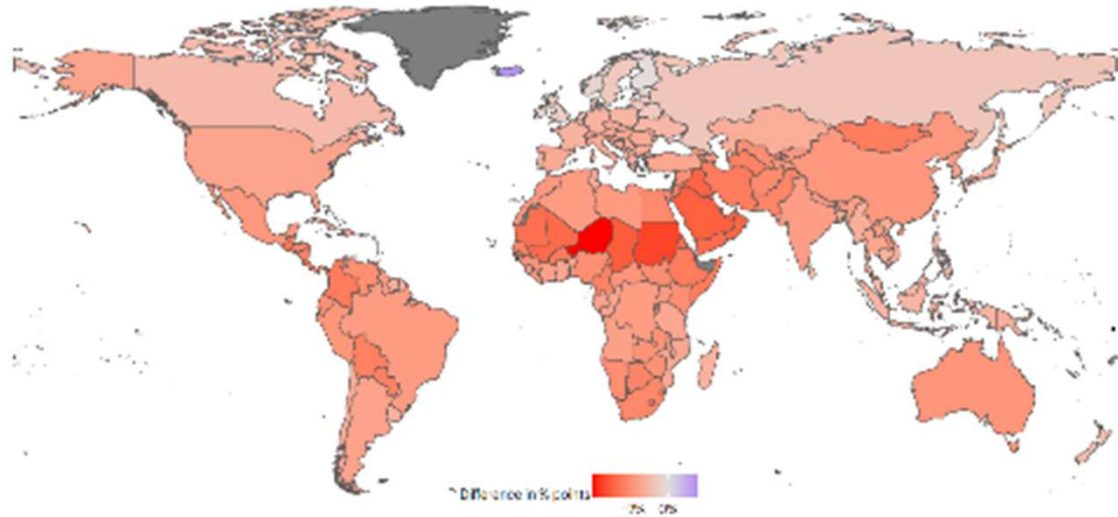
bristol.ac.uk

NOAA Climate.gov
Data: Lüthi et al., 2008

Estimated reduction in income per capita due to Climate Change



Estimated reduction in GDP from + 3^o C global warming



Sources:

Kotz et al (2024) The economic commitment of climate change. *Nature* 628, 551–557

Waidelich et al (2024) Climate damage projections beyond annual temperature. *Nature Climate Change*

<https://doi.org/10.1038/s41558-024-01990-8>

Justice and Fairness?



If the misery of our poor be caused not by the laws of nature, but by our institutions, great is our sin.

– Charles Darwin, 1845

Dr Anna Le Gouais Research Fellow & Researcher-in-Residence

Tackling Root causes Upstream of
Unhealthy Urban Development

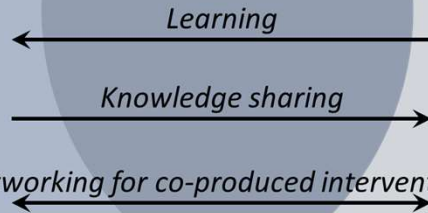


Population
Health
Sciences

Academic
research

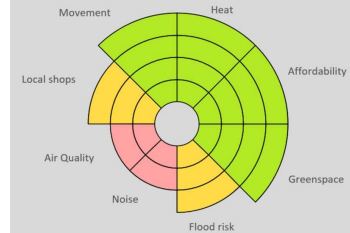
Researcher-
in-Residence

Local
government
practice

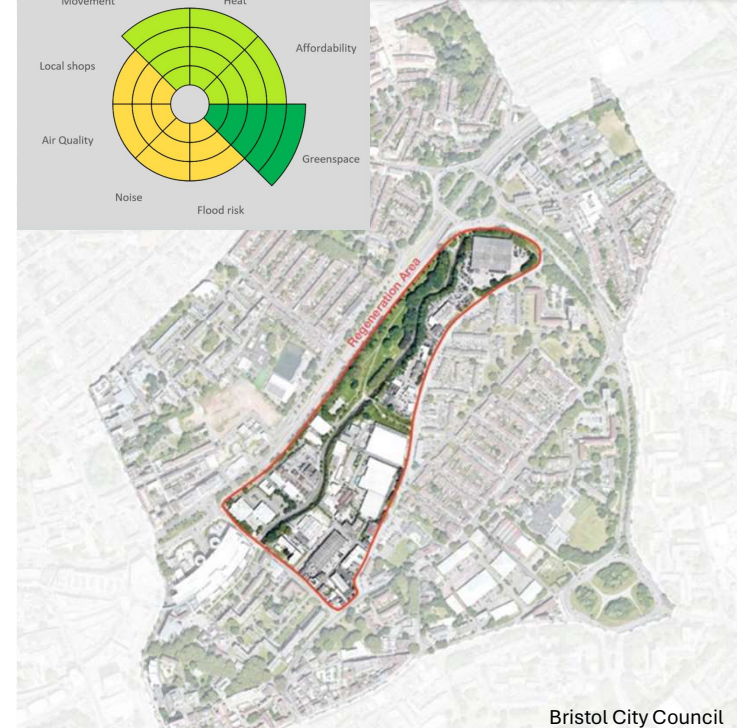
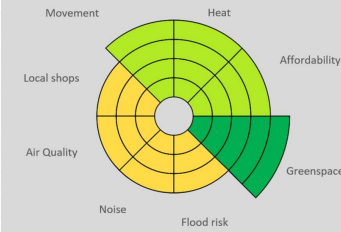


Regeneration
Planning Policy
Public Health

Scenario 2: Enhanced Housing



Scenario 4: Climate Resilient



Bristol City Council



Fatima Lopez Castellanos

*Lecturer in Sustainability and
Operations (Education focused)*

UoB Business School.

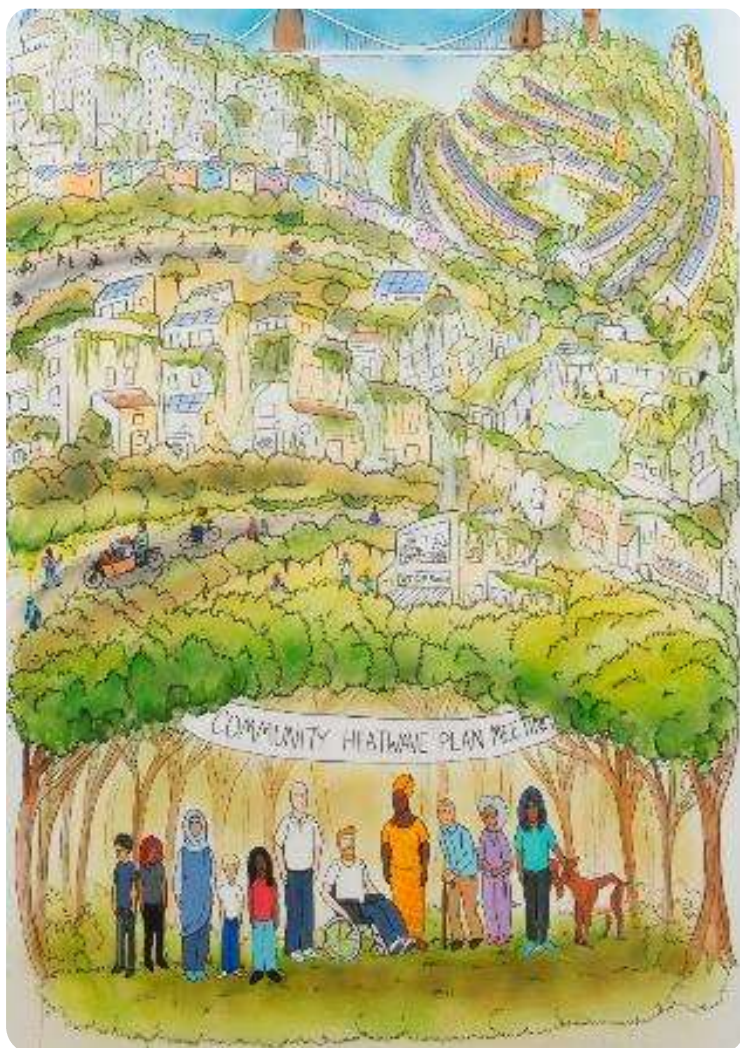
Fatima.lopezcastellanos@bristol.ac.uk

Research interests:

- Adoption of initiatives for sustainability in organisations and their supply chains: capabilities? Challenges? Latin America perspective.

- Circular economy: issues & barriers for transitioning, scalability from the perspective of the supply chain.

- Lessons to be shared with students in the classroom, how does interdisciplinarity inform education on these topics.



Dr Alix Dietzel

Senior Lecturer in Climate Justice (SPAIS)

Associate Director for Impact and Innovation at the Cabot Institute

Expertise – climate change governance, climate change politics/policy, just transition, decision making, qualitative research

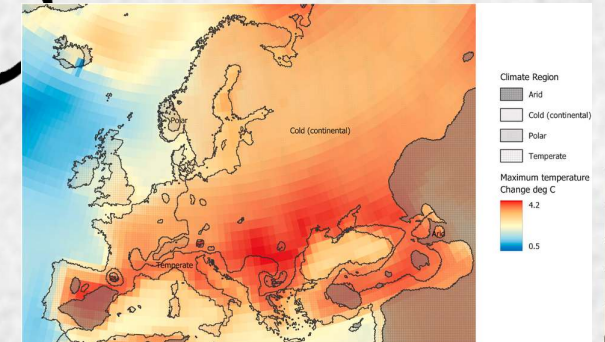
Focus areas

- Decision making at the local and global levels
- EDI issues in the environment sector in the UK
- Bristol policies and activities/organizations focusing on just transition
- Just transition negotiations at the UNFCCC

Dr Lin Zhang (Research Associate, School of Geographical Sciences)



GEOGRAPHY



(Taylor et al., 2023)

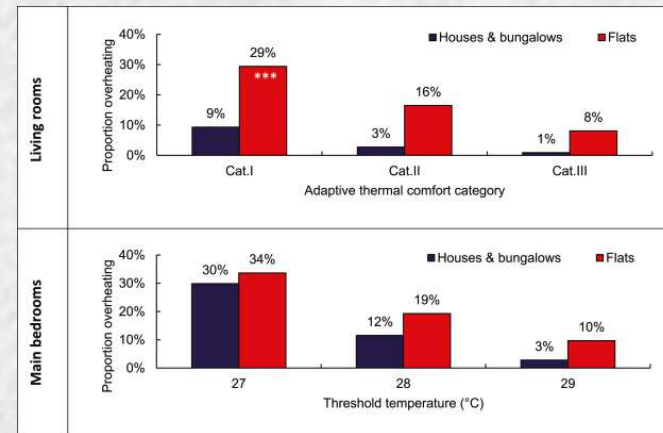
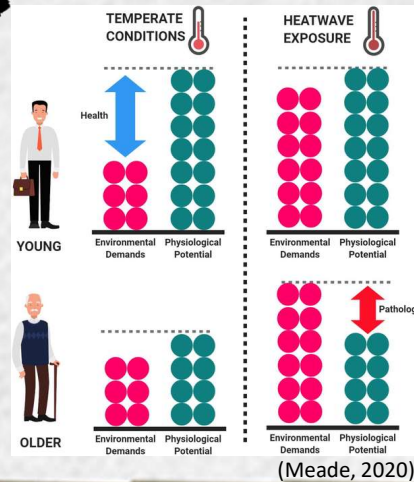


- 'Energy Poverty': people have difficulties in accessing sufficient energy services to live a decent life. I measured and analyzed 'energy poverty' in Chinese context during my PhD.

- Now, working on Mapping Ambient Vulnerabilities Project led by Dr. Caitlin Robinson.

PEOPLE

- Focusing on summer overheating problem under climate change environment and its potential vulnerability causes.



(Lomas and Drury, 2024)

ENERGY

Email: lin.zhang@bristol.ac.uk

Twitter: @LinZhang55



Caroline Bird

Currently based in Engineering / Computer Science although I have moved around the University a bit...

Range of current research interests:

- Digital environmental impacts and effects of individual behaviours / practice
- Net zero and city decarbonisation: Bristol City Leap and Social Value; and the potential implementation of the Bristol Just Transition Declaration
- Ambition Lawrence Weston and future green skills – potential and barriers





Bristol Poverty Institute – Seedcorn Fund

- Our 2024 applications window is now closed
- **SAVE THE DATE** - Our 2025 Seedcorn Fund will be launched in September 2024 at our Showcase and Launch event: **Wednesday 25th September 2024, 2pm – 4pm (Venue TBC)**
- Fund Details:
 - Fund designed to explore emerging research areas
 - Awards of around £3000 - £6000 per project
 - Projects must be poverty and social justice relevant
 - Projects must be interdisciplinary
 - Contact: joe.jezewski@bristol.ac.uk

bristol.ac.uk/poverty-institute  [@bristolpoverty](https://twitter.com/bristolpoverty)



Seedcorn Fund 2024



- Just over £40k available for the call
- Up to £7k per project
- Supporting new interdisciplinary research ideas
- Two main eligibility criteria
 - projects must be in the Cabot remit
 - Bring together UoB researchers across disciplines or involve non-academic partners
- Open to any UoB researcher who is a member of academic staff
- Closing date – 4pm, Wednesday 24 July



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Cabot Community Event funding



- Up to £1k to run interdisciplinary meeting, workshop or event
- Events must:
 - Bring people together to focus on interdisciplinary environmental topic
 - Be open to all researchers across the University, including PGRs
 - Align with the Cabot mission to provide the evidence, education and solutions that protect our environment and identify ways to live better with our changing planet
- The Cabot team can provide support to:
 - Book a room
 - Manage registrations
 - Advertise the event
 - Order catering
 - Support on the day
- Closing date – 4pm, Wednesday 10 July

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Feedback



Please complete this short feedback form to let us know what you thought of the event

www.menti.com and enter 6900 4305



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