Preliminary analysis of City Climate Plans: Case studies of UK cities and next steps

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Aim and objectives

Conduct a preliminary analysis of the integration of the SDGs in the climate action plans of urban areas in the UK

- To identify whether city-level climate actions consider sustainable development of cities

- To explore the alignment of UK cities' climate actions and plans with SDGs

UK Local Authority background

SUSTAINABLE DEVELOPMENT GOALS

DE MONTFORT UNIVERSITY LEICESTER

Country (principal authorities)

United Kingdom
- 353 in England
- 22 in Wales
- 32 in Scotland
- 11 in Northern Ireland

England (urban and rural authorities)

URBAN
- 125 single-tier authorities
- 16% geographical area
- 53% population

RURAL
- 228 two-tier authorities
- 84% geographical area
- 47% population

Local level

56 Unitary Councils

36 Metropolitan Borough Councils

33 London Borough Councils

27 County Councils

201 District Councils

Education
Highways
Transport planning
Passenger transport
Libraries
Social care
Housing
Leisure and recreation
Environmental health
Waste collection
Waste disposal
Planning application
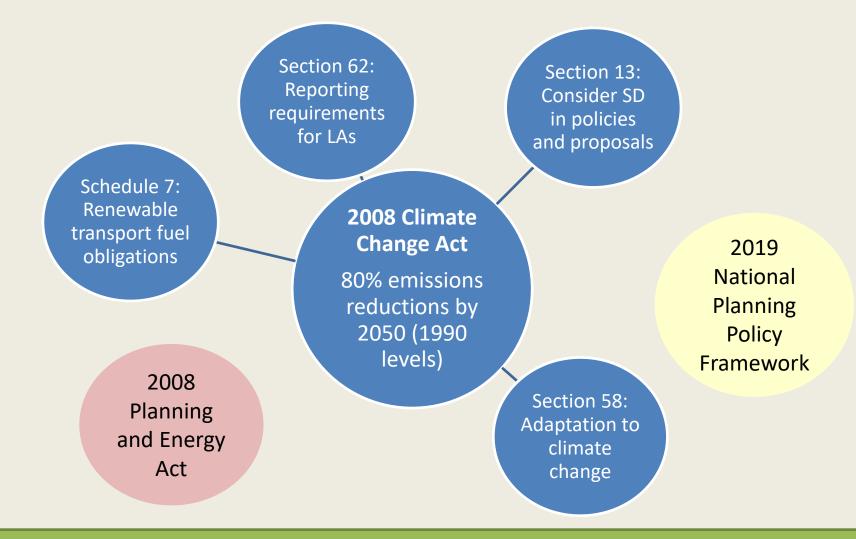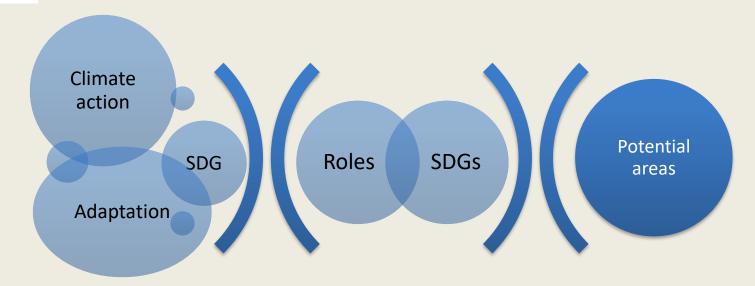Strategic planning
Local taxation

Legal and Policy Context

Methodology

Text analysis

- Selection of 30 UK local authorities (CoM signatories)
- Systematic analysis of main themes using NVivo (word clouds / word trees, keyword search)
- Selected LAs: Bristol, Nottingham

Interviews

- Quick scan of local climate mitigation, adaptation and SD plans
- Case studies of selected local cities

Mapping of Alignment

- Exploring to what extent cities are directly or indirectly influencing the climate-driven SDGs
- Work in progress
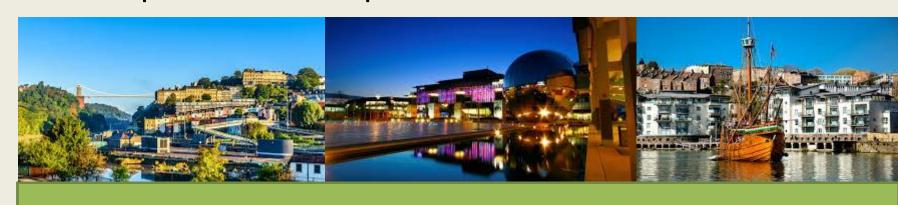
Initial common methodology

- Selection of 30 cities in the UK with Climate Action Plans
  - Population, population growth, geographical position, socio-economic activities, coastal/inland, national recognition (if any)
- Further selection of 6-8 UK cities for text analysis
  - Devolved administrations: Glasgow (Scotland), Cardiff (Wales), Belfast (Northern Ireland)
  - English cities: Manchester, Bristol, Nottingham, Leicester, Milton Keynes

Case study 1: Bristol

- Population: 457,609 inhabitants (medium size)
- Population annual growth: +1.2%
- Geographical position: Southwest / coastal
- Economic activities: Maritime, modern IT and electronics industry, aerospace, tourism
- European Green Capital 2015

Case study 2: Nottingham

- Population: 326,994 inhabitants (medium size)

- Population annual growth: +1.4%

- Geographical position: East Midlands (central) / inland

- Economic activities: Science-based industry and service sector (main economic driver)

- Social characteristics: High unemployment
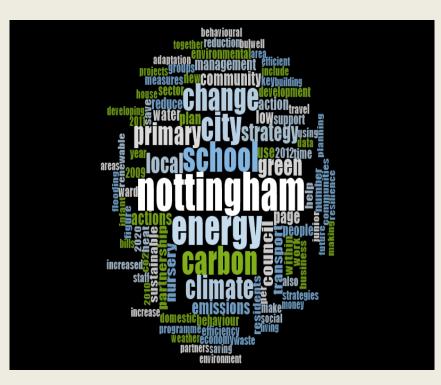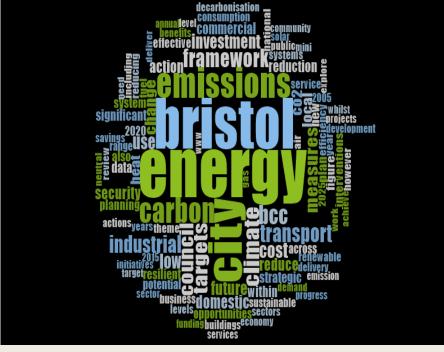
- UNESCO city of Literature

Initial DMU text analysis

Nottingham Community Climate Change strategy 2012-2020

(16,323 total words)

Bristol Our Resilience Future A Framework for Climate Change and Energy security

(21,949 total words)

Text analysis (word frequency)
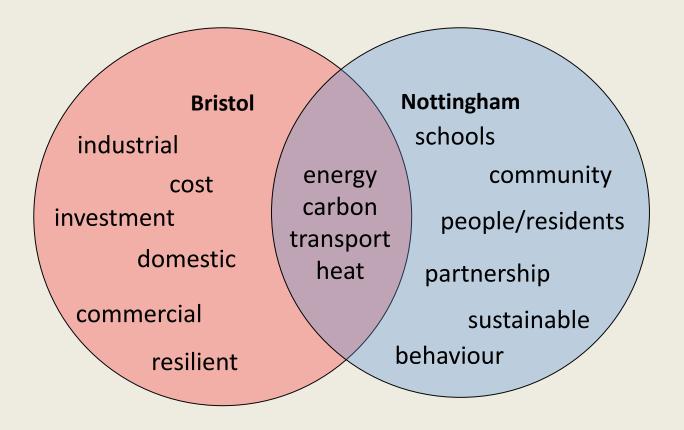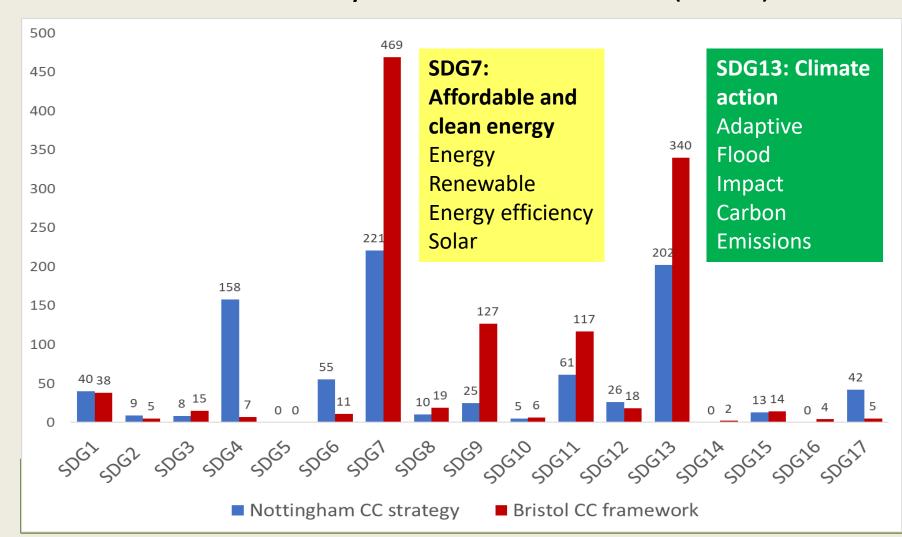
Comparison of selected cities

Bristol

industrial

cost

investment

domestic

commercial

resilient

energy
carbon
transport
heat

Nottingham

schools

community

people/residents

partnership

sustainable

behaviour

Initial DMU text analysis

- Selection of 4-5 keywords for each SDG (DMU)

SDG7:
Affordable and clean energy
Energy
Renewable
Energy efficiency
Solar

SDG13: Climate action
Adaptive
Flood
Impact
Carbon
Emissions

Chart values (Nottingham CC strategy / Bristol CC framework):
- SDG1: 40 / 38
- SDG2: 9 / 5
- SDG3: 8 / 15
- SDG4: 158 / 7
- SDG5: 0 / 0
- SDG6: 55 / 11
- SDG7: 221 / 469
- SDG8: 10 / 19
- SDG9: 25 / 127
- SDG10: 5 / 6
- SDG11: 61 / 117
- SDG12: 26 / 18
- SDG13: 202 / 340
- SDG14: 0 / 2
- SDG15: 13 / 14
- SDG16: 0 / 4
- SDG17: 42 / 5

■ Nottingham CC strategy   ■ Bristol CC framework

Text analysis (keywords)

Comparison of selected cities

Bristol

SDG9 (industry and technology)

SDG11 (transport & housing)

SDG3 (health)

SDG7

SDG13

Nottingham

SDG4 (schools and skills)

SDG6 (water efficiency)

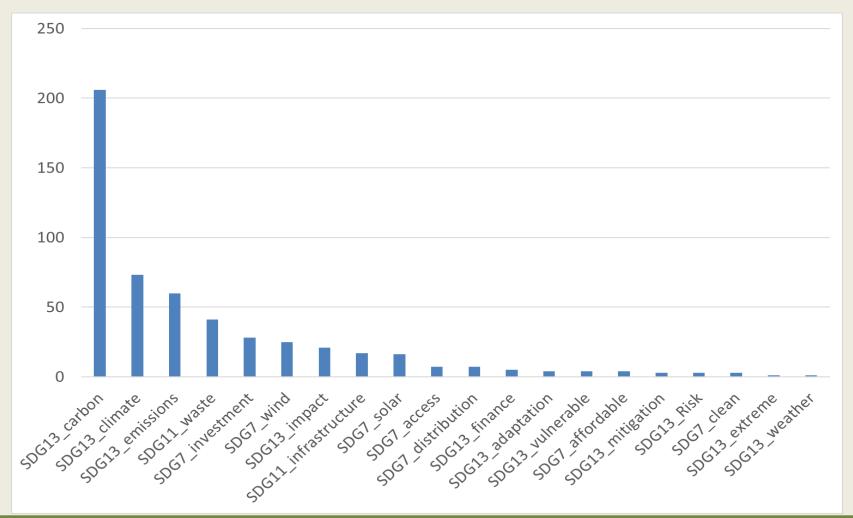SDG17 (partnerships)

SDG1 (social / resilience)

Towards a common methodology

- Further text analysis to be able to compare UK and Japanese cities

- Selection of 10 keywords per each SDG (IGES)
  - Based on targets
  - Pros: More comprehensive and less subjective
  - Cons: 170 keywords, <u>no interlinkages considered yet</u>

- For initial common analysis
  - Only focus on SDG13, SDG7 and SDG11
  - Only focus on Climate Action Plans
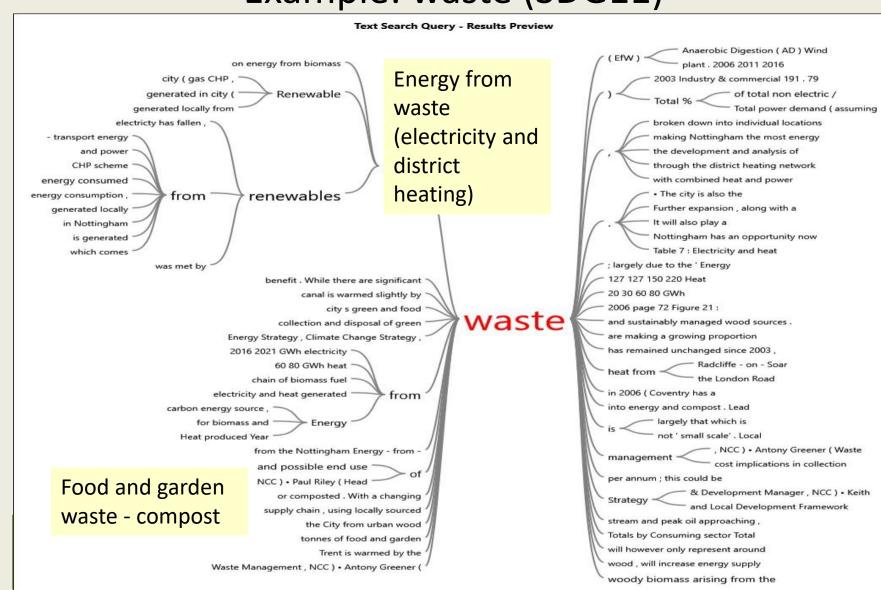 - Complemented with interviews (if possible)
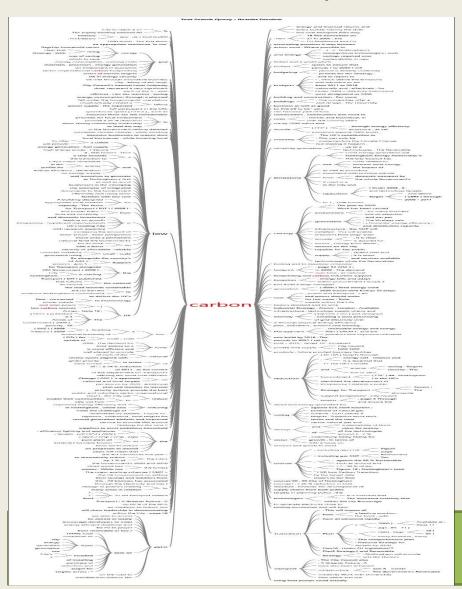
Nottingham (SDG keywords)

Nottingham (word tree)
Example: waste (SDG11)

Text Search Query - Results Preview

Energy from waste (electricity and district heating)

Food and garden waste - compost

Nottingham (word tree)
Example: carbon (SDG13)

- SDG7:
  - Renewable energy
  - Energy efficiency
  - Affordable, reliable
  - Local generation infrastructure
- SDG11:
  - Housing
  - Sustainable transport
- SDG9:
  - Infrastructure, technology supply chains
  - Local businesses
- SDG17:
  - Universities & voluntary sector

Nottingham (interview)
An energy officer (29.08.2019)

- Climate Action Plan (2010-2020)
- Climate mitigation projects:
  - Low carbon heat (CHP and district heating), smart meters, solar PVs, social housing retrofit, low transport network, deployment of EV charging, tackling fuel poverty, etc.)
- Climate adaptation projects:
  - Green and blue infrastructure (rainwater harvesting and water efficiency), SuDS, flood risk awareness
- Work on SDGs:
  - SDG8: Increasing skills for renewable energy and retrofits through SMEs and housing providers, support to SMEs using Green Funds
  - SDG9: Projects related to the Energy Hub and Industry Strategy working with partners in the Midlands (for example related to energy storage using LEP funding, heat pumps and district heating)
  - Community projects (waste shops – reuse and recycle), local food (reducing food waste but also food miles)
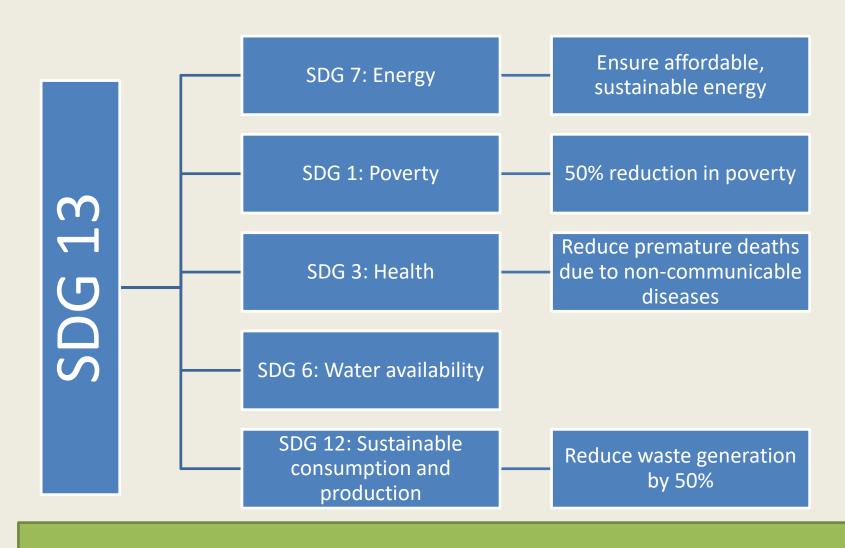
Nottingham (interview)
What is next?

- Ambition: Become carbon neutral by 2028

- Goal: Develop a co-benefits agenda

  - Achieving carbon targets considering SD

  - Co-benefit analysis of business cases and business models of carbon neutral projects

  - Interlinkages between different sectors (brining together agendas)

  - Protect and safeguard quality of life and well being of citizens + engagement with people

- Main drivers: cost efficiency, fuel poverty reduction and bringing back revenue for further investment

Next steps

- Text analysis for 6-8 cities each in UK and Japan

- Comparison and ranking of city plans
  - Some criteria to be developed

- Mapping of SDG 13 onto other SDGs
  - Possibility of engaging with stakeholders and doing a ranking exercise
  - Possibility of modelling

Conclusions

- City Climate Plans in the UK

  - Have mainly focused on climate-related issues

  - Have implicit and indirect links to Sustainable Development Goals

    - Emphasis varies by city depending on the local context

- Cities are planning for deep decarbonisation

- Better alignment with the SDGs could lead to co-benefits.

References

- Bristol Green Capital Partnership (2018). *Driving the Sustainable Development Goals Agenda at City level in Bristol*, Bristol Green Capital Partnership, Bristol (https://bristolgreencapital.org/wp-content/uploads/2018/07/Bristol-Method_Driving-the-SDGs-agenda-at-city-level-in-Bristol_17-Jul-2018.pdf)

- Leicester City Council (2014). *Carbon Reduction Roadmap*, Leicester.

- Milton Keynes Council (2012). *Milton Keynes Low Carbon Action Plan 2012*, Buildings Control and Sustainability Team, Milton Keynes.

- Nilsson M, Griggs D, Visbeck M (2016). Map the interactions of sustainable development goals. *Nature* 534:320–322. https://doi.org/10.1038/534320a