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DECLARING A CLIMATE EMERGENCY

UK LOCAL AUTHORITIES

FINAL REPORT

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Anna-Mariya Kandzhova, Iris Šömen, Rodon Miraj, Jorge Jiménez,
Lorena Cordero, Okky Oktaviani

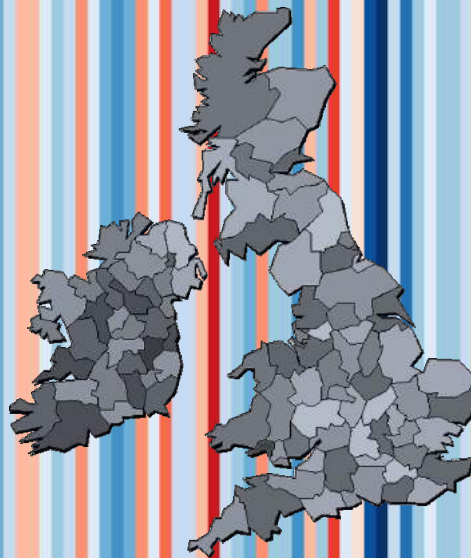


TABLE OF CONTENTS

Executive Summary.....	0
I. Introduction.....	1
1. Climate Action Plans.....	1
2. The Evolution and Aim of the Project.....	2
II. Literature Review on Climate Action Plans.....	3
1. Climate Action Planning.....	3
2. Factors which Affect the Quality of Climate Emergency Action Plans.....	4
III. Theory/Framework.....	6
IV. Methodology.....	7
1. Developing Assessments.....	7
1.1. Step One: Development of Three Checkpoints.....	8
1.2. Step Two: Comparison of Action Plans.....	9
1.3. Step Three: Interviews Analysis.....	11
2. Integration of Attribute Scores with Administrative Capacities and Geographical Classification.....	12
V. Results, Analysis and Discussion.....	13
1. Quantitative Results: Administrative Capacities.....	15
2. Quantitative Results: Underdeveloped Attributes.....	17
3. Quantitative Results: Well-developed Attributes.....	18
4. Geographical Correlations.....	19
5. Qualitative Results: Interview Findings.....	19
6. Qualitative Results: Analysis of Themes.....	20
7. Linking Quantitative and Qualitative Results with Administrative Capacities.....	22
VI. Methodological Reflection.....	25
VII. Recommendations, Lessons Learnt & Best Practices.....	27
1. Inclusiveness.....	28

2. Costing of the Action Plan.....	28
3. Partnerships.....	28
4. Item Ownership.....	28
5. Financial Security.....	29
6. Monitoring.....	29
7. Co-benefits.....	29
8. Risk Assessment and Risk Mitigation for Climate Actions.....	29
VIII. Conclusion.....	30
References.....	31
Bibliography for the Development of the 3 Checkpoints.....	39
Appendix.....	42
Table A1. Addressing Climate Change: Normal and Emergency Modes.....	42
Figure A1. Climate Change in the UK: Spatial Distribution.....	43
Figure A2. Climate Change in the UK: Impact on Areas.....	44
Table A2. Checkpoint 1.....	45
Table A3. Checkpoint 2.....	46
Table A4. Checkpoint 3.....	48
Table A5. Administrative Capacity Description.....	49
Table A6. Action Plan Attributes.....	50
Table A7. Local authorities: Geographical classification.....	52
Table A8. Outcomes of Top and Bottom Performing Attributes.....	53
Table A9. Interview Results.....	54
Recommendations.....	60
Annex 1. Climate Emergency Action Planning Manual.....	72
Annex 2. Checkpoints Analysis: Results per Attribute per Council.....	103

Executive Summary

In 2019, the United Kingdom (UK) became one of the first countries to declare a climate emergency. In this regard, local governments in the country have taken the lead and as of May 2020, 33 local authorities have declared a climate emergency. Following their climate declarations, each local authority has developed an action plan which sets specific climate targets and actions. The aim of this project is to assess the quality and structure of these action plans against criteria (a list developed by the project) and administrative capacities.

Assessing action plans according to the criteria follows a structured methodology. Attributes are first assessed as part of a 3 checkpoints analysis, which entails: 1) assessing the contents of action plans, 2) assessing climate action plan characteristics, 3) assessing the climate action plan processes. Following this assessment, attributes are grouped within administrative capacities. Further analysis is performed on regulatory, coordination, delivery and analytical capacities of local authorities.

The results from the quantitative assessment were further examined through a qualitative analysis which entailed semi-structured interviews with local representatives in charge of the design and implementation of the action plans analysed. The interview stage brought new insights on the challenges local authorities are facing as well as shed light upon best practices. After carefully analysing the quantitative and qualitative results, the team identified the most challenging areas for climate emergency action planning in local governments.

These areas are the following: i) inclusiveness; ii) costing of action plans; iii) creation of partnerships; iv) item ownership; v) securing finance; vi) monitoring; vii) realisation of co-benefits and viii) risk assessment and risk mitigation for climate actions. For each of these areas the present report provides detailed recommendations from best practices and academic literature.

The project's tailored recommendations are also included in a manual for local authorities

I. Introduction

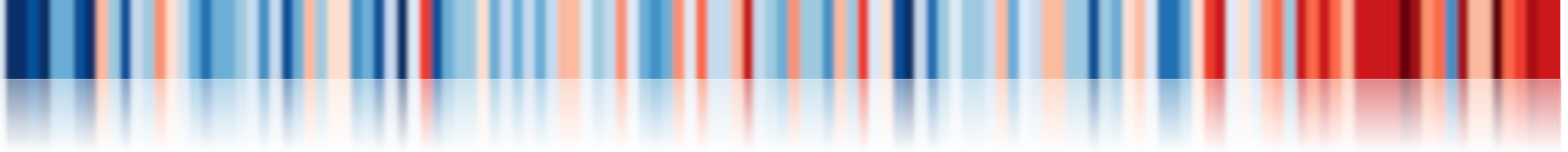
It has been globally recognised that the phenomenon of climate change has led to irreversible changes and damage to our planet. The Paris Agreement, aiming to strengthen the global response to the threat of climate change, describes the necessity to keep the global temperature rise well below 2 degrees Celsius above pre-industrial levels. This is essential in order to reduce the probability of extreme weather events and the impacts on ecosystems, human health and well-being (UN, 2020; IPCC, 2018). Extreme weather events and failure of climate change mitigation and adaptation have been recognised as having the highest global impact, with risks spanning across numerous regions. Additionally, climate-related risks have been recognised as having the strongest influence on collateral, particularly social and geopolitical, risks (WEF, 2019).

In this respect, some countries declared a climate emergency and developed national strategies to follow a pathway which limits global warming to well below 2.0°. Correspondingly, in 2019, the United Kingdom (UK) became the first major economy to declare a climate emergency and enacted a law to achieve Net Zero emissions by 2050. The strategy sets a rapid, ambitious and far-reaching transition in the infrastructure, energy, land and urban systems in the country (UK Government, 2019).

Nonetheless, climate emergency remains an emerging concept where, in most cases, governments' reactions are responses to public pressure. Likewise, the situation in the UK followed the demands stemming from the Extinction Rebellion demonstrations (Climate Emergency UK, 2020). Generally declaring a climate emergency aims to scale up action at all levels of climate change governance (Bevan, et al., 2020) and to accelerate sustained and meaningful actions that go beyond reforms-as-usual (Spratt, 2019). The goal is to provide maximum protection for the local communities, people and species globally, especially the most vulnerable, and to enable communities to be strong in the face of any unavoidable disruptive climate impacts. Nevertheless, a climate emergency declaration is not legally binding and remains a form of political obligation, resting on the principles of normative power (Bevan, et al., 2020).

1. Climate Action Plans

A common next step for local governments in the UK after themselves declaring a climate emergency is to issue climate action plans. These plans typically reflect the national government's decarbonisation commitments and strengthen the already existing sustainability strategies, but more often than not, they are developed around an emergency narrative, with even more ambitious decarbonisation targets. The issued action plans detail what are the necessary steps to be taken in order to reach the decarbonisation goals within the local authority.



Focusing on UK local authorities' response to climate commitments, by May 2020 33 local authorities, which encompass districts, unitary counties, boroughs and councils across the country had declared a climate emergency and developed action plans. The UK government recognises that these plans should be developed locally, and their decarbonisation commitments and actions need to be reflective of the local context. Nonetheless, the absence of clear instructions for the development of climate action plans is mirrored in the diversity of action plans, which showcase different environmental agendas. More specifically, the lack of guidance and standardisation from the national government is reflected in differences in structure and quality of actions plans, which has resulted in varying local policy responses (Karim et al., 2017). In addition, international-level guidance for local governments generally focuses on larger urban zones or mega cities (e.g. C40), leaving behind small and medium cities. This is problematic as 50 percent of the global urban population lives in cities with fewer than 500,000 inhabitants (Boehnke et al. 2018), which therefore calls for a coherent approach and guidance for all local authorities.

2. The Evolution and Aim of the Project

Having established the varying nature of the quality and focus of action plans, this project aimed to produce a set of comprehensive guidelines for the development and implementation of climate action plans across the UK. This direction was chosen after a careful consultation with Arup, our project partner, altering our initial focus on the climate emergency declarations themselves. The team found that climate emergency declarations had remained political statements rather than more complex, substantive strategies such as action plans. Instead of the complacency of a declaration, an action plan includes practical short-term goals that tangibly affect the level of emergency mobilisation (Breakthrough, 2020). For this reason, developing guidance on implementable climate emergency action plans, now pursued as the main objective of this project, was expected to bring more invaluable knowledge and insights to project's main stakeholders.

The analysis performed on local authorities entails a deeper dive into discovering the challenges and opportunities for local authorities in the context of climate emergency action planning. Therefore, a methodology was composed for the analysis of climate action plans of local authorities, their planning process and their administrative capacities to implement a climate emergency agenda. The report starts with identifying implementation gaps and common obstacles faced by the local authorities and ends with providing recommendations, drawing upon both academic literature, quantitative analysis, and real-life best practices and lessons learnt as identified in the qualitative analysis. The project's findings led to tailored recommendations which are also included in a manual for local authorities. The manual aims to bring more clarity to the process of climate action planning and its first draft is attached as an Annex 1 at the end of this document.

The outcomes of this project will facilitate the future work of local authorities which have not yet declared a climate emergency or developed an action plan. Furthermore, the project aimed to deliver value to its main stakeholders. The project was intended to assist the partner organisation Arup, in providing guidance on climate emergency to local authorities. This project

was also relevant for UCL and may help in further research into this emerging subject by providing a backbone for climate action planning.

II. Literature Review on Climate Action Plans

1. Climate Action Planning

The number of national, regional and local governments which have declared a climate emergency has exceeded 1300 across the world (Breakthrough, 2020). This number has been rising significantly and it is critical to understand how these responses are being operationalised (Davidson et. al. 2020).

It is being increasingly recognised that the climate emergency mode is the only response that can fully address the scale and urgency of the crisis (Breakthrough, 2019). Table A1 in the Appendix provides an overview of the emergency versus the normal mode of operation and it aids the understanding of how the climate emergency mode can be applied to develop sound policy advice and guidelines.

Studies to date have tried to identify and measure how the demographic, political, economic and geographical factors relate to the gravity of local climate commitment. They have aimed to test whether such commitments produce outcomes, and, to a lesser degree, to explore factors that motivate, enable or challenge local governments as they pursue climate policy (Salon et. al. 2017).

Tang et. al. (2010) is one of the first studies evaluating the quality of local climate change action plan. The study points out the differences of plans in incorporating awareness, impacts of climate change, mitigating and adaptive actions as well as contextual variables. The article evaluates quality of action plans through 3 independent variables relating to capacity, climate risk and emission stress. The method was used to quantify the factor influence and inspected each plan according to the 36 indicators. Scoring them on a scale 0-2 signals their (non)presence in the plan and showing the quality of an action plan by summing up all the plan components.

The results showed that the presence of state mandates most significantly and positively affects the quality of climate change action plans. It was presumed that this is due to the need for top-down pressure to enact measures and address climate change. Nonetheless, 10 years after, the narrative of the non-urgency felt by the local jurisdictions, seems to be reversed and climate emergency is now gaining momentum through a bottom-up approach.

It is important to note that the climate emergency Project did not follow the aforementioned methodology as this study was found and incorporated at a later stage. Thus, the independently development methodology of the project is reinforced by an established academic approach.

Another relevant piece, from Salon et. al. (2017), explores the motivating, challenging or enabling factors influencing local governments as they develop climate policy. The article identifies barriers such as lack of data, funding, technical support and jurisdictional authority to mandate energy efficiency as well as enablers in the form of co-benefits.

Several scholars writing specifically on the topic of climate emergency have also identified a lack of national direction, when considering the amount of preparation local authorities need to undertake when declaring a climate emergency (Salon et. Al. 2017). The article from Davidson et. al. (2017) defines the necessary non-mutually exclusive elements of the climate emergency policy by identifying 10 elements¹ addressing the what, why and how of climate emergency.

The article reviews the incorporation of these 10 attributes within the policy documents of Auckland and the City of Darebin, which have been recognised due to their comprehensive climate mitigation and adaptation mechanisms. It also points out that little attention is given to economic mobilisation or prioritisation, thus suggesting the presence of 'business as usual' responses that may be unfit to deal with the complexity of the crisis.

These articles consider many possible narratives that are pertinent to climate action plans, ranging from the protection of the environment, economy, jobs, health and wellbeing, safety and moral responsibility (Breakthrough, 2020). Practically, this highlights several factors that affect the quality of climate emergency action planning. It hence becomes clear that it is inevitable that the understanding of the climate emergency and the response that is formulated differ according to local capabilities, political will and socio-cultural context (Salon et. al., 2017).

2. Factors which Affect the Quality of Climate Emergency Action Plans

This section presents some of the literature findings that deal with thee salient factors affecting the quality of the climate emergency action plans. Although the literature on the politics of climate change is growing, it should be noted there has been relatively little study on the political factors in the implementation of climate policy (Pierson, 2005; Hill, 2012).

i) Financial Resources

The availability of financial resources affects the quality of a climate emergency action plan. For any form of strategy in the action plan their implementation is only ensured if it is reflected in the local authorities' annual budget. However, it is difficult to allocate resources to areas for

¹ (1) Purpose of action, (2) Urgency of action, (3) Prioritisation of action, (4) Institutional resource mobilisation, (5) Social mobilisation, (6) Restoring a safe climate, (7) Adapting to a changing climate, (8) Plan for informed action, (9) Coordination, partnerships and advocacy for action and (10) Equity and social justice.

which local authorities believe either they may not materialise or are so far in the future that the consequences cannot be envisaged (Williams, et. Al., 2010). Therefore, there are many local authorities that do not have a dedicated budget for their climate emergency action plan. Instead, the budget is allocated from different departments that oversee specific sectors such as the transport or energy departments.

ii) Political Will

Declaration of climate emergency can often only be seen as a political statement if not followed by a set of implementable actions. For a local authority to become sustainable they need to commit to an organisational culture change in which climate emergency and climate mitigation and adaptation measures are treated with priority. This requires extensive political will and leadership which is vital for the materialisation of legal and non-legally binding commitments (London Borough of Brent, 2009). As previously described the climate emergency declaration is not legally-binding and thus lies on the political will of each local authority to declare it and enact an action plan accordingly. The absence of a legal obligation in turn can affect the presence and/or quality of action plans.

Political will is not solely associated with the government but also connects with public engagement and public concern. Lorenzoni et. al., (2008, p.1342) argue that "there is a failure to reflect emerging evidence of public concern about climate change and calls for strong political leadership in national policy-making". Therefore, the combination of political will from government and public concern constitutes an essential pillar that affects the quality of a climate emergency action plan. The steps required to address the climate emergency are thus not primarily economic or technological, but rather political, social and cultural (Breakthrough, 2020).

iii) Energy Consumption

Highest levels of energy consumption vary across sectors and affect local authorities differently. In the UK, the transport and household sectors have become the highest consumers of energy as well as the most energy intensive sectors over the last forty years (BEIS, 2019).

Prioritising these sectors can lead to a higher reduction of GHG emissions, which in turn can accelerate the climate emergency response in local authorities. Nevertheless, addressing both sectors may affect the quality of the action plans inasmuch as it adds pressure by making it necessary for local authorities' capacities to deal with these sectors' inherent complexity in their actions to respond to climate change (Catapult, 2018). For example, tackling such large sectors, requires measures to focus on massive and long-term investments as well as the implementation of large-scale projects (BEIS, 2019).

iv) Traffic Problems

The difficulty of 'traffic problems' can itself be seen as a specific direct factor affecting the quality of climate action plans. One of the main sources that makes reducing emissions difficult is road transport, specifically private car use which is related to the rise in road traffic causing an increase in the GHG emission in the UK (BEIS, 2019; ONS, 2019).

The need and difficulty of tackling transport emissions may affect the quality of the action plan for local authorities mainly in two aspects. Depending on the road traffic context, the promotion of efficient fuel-vehicle technology would require a previous coordination with national authorities and stakeholders to develop a robust strategy. Furthermore, promoting a massive public transport use instead the private car use (World Bank, 2012) would now require a thorough assessment of how action plans are taking into account the COVID-19 pandemic context and social distancing measures.

v) *Climate Risk Hazards*

Climate action plans that address adaptation to climate change can be assessed for the extent to which they address the climate risk hazards that are most relevant locally. The most prominent climate risk hazards in the UK include floods, coastal erosion, shortages of public water supply, impacts on freshwater, risk to natural capital (ecosystems) and food production (Committee on Climate Change, 2017). Figures A1 and A2 show the risk hazards associated with specific geographical characteristics in the country, namely: uplands, rural, urban, marine and coastal.

In this context, the location of local authorities is particularly important as geographical differences may affect the quality of action plan regarding the accessibility, budget and priorities which ultimately influence their creation. According to the IPCC, climate change may exacerbate risks in low-income urban areas (Dodman & Satterthwaite, 2009). This is important to note as local authorities which in the country are located in urban centres experience risks such as heat related health impacts, degradation of air quality and flooding (ONS, 2011). On the other hand, local authorities which are located in coastal areas are particularly prone to flooding, sea level rise coastal erosion and subsequently, infrastructure damage. Hence, location specific climate hazards can increase social vulnerability across the country and the respective focus on addressing these hazards in the action plans (Committee on Climate Change, 2017).

III. Theory/Framework

While the climate emergency is often seen as a global challenge, the national and local capacities to deal with the climate emergency and the challenges that the climate emergency poses differ across countries (Lodge & Hood, 2012). Given the lack of guidelines and literature on climate emergency implementation, it was decided for this project to produce a manual on what a climate emergency action plan should entail and to support it with a sound theoretical background. The Administrative capacity theory was identified as a perfect fit to assess the different capacities which local authorities need in order to effectively create a climate emergency action plan.

Administrative capacity theory explains the main challenges of managing and implementing public policy in the 21st century. Administrative capacities are comprised of: i) delivery capacity; ii) coordination capacity; iii) regulatory capacity; and iv) analytical capacity (Lodge & Wegrich, 2014).

i) Delivery capacity: defined as the capability to ‘make things happen’. It is related to the resources available to ensure that the public receives services, that revenues are extracted, and that public order is maintained. The government needs to ensure that the public receives services which the private sector cannot entirely deliver. In other words, delivery capacity is about the resources which are deployed to ensure certain services are maintained (Lodge & Wegrich, 2014).

ii) Regulatory capacity: derives from the definition of regulation from Black et al. (2005, p.11), and is defined as a “sustained and focused attempt to alter the behaviour of others according to standards or goals with the intention of producing a broadly identified outcome, which may involve mechanisms of standard-setting, information-gathering and behaviour modification”. Therefore, regulatory capacity is the ability of the government to control public order and find the balance between the intended and unintended consequences that sociotechnical innovations bring.

iii) Coordination capacity: defined as the government’s capacity to communicate and organise internally. It goes beyond the organisation of the executive and the allocation of formal capacities by also entailing an ongoing lessons learnt approach. This capacity should be applied in order to align different organisational backgrounds on a common objective (Lodge & Wegrich, 2014).

iv) Analytical capacity: defined as the ability to assess, understand, measure and forecast the needs of the society and address these accordingly with targeted policy measures. It also involves considering the potential implications and outcomes of the implementation of these measures. Administrative analytical capacity is therefore an essential prerequisite for evidence-based policymaking (Lodge & Wegrich 2014, p.89).

This theory was used as a framework to explain the different administrative capacities in local authorities, with the purpose of linking these capacities to the processes of planning, drafting, and implementing climate action plans.

IV. Methodology

1. Developing Assessments

In order to compare and assess the 33 action plans which local authorities have issued until this point in time, the team developed a robust methodology for conducting the assessments. The methodology followed 3 steps. The first step entailed developing assessment criteria for “three checkpoints”, which were produced by conducting desk research and literature review. The second step consisted of performing a quantitative comparative analysis of the 33 action plans against the criteria developed in step one in order to find common challenges and best

practices. The third step consisted of analysing the information gathered by conducting interviews with local authorities. The aim of following these steps is to ensure gathering valuable insights from the assessment of action plans as well as from first-hand input from representatives in local authorities.

1.1 Step One: Development of Three Checkpoints

The aim of this step is to produce criteria and attributes which cover the assessment of three different checkpoints: i) a checklist of desirable content of the action plans; ii) checklist of desirable characteristics of the action plans; and iii) a checklist of the necessary processes to create an action plan. The first two checkpoints focus on - the action plans themselves, their content and their characteristics whereas checkpoint 3 focuses on the climate action planning process. For Checkpoint 1 and 2 the sources analysed were the actions plans, whereas for Checkpoint 3 additional sources were consulted. In this way, the assessment of three checkpoints allow to have a complete picture of the process, creation and implementation of action plans.

As aforementioned, the process of creating these three criteria entailed a thorough literature review and a detailed revision of established guidelines from major international organisations, consultant companies and the UK government. These included: The United Nations, C40, Friends of the Earth, Arup, Ashden, among others. The references used for the development of the 3 checkpoints can be found in the Bibliography Section.

i) Checkpoint 1: A Checklist of Desirable Content of the Action Plans

This checkpoint emerged from the lack of a homogenous guidance from the national government on what the contents of an action plan should include. The content proposed does not need to follow a pre-established structure, but rather this checkpoint assesses whether the content items are present or not throughout the action plan. For further detail about the adopted description for each content item the reader is referred to Table A2.

ii) Checkpoint 2: A Checklist of Desirable Characteristics of the Action Plans

A checklist was developed with a view of reflecting what overarching characteristics an action plan should entail. This checkpoint is developed to assess the quality and comprehensiveness of action plans by analysing each of them in detail. Table A3 lists the desirable characteristics of an action plan and provides a description of each characteristic assessed.

iii) Checkpoint 3: Climate Action Planning Process

This Checkpoint was developed to assess the internal delivery processes behind the creation of action plans. It considers the different preceding steps which local authorities should follow in the climate action planning process. Table A4 lists the characteristics of a desirable climate action planning process and provides further detail about the adopted description for each process item proposed.

1.2 Step Two: Comparison of Action Plans

i) Scoring of Action Plans

Each of the action plans were assessed against the criteria developed in the 3 checkpoints. A scoring system was applied in the assessment of each attribute. Comparing the scores among team members, ensured a unified understanding of the attribute definitions. This enabled greater confidence in scoring the local authorities in the three categories: ranging from 0 (attribute not fulfilled), 1 (attribute somewhat fulfilled) to 2 (attribute fully fulfilled). For the scores to be better visualised, the team used a RAG (Red - Score 0; Amber - Score 1; Green - Score 2) scale.

ii) Pilot Project

Performing a pilot assessment consolidated the knowledge and understanding of the attributes and helped the team to have a coherent approach.

The pilot scoring was conducted on the action plan of the council of East Lothian in Scotland. All team members individually scored it according to the 3-Checkpoint criteria list (comprised of 49 attributes), and then cross-checked the results with the other team members. Internally describing an attribute with synonyms and examples helped to develop a comprehensive understanding of all attributes, thus, establishing their 'implicit' meaning. The process of testing the scoring approach, also invoked a re-evaluation of the attribute definitions, causing their further specification, removal or merger.

iii) Peer Reviewing

To further add to the rigour of the process, the 33 actions plans were divided among team members to be assessed individually and, each plan was scored by two members of the team to reduce the value-ladenness of the assessment. Also, the diverging scores were cross-checked and discussed in pairs to agree upon a final score.

iv) Assessment Methodology

- *Consideration of Qualitative Comparative Analysis*

The initial data analysis plan envisaged the application of Qualitative Comparative Analysis (QCA). This method seemed to be a conceptual and sample-size fit for the purpose of the project. It would have helped to identify the decisive cross-case characteristics while considering their different causalities and context specificities (Benoit & Ragin, 2008). Nonetheless, the team encountered limitations in its potential application. Its novelty, complexity and lack of clarity on how to calculate consistencies for the truth table made justifying its use difficult. QCA would perhaps have been possible for crisp sets it but was not less of a fit for fuzzy/multi-value sets, where, as in this research's case, the variables can be represented on a continuum and can have three, instead of two values.

- *A Simple Quantitative Method*

Given the above-mentioned considerations, an alternative possibility was identified. The decision was made to steer away from QCA and instead use a simple quantitative method (e.g. calculating percentages, scores, averages, weighting), which fulfils the needs of discerning the challenges arising from designing the action plans. It proved to be a reliable and suitable method for the purpose of highlighting which attributes are not yet widely present in the action plans and hence worth considering for the recommendations.

- *Identifying Underdeveloped Attributes*

For each attribute, the team counted the 0, 1 or 2 scores. For some of the analyse such numbers were represented as percentages of the total of local authorities which perform in either score for each attribute. This was deemed to be easier to understand and contextualise the results. The calculated percentages show what proportion of councils scored 0, 1 or 2 for a specific attribute.²

- *Setting a Threshold*

A threshold was put in place to identify the underdeveloped attributes in which most local authorities do not score sufficiently as well as for the well-developed ones which score the highest. This threshold delineates the sufficiently represented attributes from the insufficient ones, which would benefit from elaborated guidance. An iterative process was set up to determine which threshold delivered a relatively small number of attributes to focus on, in accordance with the resources available for this project. In the end, two thresholds were used.

First, if more than 50 percent of action plans scored 0 in a certain attribute, these were considered most problematic and could benefit from detailed recommendations. The results can be seen in Table 3 (see the Analysis Section). Second, an additional analysis was done by also considering scores of 1. The first threshold only shows the worst-performing attributes in score 0 and does not take into consideration a significant part which scored 1, which as an intermediate score, shows a lack of specificity or comprehensiveness. The results are presented in Table 4 (see the Analysis Section).

By summing the results of scores 0 and 1, a broader picture could be painted that showed which attributes were either not present or insufficiently present across local authorities. A threshold of 70 percent was set on the combined (added) percentages of scores 0 and 1 for each attribute. These represent the second most significant absence of the attributes in action plans. These lower-performing attributes can be improved by following the prescribed recommendations in the Recommendations section. Third, a threshold of 75 percent was introduced, using the same

² For example, in attribute Flexible 1 council scored 0; ten councils scored 1 and 21 councils scored 2; resulting in score of being afforded to 3% of the councils; 1 to 30% and 2 to 64% of the councils. This shows that according to the team's criteria most councils are scoring high in this attribute.

methodology in order to identify well-developed attributes in which most local authorities score 2. The results can be found in Table 5 (see the Analysis Section).

1.3 Step Three: Interviews Analysis

The quantitative analysis was followed by performing interviews with elected members (councillors/local representatives) and officers in local authorities. The aim of the interviews was to gain new additional insights from the process of climate action planning. Thus, the outcomes of the interviews are backed up with the desk research and the findings are triangulated with the results of the quantitative analysis. This interview focused on a local authority which is in the process of developing their action plan. The findings from this interview were useful for Checkpoint 3.

The interviewees were selected by contacting the same local authorities whose action plans were reviewed. The departments responsible for climate action planning were contacted, or if the responsible team was not identifiable, the next most relevant department was contacted. In full compliance with the UCL Ethical approval requirements for this project, the local authorities which replied to the team's invitation were forwarded a consent form, information sheet and the 32 provisional questions of the semi-structured interview. After agreeing the timing of the interview and signing of the consent form, the interviews were conducted via Microsoft Teams in 30-60 minutes or in a written format. The interview period started on the 13th of August and finished on the 8th of September. In total, 7 local authorities³ were interviewed. This represents 18 percent (6 local authorities) from the 33 local authorities which action plans were analysed. Furthermore, an additional interview was conducted on a local authority that is still in the process of developing their action plan. Thus, this interview was not considered as part of percentage previously described. The interviews were conducted by the two members of the team who peer reviewed the respective action plans. The flexibility of the semi-structured approach enabled a complete understanding of the priorities, challenges and best practices of each local authority.

Following the interviews, the major themes and insights were summarised, and a transcription of the interviews was produced. Content analysis was then deployed - extracting and discussing the relevant factors playing out in the dynamics of climate action planning. Attention was dedicated to the identification of factors which the interviewees suggested were important and which occurred repeatedly in different interviews. The results of the interviews analysis, which summarise the challenges, lessons learnt, and best practices of the local authorities can be found in Table A9.

³ List of local authorities which were interviewed: Bradford, Nottingham, Leeds, Hampshire, Monmouthshire, Winchester (Written interview), Leicester (additional interview)

2. Integration of Attribute Scores with Administrative Capacities and Geographical Classification

This section explains the integration between the administrative capacity theory and the analysis developed in Steps One and Two. These attributes were categorised into 4 different types of administrative capacities, namely: delivery, regulatory, coordination and analytical capacity, which are further defined in Table A5.

The process of the categorisation was divided into two steps: i) individual assessment; and ii) peer-reviewing assessment.

i) Individual assessment: For this step each member of the team analysed the list of attributes from checkpoints 1, 2, and 3 (a total of 49 attributes) in order to categorise them according to the four administrative capacities.

ii) Peer-reviewing assessment: To further add to the rigour of the process, the results of the individual assessments were discussed, and cross-checked among members of the team to reach an agreement, which reduced individual bias and value-ladenness. The result of this step is shown in the Table A6.

Next, the team then performed an average scoring of the attributes clustered per capacity for each local authority. In this case, for ease of representation of results, a percentage of the overall fulfilment of each capacity was used. The scores (either 0,1 or 2) of each local authority on each attribute were added up and divided by the maximum potential score possible on that administrative capacity (as if the local authority had scored 2 on all attributes). Then the result was multiplied by 100 to translate into percentage. This enabled an overview of the capacities performing significantly better or worse than others, resulting in the identification of the underdeveloped and well-developed attributes, which will be further explained in the following section.

Also, an analysis of average scores of all attributed taken together was performed using a geographical classification for the local authorities. For this, the characteristics of Rural of Urban and Coastal or Inland were assigned to the 33 local authorities. This allowed the average score of local authorities of the 3 Checkpoints analysis to be associated with their location. Local authorities were then sorted in descending order, starting from the highest scoring one.

Finally, recommendations were formulated for the underdeveloped attributes. Thus, the components of the analysis have being linked together, in having a rationale for where recommendations are offered for the challenges faced by local authorities.

V. Results, Analysis and Discussion

1. Quantitative Results: Administrative capacities

As explained in the Methodology section, an analysis was performed on each capacity by taking the average scoring of the attributes clustered per capacity. The analysis was performed for each local authority and the results can be seen in the table below.

Table 1. Administrative Capacities Scoring

Local Authority	Administrative Delivery Capacity	Administrative Regulatory Capacity	Administrative Coordination Capacity	Administrative Analytical Capacity
Cornwall	68 %	79 %	54 %	83 %
Portsmouth	55 %	64 %	42 %	73 %
Hampshire	66 %	57 %	71 %	70 %
West Midlands	37 %	79 %	50 %	80 %
Monmouthshire	50 %	64 %	38 %	68 %
North Somerset	61 %	64 %	58 %	83 %
Kirklees	66 %	86 %	54 %	78 %
Leeds	63 %	86 %	54 %	78 %
Nottingham	74 %	71 %	79 %	80 %
West Devon	37 %	36 %	38 %	43 %
Bournemouth	37 %	43 %	67 %	68 %
Plymouth	50 %	86 %	63 %	78 %
Southampton	79 %	71 %	67 %	80 %
Peterborough	71 %	50 %	67 %	63 %
Wandsworth	89 %	71 %	100 %	95 %
Harborough	42 %	50 %	38 %	45 %
Brent	55 %	57 %	63 %	75 %
Bradford	55 %	86 %	46 %	78 %

Richmond	87 %	79 %	100 %	93 %
Wealden	61 %	29 %	46 %	55 %
Winchester	92 %	79 %	88 %	78 %
Lambeth	50 %	57 %	58 %	40 %
Eastleigh	58 %	43 %	58 %	63 %
Sutton	76 %	64 %	79 %	88 %
Wirral	45 %	57 %	67 %	65 %
Ryedale	79 %	21 %	67 %	43 %
Fife	89 %	71 %	100 %	98 %
Oxford	61 %	57 %	46 %	80 %
Dundee	66 %	93 %	75 %	88 %
Carmarthenshire	53 %	64 %	67 %	63 %
Northumberland	71 %	64 %	79 %	60 %
Stroud	32 %	57 %	42 %	55 %
Islington	53 %	64 %	58 %	83 %
AVERAGE	61%	64%	63%	72%

Scores coloured in red (below <50 %) indicate that the capacity is underperforming, as the attributes which fall within this category have demonstrated lower scores.

Scores coloured in amber (between 50 % and 85 %) show that the given capacity has attained a medium score, as the attributes analysed were somewhat fulfilled.

Higher scores coloured in green (above 85%) demonstrate that the capacity was assessed to be well performing, as the attributes which fall within it have been graded higher.

Upon identification of a capacity which necessitates improvement, it can be referred to the Recommendations Section, where recommendations are assigned per capacity for underdeveloped attributes.

Table 1 also provides high-level insights on the local authorities overall weaker vs stronger capacities. The results demonstrate that the least developed administrative capacity is Delivery Capacity, which scored 61 percent. On the other hand, the best performing capacity is the Analytical Capacity, scoring 72 percent.

2. Quantitative Results: Underdeveloped Attributes

All local authorities' action plans have been assigned a scoring according to the 3 checkpoints as part of the quantitative analysis. The complete checkpoints analysis (per attribute per council) is included as Annex 2. The scoring presented in the table below provides a higher-level information on the average performance on each checkpoint for councils.

Table 2. Checkpoints Scoring

Local Authority	Action Plan Content (Checkpoint 1)	Action Plan Characteristics (Checkpoint 2)	Climate Action Planning Process (Checkpoint 3)
Cornwall	74 %	58 %	77 %
Portsmouth	55 %	62 %	67 %
Hampshire	60 %	69 %	70 %
West Midlands	64 %	58 %	60 %
Monmouthshire	50 %	62 %	53 %
North Somerset	62 %	73 %	63 %
Kirklees	67 %	58 %	83 %
Leeds	74 %	54 %	73 %
Nottingham	69 %	81 %	73 %
West Devon	29 %	31 %	60 %
Bournemouth	48 %	65 %	50 %
Plymouth	64 %	58 %	60 %
Southampton	79 %	65 %	80 %
Peterborough	62 %	54 %	77 %
Wandsworth	79 %	85 %	97 %
Harborough	48 %	38 %	40 %

Brent	60 %	54 %	73 %
Bradford	71 %	58 %	53 %
Richmond	88 %	92 %	93 %
Wealden	36 %	46 %	83 %
Winchester	86 %	73 %	73 %
Lambeth	50 %	35 %	57 %
Eastleigh	62 %	46 %	43 %
Sutton	83 %	81 %	57 %
Wirral	50 %	69 %	53 %
Ryedale	55 %	46 %	53 %
Fife	81 %	100 %	90 %
Oxford	62 %	58 %	70 %
Dundee	81 %	77 %	73 %
Carmarthenshire	55 %	58 %	67 %
Northumberland	69 %	58 %	77 %
Stroud	43 %	50 %	40 %
Islington	69 %	62 %	57 %

From Table 2, it can be observed that very few local authorities have achieved scores of 0 or 2 and are under- or well-performing according to the checkpoint's analysis (coloured in red and green). The majority are averagely scoring (coloured in amber). For this reason, the aim was to investigate further which are the well- and under-developed attributes which stand out for each checkpoint. Tables 3 and 4 present the under-developed attributes which stand out from each checkpoint and Table 5 presents the well-developed attributes per checkpoint.

Table 3. Underdeveloped Attributes

Attributes	% of local authorities scoring 0 (Threshold >50%)
Checkpoint 1 - Action Plan Content	
Item Ownership	52%
Checkpoint 2 - Action Plan Characteristics	
Costed	67%
Checkpoint 3 - Processes	
Budget / Cost the actions of creating an AP	73%
Appoint monitoring team for the creation of the Action Plans	52%

From Table 3 it can be observed that the attributes related to financial resources and costs appear to be the most under-developed in the action plans. For example, in Checkpoint 2, 67 percent of local authorities score 0 in the 'costed' attribute, which is related to the costs of implementing measures in the action plan. In a similar way, in Checkpoint 3, 73 percent of local authorities score 0 in relation to the budget and cost of creating an action plan.

Table 4. Extended List of Underdeveloped Attributes

Attributes	% of local authorities scoring 0 and 1 (Threshold >70%)
Checkpoint 1 - Action Plan Content	
Risk Assessment and Risk Mitigation for the Actions	85 %
Checkpoint 2 - Action Plan Characteristics	
Costed	88 %
Financing Secured	79 %
Responsibility defining/assigning	73 %
Creating Cross-sectoral Co-benefits	79 %
Checkpoint 3 - Planning process	
Set the requirement to explore Co-benefits Across Sectors	73 %
Budget / Cost the actions of creating an AP	91 %

From Table 4 it can be observed that when summing scores 0 and 1, costs and budget stand out as reflected in the *'financing secured'* attribute. Furthermore, this sum complements the list resulting in more attributes in Table 4 than the Table 3, highlighting the importance of utilising both scores to paint a more complete picture of the challenging areas. Score 1 indicates that while some of the attributes are present, they are not necessarily fully developed. It was thus decided to include these attributes in the recommendation section for local authorities to fully develop them. This is the case for the attributes on risk assessment, responsibility assignment and the creation of co-benefits.

3. Quantitative Results: Well-developed Attributes

Table 5 presents the well-developed attributes on which at least 75 percent of local authorities scored 2.

Table 5. Well-developed Attributes

Attributes	% of local authorities scoring 2 (Threshold >75%)
Checkpoint 1 - Action Plan Content	
<u>Priority areas and sectoral assessments</u>	76 %
Checkpoint 2 - Action Plan Characteristics	
Reflectiveness of past strategies	85 %
<u>Evidence-based</u>	82 %
Comprehensive	76 %
Checkpoint 3 - Planning Process	
<u>Carry out GHG assessment</u>	85%

Table 5 summarises the attributes which scored higher overall and the checkpoints to which they belong. An insightful observation can be made here. In terms of action plan content (Checkpoint 1), the content attribute *'identified priority areas and sectoral assessments'* is reflected by the characteristic of an action plan to be *'evidence-based'* and backed up by rigorous data (Checkpoint 2). In turn, results of the Checkpoint 3 also demonstrated higher scores for the attribute *'Carry out GHG assessment'*. Reinforcement of these attributes shows coherence in the results. This means that more than 75 percent of local authorities had an evidence-based approach to carrying out GHG assessments and set priority areas by sectors.

Another interesting observation is that all five best performing attributes listed in Table 5 fall within the Administrative Analytical Capacity which was already shown to score the highest on average of all capacities. This means that local authorities have a better-developed ability to

mobilise their knowledge and expertise for the assessment and the delivery of their climate commitments. However, in terms of underperforming attributes (Tables 3 and 4), there is no clustering as these attributes fall within various capacities.

In this sense, it should be noted that analysing administrative capacities must consider the different tiers of government, including urban and rural areas that may possess varying needs and contexts (Polidano 2000 cited by El-Taliawi and Van Der Wal, 2019). Therefore, the next section provides more insight on the local context factor by considering different geographical characteristics.

4. Geographical Correlations

The outcomes of sorting of local authorities in relation to their geographical location can be found in the Appendix in Table A7.

An analysis is made of the top and bottom performing local authorities (reflected in green and red in Table A7). Better performing local authorities (the top six) have an urban profile (>83%) and significantly less (<17%) are rural. In this case, being in a coastal or inland area doesn't play a definitive role, with both scoring 50%. Worse performing local authorities (the bottom five) demonstrate the opposite. In this case, rural or urban location does not have a significant correlation (40% and 60%) while most were concentrated in inland areas (80%) and far less (20%) of the underperforming ones are in coastal areas.

However, the need for a more rigorous analysis was recognised in order to account for geographical characteristics not being in equal numbers in the list, (e.g. twice as many urban compared to rural) and increasing the sample from only top or bottom 5-6 local authorities to including all of them. Therefore, a sensitivity analysis was done, in which all local authorities were included in the analysis and the outcomes were weighted to account for their difference of occurrence. This resulting in a confirmation of the result that in better performing local authorities have a tendency to be located in urban areas.

Nonetheless, due to the very local and particular context of local authorities, it is essential to consider qualitative data and use more contextual inputs from the interviews with individuals involved first-hand in the delivery of these action plans.

5. Qualitative Results: Interview Findings

Table 6. below summarises the topics for which representative from local authorities pointed out challenges and best practices. The findings support the previous quantitative assessment and also shed light into new areas. For further details about the interview results on challenges and best practices of local authorities the reader is referred to the summaries in Table A9.

Table 6. Summary of Interviews Insights

Local Authority	Lessons Learnt and Challenges	Best Practices
Interview A (city, urban, inland)	<ul style="list-style-type: none"> • Infrastructure Lock-in • Embedded Carbon 	<ul style="list-style-type: none"> • Risk Management • Partnerships
Interview B (city, urban, inland) *local authority is still developing action plan	<ul style="list-style-type: none"> • Source of Funding • Measuring Success 	<ul style="list-style-type: none"> • Public Engagement • Embracing Visions of Local pressure Groups
Interview C (city, urban, inland)	<ul style="list-style-type: none"> • Attainable • Funding Allocation 	<ul style="list-style-type: none"> • Stakeholder Engagement • Setting Priorities
Interview D (city, urban, inland)	<ul style="list-style-type: none"> • Co-benefits • Costing 	<ul style="list-style-type: none"> • Climate Action Framework • New Governance Structure
Interview E (city, urban, inland)	<ul style="list-style-type: none"> • Public Transportation • Extended Expertise 	<ul style="list-style-type: none"> • Assessment and Profiling • Sustainable Partnership
Interview F (city, urban, inland)	<ul style="list-style-type: none"> • Partnerships • Funding 	<ul style="list-style-type: none"> • Internal Coordination • Influencing Employee Behaviour
Interview G (city, urban, inland)	<ul style="list-style-type: none"> • GHG Measurements • Implementation 	<ul style="list-style-type: none"> • Innovative Borrowing • Priority Identification

6. Qualitative Results: Analysis of Themes

The following findings are categorised in different themes which correspond to interview questions and findings.

i) COVID-19

Overall, the interviewed local authorities described that prior to the COVID-19 pandemic, they did not encounter challenges in determining priority areas for the development of their action plans. This is relevant as setting priorities constitutes a pre-condition for effectiveness (Ye and Ockenden, 2016). Local authorities were then asked if COVID-19 changed or affected their proposed prioritisation. The interviews revealed different results.

For instance, one local authority pointed out that the plan will continue as it was initially planned and that the pandemic demonstrated the importance of speeding up the actions to tackle climate change and address the coming economic recession through a green recovery. On the other hand, two local authorities identified that COVID-19 caused a diversion from their initial priority areas of promoting public transportation or reduced the numbers of staff dealing with the Climate Emergency. Also, efforts oriented towards behaviour change and renovation of train and bus fleets prove to be ineffective in the short term; due to the social distancing rules, their programmes are affected as people are now opting for private cars over public transportation. However, this enabled an acceleration of the installation of district heating which involved digging up roads.

ii) Budget

One of the common issues that came across in different interviews was the absence of a specific budget dedicated to tackling the climate emergency. One of the challenges identified relates to the lack of funding from the central government. For example, one local authority pointed out that for the last ten years they have received less resources from the central government, which has led the council to adopt austerity measures.

iii) Partnerships

Building alliances with the private sector was not considered a priority in alleviating budget issues for three local authorities. They described that partnerships in the climate sphere became increasingly challenging as the public and private agendas do not necessarily align. On the other side, just one local authority described partnerships as a priority in the implementation of the action plan. They explained that the local authority recently established a Sustainable Development Partnership to work with the private sector and key organisations to tackle climate change and improve the social and economic wellbeing of the entity.

iv) Internal expertise

Four local authorities pointed out that they have solid internal expertise for the creation and implementation of the action plans. Thus, it was explained that there was no need to hire new experts as these teams have developed their previous environmental strategies so that they can reflect the current action plans. Contrarily, one local authority described that the austerity measures have led to general understaffing and lack of internal expertise, particularly in the energy sector, which has ultimately affected the creation and implementation of their action plan.

v) Item ownership and monitoring

Regarding item ownership and monitoring, four local authorities described that their environmental departments are the ones in charge of the implementation of action plans. After declaring a climate emergency, these local authorities did not see the need to modify their organisational structure, arguing that their internal departments already address strategic areas for action planning such as housing, transport and energy efficiency. However, despite the satisfaction of the respective local authorities with item ownership, it cannot be overlooked they have not yet developed monitoring systems. In some specific cases, the monitoring system is still oriented towards internal departmental coordination and does not apply to monitoring of climate emergency actions.

vi) Individual Insights and Best Practices

- Understanding of climate emergency: It is important to note that several of the local authorities interviewed have not developed a clear understanding of the difference between a climate change/sustainability/environmental plan and a climate emergency action plan. This reflects a lack of a homogenous definition across local authorities of what structural changes are needed to address the climate emergency.
- Inclusiveness: One of the best individual practices identified in the interviews was the case of a city's inclusiveness strategies are oriented towards addressing the impact of

climate change on the marginalized and the vulnerable. This is particularly important as almost half of the analysed local authorities have not fully developed this attribute with vulnerable communities who are impacted by climate change.

7. Linking Quantitative and Qualitative Results with Administrative Capacities

Quantitative insights alone are insufficient to address all the dimensions embedded in climate change, including uncertainty. To complement this limitation, qualitative approaches, mainly interviews, were incorporated with the analysis and assessment of the quantitative results (Pye, et al 2018). This section integrates the quantitative and qualitative results on under-developed attributes within the framework of the administrative capacities.

i) Coordination capacity

Climate change has been considered as a wicked problem for governments inasmuch as it requires highly complex planning that cannot be organised within a single sector or administrative level (Christensen, et al 2019). In this respect, interview findings revealed that local authorities face challenges in building partnerships and assigning item ownership.

- Partnerships

The interviews revealed the challenges in building public/public-private/ private partnerships. Representatives expressed their concerns about forming partnerships with large corporations due to their profit-oriented nature. For example, two interviewed local authorities described that it is inherently challenging to align scaled investments with government's objectives revolving around vulnerable groups and their impacts associated with the climate emergency. Thus, local authorities are finding themselves in a situation where both parties are unable to work towards a common objective and are missing out on the opportunity of building collaborative partnerships.

- Item ownership

The quantitative results showed that over 50 percent of the local authorities do not include item ownership in their action plans. During the interview stage some local authorities revealed that the lack of item ownership is attributed to the understaffing and lack of internal expertise. This can derive from a lack of coordination capacity which is needed to address the climate emergency.

ii) Delivery capacity

Delivery capacity is crucial to achieve an effective implementation of the action plan and it entails setting priorities and aligning resources to materialise objectives (El-Taliawi & Van Der Wal, 2019). In this regard, the quantitative and qualitative results show that local authorities lack the development of two attributes that fall in this capacity: financial security and monitoring mechanisms.

- Financial security (funding mechanisms)

Financial security is an integral component of climate action planning. Findings from the quantitative assessment show that nearly 80 percent of local authorities have not secured the funding needed for the delivery of their action plans. Some of them have secured a smaller share of the resources needed or are still considering different funding mechanisms. As insights from the interviews revealed, securing resources from the central government is one of the biggest challenges in local authorities for the delivery of climate action. This challenge reflects the local authorities' dependency on the resources from the central government.

- Monitoring

Findings from the quantitative assessment shows that more than half of the local authorities do not have monitoring systems for the revision and evaluation of their targets. The result was confirmed by the interviews where local authorities described the absence of a specific monitoring system or department to follow-up and evaluate their targets.

According to academic literature, measuring progress in climate action plans is the main challenge in monitoring processes. Without careful monitoring, the data is not fully collected, and progress cannot be fully assessed (Covenant of Mayors for Climate and Energy Europe, 2019). However, it is interesting to note that while local authorities lack monitoring systems, 63 percent of them score 2 for the measurable attribute. This is a positive finding as measurable actions were identified by local authorities as a prerequisite for monitoring systems during the interviews.

iii) Analytical capacity

This capacity includes a thorough examination of policy options, including their costs, benefits, as well as the evaluation of trade-offs (Head, 2015). To manage the complexity of climate change issues, it is required to enhance the analytical capacities which encourage integration of innovative approaches such as the promotion of joined initiatives to connect different policy areas (Head, 2015). The quantitative assessment showed that this capacity had the best performance across local authorities. Still, two main attributes in this capacity: co-benefits and risk assessment were still underdeveloped in most local authorities.

- Co-benefits

The quantitative results showed that almost 80 percent of the action plans do not include the co-benefits of addressing climate emergency and/or include them briefly. Evidencing the co-benefits may "catalyse more focused action and inclusive collaboration" (UNFCCC, 2019, p.15) and may involve delivering more climate actions, cost savings, liveability and environment preservation (Tyndall Centre, Centre for Climate Change and Social Transformations & CDP, 2020).

However, 4 local authorities (Nottingham, Fife, Wandsworth, North Somerset, and Richmond) scored 2 as they detailed the specific co-benefits on each of their actions. For instance, their action plans explain that improving air quality is linked to better health standards and reducing energy costs is associated with lower levels of inequality.

- Risk assessment

Risk assessment can anticipate failures in the implementation of strategies on a project (Howlett, 2009). Findings from the quantitative analysis indicate that 85 percent of the local authorities do not include a risk assessment in the action plans and/or include it briefly. Literature suggest that the lack of technical understanding in the organisation can be detrimental for the performance of risk assessment (Jacxsens et al., 2016). This might be attributed to understaffing and lack of internal expertise described by local representatives during the interview stage. Furthermore, it has been argued that a challenge to the successful implementation of a risk assessment is the internal promotion of a positive risk culture that encourages openness and discussion in crucial issues (UK Government, 2017).

iv) Regulatory Capacity

In order to adequately deal with the climate emergency, strong regulatory systems are needed in the public sector (El-Taliawi & Van Der Wal, 2019). This entails the political will to continuously reform and adopt regulatory frameworks to adapt policies to the most demanding priority areas in climate emergency (El-Taliawi & Van Der Wal, 2019). In this sense, the results from the quantitative and qualitative analysis demonstrated the need to enhance regulatory capacities to address and incorporate two attributes: costs and inclusiveness.

- Inclusiveness

Even though many of the action plans analysed touched upon inclusivity as an important aspect, insights from the assessment of action plans and interviews revealed that there are no specific actions to alleviate the impacts of climate change in vulnerable communities. The issue is that strategies in most action plans address the borough/council/entity as a whole and do not differentiate that vulnerable communities will be the first and foremost who are impacted by climate change.

However, some local authorities as in the case of Lambeth (one of the few local authorities which score 2 in this attribute) offer a clear distinction in this subject. Lambeth's action plan considers the risk associated with shifting to a low-carbon economy, which in many cases produces trade-offs which can exacerbate social inequalities and vulnerabilities. To solve this issue, the local authority created a citizens' assembly which promotes public engagement to ensure a just transition. This is particularly important as climate change is likely to exacerbate risks in low- and middle-income urban centres (Dodman & Satterthwaite, 2009).

- Costed

The quantitative results revealed that almost 70 percent of the local authorities do not include the cost of implementing actions. In addition, regarding Checkpoint 3 (processes) the findings indicate that more than 90 percent of local authorities have not publicly disclosed the costs and budget of creating their action plans. However, as findings from the interviews suggest, local authorities have limited financial capacities to allocate a specific budget which makes it difficult for them to calculate the cost of each action in their action plans. Local authorities usually expect each of their internal departments to allocate resources to address strategic areas in their

sectors. For instance, the budget for building new bike lanes would come from the transport department.

Regarding budget and costs of creating an action plan, interviews revealed that some of the costs are not publicly available due to contractual arrangements with partners. However, the inclusion of information in relation to budget and costs in climate action planning is important to ensure transparency and accountability to the public/recipients of public services (Stein, 2019).

VI. Methodological Reflection

i) Checkpoints

As Checkpoint 3 focuses on the development of action plans, external sources such as minute-to-minute meetings, news stories, and interviews needed to be consulted to complement the assessment of this checkpoint. It is important to note that the results of this Checkpoint do not necessarily mean that the attribute was not present, but rather that the information was not publicly available.

For instance, as previously mentioned, information from the interviews revealed that internal costs are often not disclosed or publicly available due to contractual arrangements with partners. This calls for a more transparent mechanism in local authorities to disclose the internal process associated with action plans development.

ii) Interviews

Conducting interviews helped in identifying additional implementation challenges which the quantitative analysis and assessment of action plans did not capture. For example, the scoring system did not reveal the implementation gaps and specific reasons to (not) pursue partnerships with the private sector. Furthermore, the interviews revealed the lack of specificity in addressing the climate change impacts on vulnerable groups. This suggests that in some instances the attributes which have medium scores can reflect the most challenging aspects in a local authority. These additional insights helped the group complement the attributes on which it was decided to give recommendations.

iii) Scoring Peer Review

The double scoring of each action plan added rigour to the assessment process overall. It was common that scores differed during the reviewing process and the reviewing team had to reach an agreement on a final score. The decision to score local authorities in pairs and not by more members was made in view of resource efficiency and timing of the project. However, it would have added more rigour to the assessment if each action plan was reviewed by all members of the team. It should be noted that most of the time the differences in scoring were only up to 1 scale, so the overall differences for the analysis can be expected not to be large.

iv) Interview Participation

At the outset of the project, a higher interview participation rate from local authorities was envisioned. There were 33 local authorities to be contacted and some of them have a strong

connection with the client, Arup. However, due to the COVID-19 pandemic the priorities of a lot of the local authorities changed, which automatically lowered the response rate. Additionally, it was initially intended to conduct interviews in person and due to social distancing rules, the group had to switch to online means. Regardless, of the challenging times, the team managed to contact and interview 18 percent of the 33 local authorities which action plans were analysed.

v) Quantitative analysis

For different purposes, two different quantitative approaches were used to gain insight from the individual scoring of each attribute in each local authority (Checkpoints analysis and Administrative Capacity analysis). Initially, there was no plan in attributing an individual average score on local authorities in either the Checkpoints or the Administrative Capacities. However, that type of scoring was introduced in order to allow for the report and tables in it to be used as a tool. The scoring was limited to not include an overall score for each local authority, in order to not create the impression that they were put in any sort of competition, as this was not the purpose of the study.

Additionally, assessing the climate emergency action plans against the attributes at such an early stage of the implementation phase, scrutinizes intents but does not necessarily disclose the final outcome or success of the plan. Nonetheless, this sort of analysis is relevant due to the growing momentum around global emergency declarations and climate action planning. It aims to provide a framework which may improve further implementation of climate emergency declarations and action plans but should be followed by further study to assess the pitfalls to be encountered in the phase of implementation (Davidson et. al., 2020).

vi) Theory Integration

Integrating administrative capacity theory with attributes was done for the purpose of reflecting on and integrating academic literature in regard to the implementation process of climate change policy. This represented a challenge as climate emergency literature is still an emerging field with some areas such as climate action planning, implementation and climate governance still developing. Another reason for this chosen method is following the reasoning that this project is undertaken by students of a Master of Public Administration and it was thus considered essential to base the project's assessment on theories and frameworks that incorporate the public administration theory.

vii) Literature review

The groups initial understanding of the climate emergency declarations was blurred due to the absence of a universally accepted definition of a climate emergency. Nonetheless this has been overcome by developing the attributes which characterised the phenomenon as a whole, grasping its systemic, political, environmental, economic and social facets. Nonetheless, the multi-faceted and limited agreement on the definition consequently posed challenges on assigning a limited number of appropriate strategies to address the crisis (Davidson et. al. 2020).

viii) *Categorising Attributes*

As explained in the methodology section, the process of categorising the attributes to the administrative capacity theory was done in two steps, namely individual assessment and peer review. One of the main challenges in the peer review assessment was to match the attributes with the administrative capacities as some of these attributes can fall into more than one capacity. It was therefore essential for the team to have a clear understanding of the definition of each attribute in order to assign it to the relevant capacity accordingly.

ix) *Threshold*

In the quantitative analysis there was a need to set a threshold on the scores, above or below which the results would be separated in terms of importance. Given that the sample of local authorities' action plans was relatively small, the results from setting a certain threshold were immediately visible and there was no need for an advanced statistical analysis. The thresholds were set at such levels to highlight a limited number of attributes. This decision was influenced by taking into consideration the resources and time available for the project to produce recommendations. While the analysis can identify many attributes may need recommendations, for the purposes of this project thresholds were set to identify only the most problematic and the best performing attributes. top outliers.

VII. Recommendations, Lessons Learnt & Best Practices

This section aims to link the results from the analysis with corresponding recommendations. It incorporates recommendations from the literature and best practices from the local authorities interviewed. The recommendations per capacity are summarised in Table 7 below and further details on each recommendation, including more specific guidance, can be found in the Recommendations Section the Appendix.

Table 7. Topics for Recommendations on Improving Climate Action Plans

Administrative Regulatory Capacity	<ul style="list-style-type: none">• Inclusiveness• Costing of the Action Plan
Administrative Coordination Capacity	<ul style="list-style-type: none">• Partnerships• Item Ownership
Administrative Delivery Capacity	<ul style="list-style-type: none">• Financial Security• Monitoring
Administrative Analytical Capacity	<ul style="list-style-type: none">• Co-benefits• Risk Assessment and Risk Mitigation for Climate Actions

1. Inclusiveness

- Action plans should address the vulnerability and exposure of disadvantaged communities to climate change.
- It is essential that action plans address any arising implications associated with trade-offs between different climate change measures.
- Conducting equality profiling and impact assessments and adoption of Early Warning systems helps to develop a thorough understanding of vulnerable groups and their needs in terms of climate mitigation and adaptation measures.

2. Costing of the Action Plan

- Achieving meaningful climate action demands better use of cost information. Thus, employing financial and management accountancy enables monitoring of local authority's performance and supports well-informed internal decision-making.
- Using priority-based budgeting, utilising authorities' objectives as a starting point in assigning budget (Audit Scotland, 2012).
- Calculating unit costs links the costs of a distinct service with its output. This is particularly useful to help evaluate the benefits and disadvantages of pursuing different climate actions and priorities. This can also provide a benchmark across time or among local authorities (Communities and Local Government, 2008).

3. Partnerships

- Creating partnerships has proven to ensure an effective way to support the delivery of climate commitments.
- Clear specification of partner's objectives helps improve transparency and enables a more effective implementation of actions.
- Establishing mechanisms which facilitate the conversation between partners helps set priorities and goals in a clear and objective manner.

4. Item Ownership

- Assigning item ownership to actions enables an easier and better coordinated delivery process.
- Item ownership is an integral part of climate action planning from the process of developing the action plan to its execution and monitoring phase.
- Promoting capacity building and reinforcing coordination mechanisms across different levels or departments promotes an effective implementation of item ownership.

5. Financial Security

- Considering other alternative sources of funding helps local authorities become less dependent on direct government funding and tax revenue. Alternative sources of funding can be pursued through a mix of public and private investments which generate broader economic benefits such as increases in gross added value and employment.
- Financing can also be drawn from the banking sector as banks have a pivotal role in the delivery of financial capital can provide innovative models such as Community Municipal Investments crowdfunding platforms.
- Local authorities can also pursue financing through Climate Finance and a mechanism of blended finance can be introduced to ensure robust risk management of a portfolio of different streams of blended funding.

6. Monitoring

- The implementation of monitoring mechanisms enables an on-going surveillance on progress of climate action delivery.
- Monitoring should consider adaptation and mitigation actions separately in order to comprehensively address climate change.
- Developing a set of metrics and indicators will enable the monitoring of progress made and will allow for making progress comparisons with other local authorities.
- Incorporating programmes to enhance the internal technical knowledge of the local authority helps to closely monitor GHG emissions.

7. Co-benefits

- Action plans should address ways in which they could work with organisations and industries to create co-benefits for their communities.
- To enhance the realisation of co-benefits local authorities can adopt policy frameworks to establish the basis for actions and interventions.
- Leadership programmes can help to disseminate the co-benefits of climate action across different actors of society.

8. Risk Assessment and Risk Mitigation for Climate Actions

- Risk assessments should be integrated in action plans to provide an assessment of the risk associated with the delivery of each action.
- The Business Areas Climate Assessment Tool (BACILAT) developed by the UK Climate Impacts Programme (UKCIP) can be a useful methodological approach to identify future threats and opportunities.

- The development of a Risk Matrix can help to classify risks according to consequence and likelihood. It is also advised that follow-up actions are assigned to respective owners in order to create accountability.

VIII. Conclusion

The phenomenon of climate emergency action planning is a new and developing topic in climate policy. In the UK, it emerged from the recognition that the national and local governments can do more to tackle the adverse effects of climate change. Climate emergency declarations follow a bottom-up approach which recognises the importance of action starting at the local level. In this way, local authorities can develop their own strategies to address the challenges in their specific context.

However, the ability of local governments to take the lead on dealing with the climate emergency is constrained by several factors including their administrative capacities. Development of comprehensive climate action strategies is also constrained by the insufficient literature and guidelines in climate emergency and climate change action planning. To add to that, climate emergency planning is an inherently complex process for local authorities as they diverge in geographical location as well as in different social, economic, and political settings.

These challenges have become evident in this study, in the quantitative assessment of action plans, the qualitative findings from interviews and the integrated analysis of the results of this project. Following the identification of the most common challenging topics, the project produced recommendations to address these challenges faced by local authorities. The project combined a real-life assessment of actions plans, insights from local representatives, and a thorough literature review - this was all done in order to provide sound overarching guidance. The resulting recommendations, also part of a manual for local authorities, have been tailored to address common challenges through the enhancement of administrative capacities.

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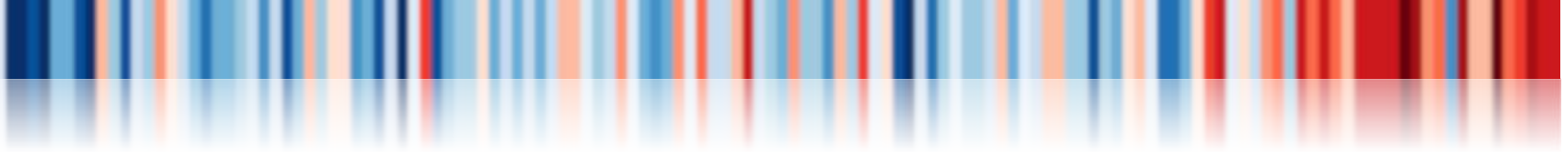
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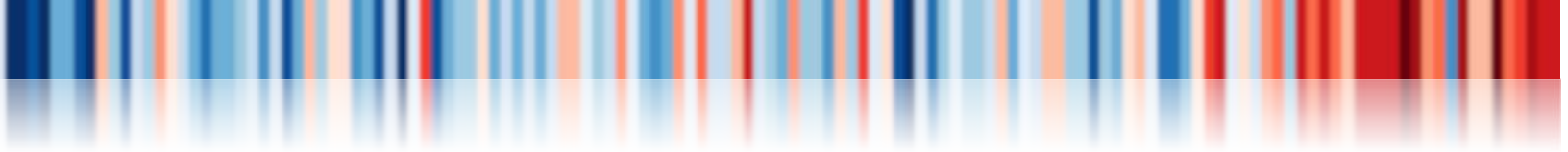
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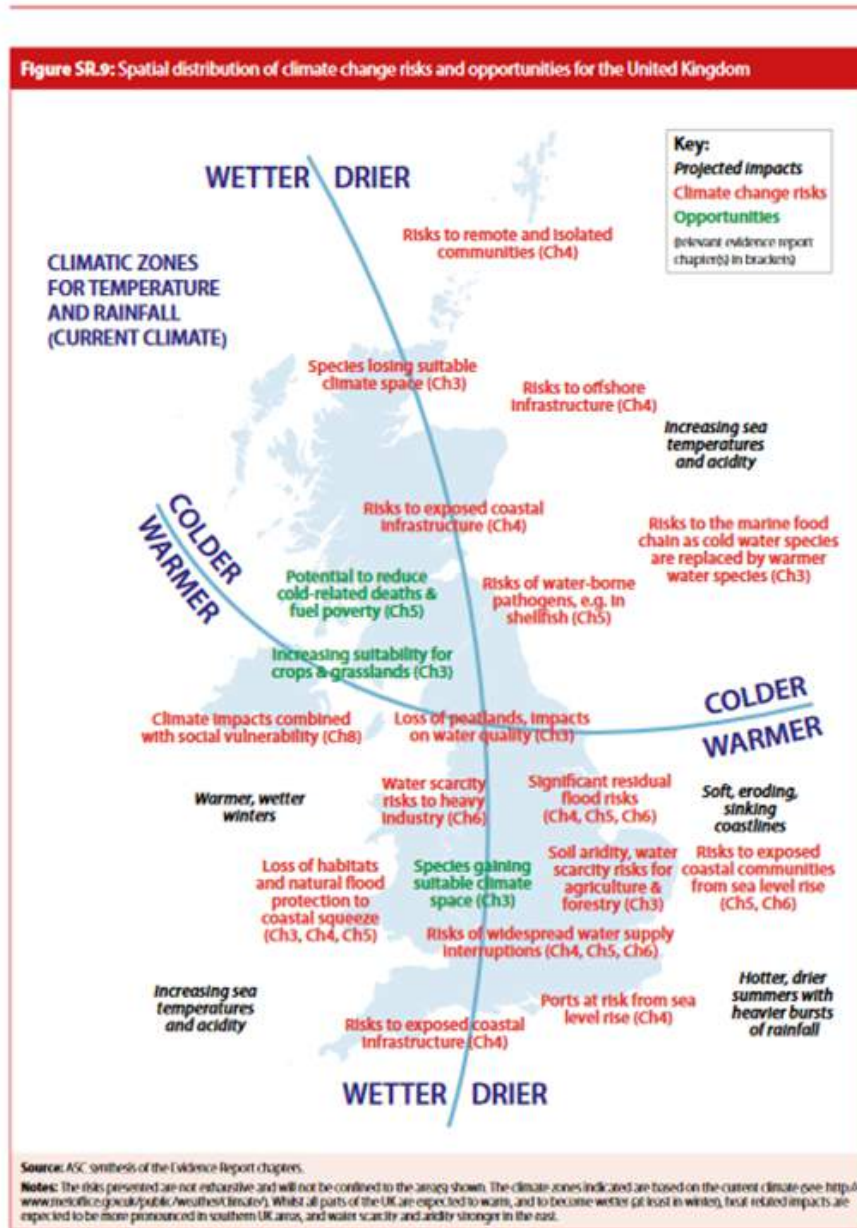
Appendix

Table A1. Addressing Climate Change: Normal and Emergency Modes

Normal mode	Emergency mode
Climate action is embedded within the business-as-usual mode.	Society is adapting in accordance with the urgency and scale of the climate emergency crisis.
Climate change action does not entail an urgency to act immediately.	Climate change action is presented through an urgency to act.
No urgent threats are perceived from climate change.	Climate change poses an immediate threat to human lives, health, society and the environment.
No unmanageable risks are envisioned and climate action is not prioritised.	High probability of climate risk escalation beyond control if immediate action is not taken.
Timely response is not a foremost priority.	Timely response is essential for effectively addressing climate change.
The climate crisis is just one of many other issues.	The climate crisis is of the highest priority for its duration.
Budgetary restraints impact on the delivery of climate actions and the climate agenda is perceived as unreasonably expensive.	Available resources are mobilised to deliver the climate emergency response and if necessary local authorities borrow heavily.
A slow rate of change occurs because of systemic inertia (action is framed as expensive and disruptive).	Rapid energy transition and scaling up of systemic change occurs.
Business-as-usual guides climate action response choices.	Climate action planning, fostering of innovation and climate research take place.
Climate action targets are driven by political trade-offs in a context of compromise.	Critical targets and goals are not compromised because failure to address climate change is not an option.
Lack of climate action leadership.	Effective climate leadership is the norm.

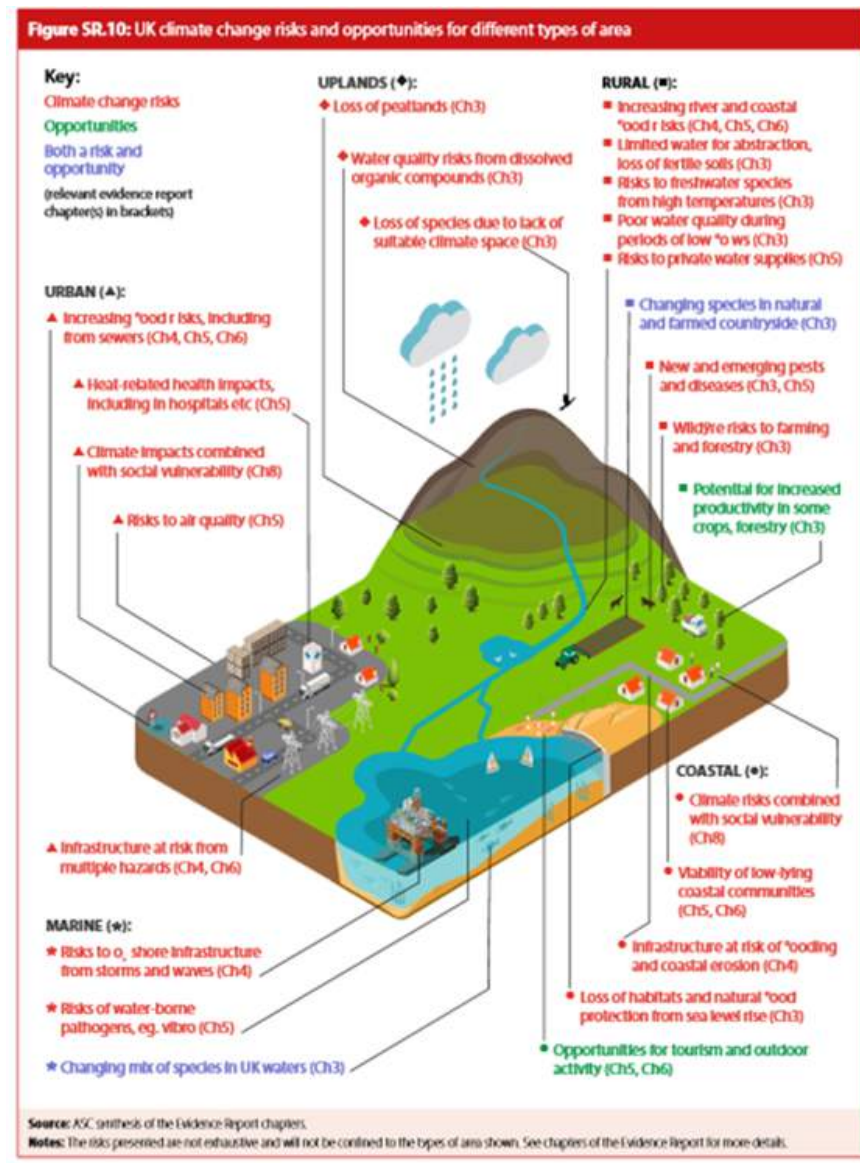
Adapted from Breakthrough 2020, 5.

Figure A1. Climate Change in the UK: Spatial Distribution



Source: Committee on Climate Change, 2017

Figure A2. Climate Change in the UK: Impact on Areas



Source: Committee on Climate Change, 2017

Table A2. Checkpoint 1

Climate Action Plan Content – Checkpoint 1	
Attribute	Description
Vision Statement	The action plan includes a vision statement that is in accordance with the Paris Agreement and with UK's Strategy to achieve Net Zero by 2050.
Executive Summary	The action plan includes an executive summary which explains the objectives of the plan, the local context, the climate emergency background etc.
Engagement strategy	There is an engagement strategy present which engages with the public on the implementation of the action plan. This for example could include its outreach and public participation activities.
Leadership and Revision Periods	It is clearly identified who is responsible for the plan itself and the timeframe of the revision periods of the action plan is included.
Stakeholder mapping	Major stakeholder groups are identified, and stakeholders and participating actors are listed.
Goals and Objectives	Goals and objectives are clearly identified.
Priority areas and sectors	The plan has a sectoral approach and establishes which are the local priority areas. These could be Include Transport, Buildings, Water, Energy, Waste, Land-use, and/or others.
Vulnerability assessment of the Sectors	The plan includes a vulnerability assessment of the local authority's exposure to current and long-term climate conditions, describes its adaptive capacities and identifies which people/places/institutions/sectors are most vulnerable to climate change.
Adaptive and Mitigating Actions	The action plan prescribes clear adaptive and mitigating actions across sectors.
Co-benefits and synergies:	The plan pursues creation of co-benefits, synergies and win-win solutions among different sectors (e.g. transport, agriculture, construction, finance, retail and energy-supply).
Risk Assessment and Risk Mitigation for the Actions	The plan includes risk assessment and risk mitigation of the actions identified.
Item Ownership	Ownership of actions is identified in order to enable reporting and accountability for the delivery of actions.
Timeline of the actions	There is a clear timeline of actions to be implemented.

Table A3. Checkpoint 2

Climate Action Plan Characteristics- Checkpoint 2	
Attribute	Description
Agile/Flexible	Action plan's measures are reversible or can later be adjusted to keep the option open to adapt when necessary". Being flexible does not mean being vague about the target. Also, it can be interpreted as including an acknowledgment that implementation can change according to circumstances.
Attainable	Based on baseline data, existing resources and capabilities, mandates and capacities; realistic about their ambitions.
Innovation spurring	Spur innovation locally using best practices and adoption of innovative solutions, working with universities, industries etc. Both fostering innovation and taking advantage of innovations count towards this attribute.
Resilient to climate hazards	Demonstrate how the city will adapt and improve its resilience to the climate hazards that may impact the city now and in future climate change scenarios. Mitigation and adaptation solutions are clearly expressed in the action plan. Showing reflection on the topic, (planning for studies or assessment on the topic, in order to pave the way for future assessments).
Carbon neutrality ambition	This attribute measures the CO2 reduction ambition, where scores are assigned in relation to the local authority's ambition to align vs surpass government's 2050 Net Zero plans.
Carbon neutrality - interim objectives	This attribute measures whether there are sufficient interim CO2 reduction objectives specified within the climate plan.
Comprehensive	This attribute measures whether multiple actions are considered across a range of sectors within the city/municipality. e.g. Transportation, Waste, Energy, Buildings etc.
Inclusive	Addresses minority and marginalised groups; includes terms as leaving no one behind; fair or just transition.
Integrated	Combines and coordinates economic planning, physical planning and environmental planning to deliver efficient policies that support, rather than undercut each other Examples: health, education, economic, social inequalities, etc.
Costed	This attribute measures whether costing is specified for the implementation of the actions specified in the action plan.

Financing Secured	This attribute measures whether the funds required for the implementation of the plan are financially secure. A well-developed financial security strategy inclusive of financial criteria should be in place.
Specific	Explicitly states the changes to be made. The action plan should be focused on addressing concrete challenges clearly stating how these would be tackled. Actions should be specific enough that they can be readily implemented and measured.
Measurable/Evaluative	Actions planning should primarily be evaluated on the extent to which they manage to attain the goals and objectives. Attribute investigates whether there are any mechanisms to measure the success of the implementation of actions.
Monitored	This attribute measures whether the action plan has a monitoring mechanism. A rigorous monitoring framework should be in place.
Time-bound	The plan has a clear implementation timeline of actions. Could be integrated in the plan or as a separate annex with tables where delivery times are specified for each action.
Perception/Behaviour change	The climate action plan is shaping the preferences of citizens. Actions to incentivise behavioural change are identified or are embedded within the broader set of actions.
Evidence-based	Climate action plans should be evidence-based reflecting scientific knowledge and local understanding.
Responsibility defining/assigning	Actions should be assigned to specific representatives, agencies, organisations, or stakeholders so that those entities can be held accountable for implementation.
Creating cross-sectoral co-benefits	The action plan aims to maximise potential co-benefits, synergies and win-win measures. Benefits may also include the generation of social capital.
Reflective	The plan is reflective of other existing plans and commitments and there is a clear sequence with previous and future actions.
User friendly	The language used in the action plan is jargon free, understandable, clear and easy to comprehend. The action plan includes visual aids such as graphs and tables.

Table A4. Checkpoint 3

Climate Action Planning Process - Checkpoint 3	
Attribute	Description
Declare a climate emergency	The council has successfully declared a climate emergency.
Setting the vision	The council has put forward a vision for the implementation of climate emergency action planning.
Choose the framework to follow for the plan	The council has considered the climate emergency overarching legal frameworks and guidelines. For the delivery of its action plan it followed an established framework or worked with an experienced partner.
Develop a public engagement strategy	The council has developed a public engagement strategy to inform and involve the public (citizens, industries, etc).
Pursuing of public/ public- private / private partnerships	The council pursues creation of partnerships and encourage working in cooperation, with industries and local power actors.
Carry out assessments GHG	The council has carried out baseline GHG assessments and has identified GHG inventory and reduction potential.
Sectors assessment - sectoral approach	The council has identified the challenges and opportunities within the different sectors (Water, Energy, Transport, Buildings, etc). An assessment is made of the different sectors and their GHG impact and reduction potential.
Identify priorities and set preliminary goals	Higher priority areas are identified from the assessment (e.g. contaminated water, pollution etc).
Identify Actions	Within the sectors identified, clear mitigation and adaptation actions are specified. Potential interventions are studied, taking into account the interventions already in place and the existing sustainability actions.
Set the requirement to explore co-benefits across sectors	The council has set the requirement to explore co-benefits across sectors and to work with local industries through pursuing partnerships and working in cooperation.
Targets	The council has set clear targets and objectives.
Carry out budgeting of the action plan and costing of the climate actions	The council has budgeted the delivery of the action plan. It has considered a range of financing options for the delivery of the actions specified (public vs. private, local vs. national vs. international financing options). It has performed financial analyses and provided costing option for the delivery of actions.
Identify leadership	The council has identified who owns and leads the process of the creating the action plan.
Develop a timeframe for the creation of an action plan	The council has developed a timeframe on the duration of the creation of the climate action plan.
Appoint monitoring team for the creation of the Action Plan and future plans	The council has established the monitoring, evaluation and reporting required for the delivery of the action plan and is monitoring is performed on an on-going basis. The council is transparent to the public and has provided public monitoring mechanisms (e.g. live trackers available to citizens, live information sections on progress and delivery)

Table A5. Administrative Capacity Description

Administrative Capacity	Administrative Capacity Description
Administrative Delivery Capacity	The capability to 'make things happen'. It is related to the resources available to ensure that the public receive services, that revenues are extracted, and that public order is maintained. It is related to the government delivering essential services that the private sector cannot entirely deliver. In another words, delivery capacity is about the resources that are deployed to ensure certain services are maintained.
Administrative Regulatory Capacity	The capacity of the government to control to maintain public order. Derives from the definition of regulation from (Black et al 2005:11), the "sustained and focused attempt to alter the behaviour of others according to standards or goals with the intention of producing a broadly identified outcome or outcomes, which may involve mechanisms of standard-setting, information-gathering and behaviour modification". Therefore, regulatory capacity is the capacity of the government to and the balance between the intended and unintended consequences that sociotechnical innovations bring.
Administrative Coordination Capacity	The government's capacity to communicate internally. It goes beyond the organization of the executive and the allocation of formal capacities to work towards the same objective. It applies to areas where collaborative governance is supposed to take place and bring together and aligning organisations from different backgrounds.
Administrative Analytical Capacity	The way in which executive governments is informs knowledge on current developments and future projections. It is also to ensure transparency and legitimacy in the light of popular scepticism regarding the application of knowledge.

Adapted from Lodge and Wegrich, 2014.

Table A6. Action Plan Attributes

Administrative Capacities	Action Plan Attributes
<p>Delivery Capacity</p>	<p>Agile/flexible Financing secured Measurable/evaluative Monitored, Time-bound Responsibility Defining Engagement strategy Develop a timeframe for the Action Appoint Monitoring Budget (creation an AP) Identify priorities Identify actions Timeline of the actions Adaptive and mitigation actions Priority areas and sectors Pursuing Partnerships Targets Leadership and revision periods Specific</p>
<p>Regulatory Capacity</p>	<p>Innovation spurring Carbon Neutrality Ambition Costed Inclusive perception/behaviour change, Declare a climate emergency Setting the vision</p>
<p>Coordination Capacity</p>	<p>Responsibility Defining Engagement Strategy</p>

	<p>Timeline of the actions</p> <p>Leadership and revision periods,</p> <p>Comprehensive,</p> <p>Integrated,</p> <p>Responsibility assigning</p> <p>Stakeholder mapping</p> <p>Co-benefits and synergies</p> <p>Item ownership</p> <p>Develop and engagement strategy related to public</p> <p>Pursuing of public private partnerships</p>
<p>Analytical Capacity</p>	<p>Interim Objectives</p> <p>Specific</p> <p>Reflective,</p> <p>Vision Statement</p> <p>Sectors assessment</p> <p>Identify priorities</p> <p>Identify actions</p> <p>Priority areas and sectors</p> <p>Targets</p> <p>Goals and objectives</p> <p>Stakeholder mapping,</p> <p>Co-benefits and synergies,</p> <p>Attainable,</p> <p>Resilient to climate hazard</p> <p>Evidence based</p> <p>Vulnerability assessment of the sector</p> <p>Assessments GHG</p> <p>Risk assessment and Risk mitigation for the actions</p> <p>Comprehensive</p> <p>Integrated</p>

Table A7. Local authorities: Geographical classification

Name of the local authority	Urban vs Rural	Coastal vs Inland	AVG checkpoints
Richmond-Upon-Thames	URBAN	INLAND	91%
Fife	URBAN	COASTAL	90%
Wandsworth	URBAN	INLAND	87%
Winchester	RURAL	INLAND	77%
Dundee	URBAN	COASTAL	77%
Southampton	URBAN	COASTAL	75%
Nottingham	URBAN	INLAND	74%
Sutton	URBAN	URBAN	73%
Cornwall	RURAL	COASTAL	69%
Kirklees	URBAN	INLAND	69%
Northumberland	RURAL	COASTAL	68%
Leeds	URBAN	INLAND	67%
Hampshire	RURAL	INLAND	66%
North Somerset	URBAN	COASTAL	66%
Peterborough	URBAN	INLAND	64%
Oxford	URBAN	INLAND	63%
Islington	URBAN	INLAND	62%
Brent	URBAN	INLAND	62%
Portsmouth	URBAN	COASTAL	61%
Bradford	URBAN	INLAND	61%
West Midlands	RURAL	INLAND	61%
Plymouth	URBAN	COASTAL	61%
Carmarthenshire	RURAL	COASTAL	60%
Wirral	URBAN	COASTAL	58%
Wealden	RURAL	COASTAL	55%
Monmouthshire	RURAL	COASTAL	55%
Bournemouth	URAN	COASTAL	54%
Ryedale	RURAL	INLAND	51%
Eastleigh	URBAN	COASTAL	50%
Lambeth	URBAN	INLAND	47%
Stroud	URBAN	INLAND	44%
Harborough	RURAL	INLAND	42%
West Devon	RURAL	INLAND	39%

Table A8. Outcomes of Top and Bottom Performing Attributes

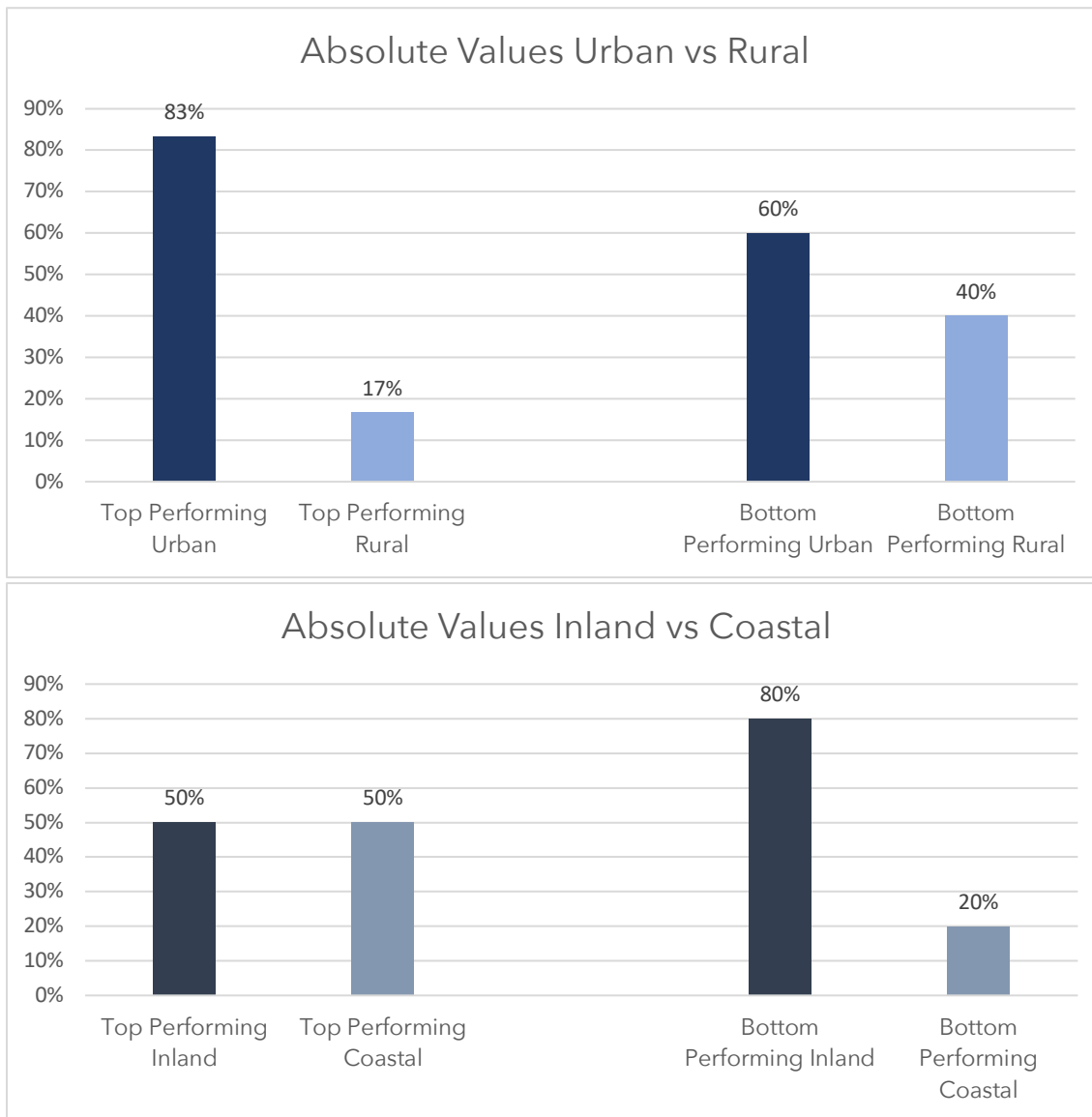


Table A9. Interview Results

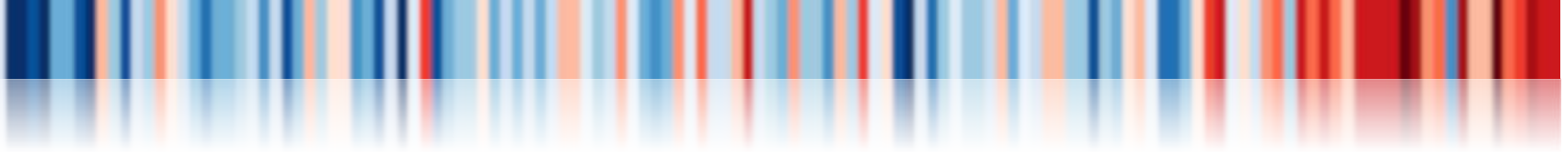
	Challenges and Lessons Learnt	Best Practices
Interview A (city, urban, inland)	<p>Infrastructure Lock-In The city's infrastructure has been heavily oriented towards road traffic, preventing a rapid transition to scaling up the costly infrastructure for public transport. Additionally, the city is embedded with a disproportionate number of Victorian properties, which are mostly inhabited by lower-income populations, causing a double conflict in the efforts towards their insulation and cost-bearing.</p> <p>Embedded Carbon The action plan is mostly oriented towards Scope 1 and 2 emissions but does not include the looming, consumption-based emissions of Scope 3. A lack of data on embedded carbon is however a challenge which is not only limited to a particular council but concerns the way we account for costs in the global economy.</p>	<p>Risk Management The Council developed guidelines, which incorporated the impacts of every council decision on equality, diversity and sustainability. The latter is embedded as a cross-cutting trait, filtering the decisions by considering the Climate Emergency and consequently blocking any decision which could increase the city's vulnerability to climate change. Potential decisions are also screened for their impact and need to include management of any escaping/potential emissions.</p> <p>Partnerships The council established a climate commission, which involves the council, universities and other organization to act as an independent advisory group, advising on carbon reduction potential of different sectors. It produces tangible considerations/cost savings for the instance of transitioning to a low-carbon sector/economy.</p>
Interview B (city, urban, inland)	<p>Funding Allocation One of the more challenging factors that the city council faced in the process of creating a climate emergency action plan</p>	<p>Public Engagement Public engagement was at the heart of the creation of the climate emergency action plan of the city. The council carried</p>

	<p>was to get all the different internal departments to agree on the level of action to be taken. Due to the limited funding, they found it particularly difficult to choose which actions should be prioritized.</p> <p>On the other hand, getting the private sector involved could be even a more difficult task for the city. As this will give rise to other implications, which will need to be treated differently.</p> <p>Measuring Success The city council found difficulties in introducing an effective monitoring and evaluation mechanism for the implementation of their climate emergency action plan. Nevertheless, the city recognised the need to track and measure success and as a lesson learnt practice, they assigned each action to an officer to be the person-in-charge. Thus, responsibility assigning helped compensate for the lack of a coherent monitoring mechanism and individuals within the council are responsible for the delivery of their assigned actions. This also makes the coordination process easier between departments within the council.</p>	<p>out a public consultation from November 2019 - February 2020. During the consultation, the city worked with experts in the field, universities and the wider community to ensure that public ideas were incorporated.</p> <p>Embracing Visions of Local Pressure Groups A large part of the reason why the city declared a climate emergency is because of the climate justice demands from local pressure groups such as Extinction Rebellion. However, a final decision was taken by the council to keep the momentum going for the city of being the leader in sustainability. Adopting this vision then led the council forward to declare a climate emergency and draft a climate emergency action plan which will be published in the Autumn of 2020.</p>
Interview C (city, rural, inland)	<p>Attainable A challenge the city council faced was to make sure that the plan was attainable. Ensuring traceability and establishing clear and quantifiable measuring indicators for both</p>	<p>Stakeholder Engagement Engagement with stakeholders has been a central aspect in the creation of the city climate action plan. For this reason, they organised a sustainability conference for the wider public</p>

	<p>the authority and wider public is a priority for the city, which required a lot of thorough work.</p> <p>Funding Allocation One of the more challenging aspects for the city was allocation of funding for the successful completion of all actions within tight timeframes. For example, the council had to choose how to more effectively allocate their funding. The city was faced with a trade-off between choosing a higher impact deep retrofit programme, which was however out of scope for the council's budget and a lower-impact insulation program which was more attainable.</p>	<p>and formed a steering group with local charities and larger stakeholders. Thus, the wider community was able to actively participate in shaping the city climate agenda.</p> <p>Setting Priorities A best practice for the city in setting priorities was to consider the associated carbon footprint. Some measures were proposed with respect to existing technologies in order to help pursue a zero-carbon ambition where possible; in other cases, actions were identified which would aid more significantly in reducing GHG emissions.</p>
Interview D (city, urban, inland)	<p>Co-benefits This local authority pointed out the need of establishing the co-benefits derived from climate actions in order to obtain the maximum value of the actions in the climate emergency plan. However, they pointed out that the main challenge for the realisation of co-benefits was the lack of engagement with local businesses, which has deterred the city council from materialising a common agenda between the public and private sector.</p> <p>Costing The city noted that costing of actions is particularly</p>	<p>Climate Action Framework Implementing a climate action framework in the city's action plan enhances the comprehensiveness of the plan. Thus, the plan is delivered in a user-friendly way and the reader can easily navigate through the plan and better comprehend the implementation process of the actions.</p> <p>New Governance Structure The local authority carried out a public consultation through an</p>

	<p>challenging because it involves taking into consideration various policies, uncertainties and the future market context. Furthermore, costing of actions in cutting-edge sectors adds inherent complexity of the costing process because innovation requires a dynamic approach. This implies that the approach to costing would need to be open for on-going changes that can incorporate the ever-evolving price-affecting factors.</p>	<p>executive panel in order to clarify its implementation. As a result, different teams were appointed, and each team is led by a dedicated senior officer lead. Thus, an implementation team was formed which is essential for assigning responsibilities and improving accountability for the plan's delivery</p>
<p>Interview E (city, urban, inland)</p>	<p>Public Transportation One of the challenges faced by the city council resulted as an implication of the COVID-19 pandemic. Prior to the pandemic, the council had introduced an initiative to raise awareness on higher emissions from private vehicles and to encourage the use of public transport instead. However, because of social distancing rules, more individuals are opting to use private vehicles, which is currently affecting the ongoing campaign.</p> <p>Extended Expertise The city council shared that it would be beneficial for them if they had extended expertise on areas. They identified that it would be helpful for them if they had more expertise in specific subjects such as the wider energy industry.</p>	<p>Assessment and Profiling The city conducted an assessment and profiling of its citizens. This assessment was done in order to understand the city's unemployment, ethnicity, life expectancy and poverty rates. This helps the city to better understand its vulnerable communities, and to address climate actions accordingly.</p> <p>Sustainable Partnership The city believes that partnerships are essential for the implementation of climate actions. For this reason, they established a sustainable partnership initiative with the aim to bring together and build alliances with key organisations and industries to address climate change.</p>

<p>Interview F (county, rural, inland/coastal)</p>	<p>Partnerships One of the more challenging aspects of climate action for the county has been pursuing of just partnerships, focused on the delivery of equitable and inclusive actions. Making a difference for children, elderly and more vulnerable people is a priority for the county, and they aspire to get bigger corporations on board with their vision for just climate action.</p> <p>Funding In the experience of the county, it has been challenging to secure budget for the medium-long term execution of climate action, especially in light of the current COVID-19 crisis. The local authority outlined that mobilisation of limited funds is targeted to marginalised groups and individuals affected by the pandemic. In turn, prioritising the COVID-19 emergency has resulted in some questions regarding the future funding of climate actions.</p>	<p>Internal Coordination A best practice from the county is an internal monitoring tool the team is using for coordination and keeping track on progress of actions. As the climate actions are embedded within wider sectoral programmes, a live tool updates and feeds information from the other teams to the climate team where climate actions are monitored.</p> <p>Influencing Employee Behaviour The county has introduced an internal initiative on influencing employee behaviour. Employees are reminded of the various ways they can reduce their CO2 footprint. The county would like to set the example on how change can be encouraged internally and lead the way of change for the wider community.</p>
<p>Interview G (county, rural, coastal/inland)</p>	<p>GHG Measurements This county council identified that one of their more challenging areas is performing GHG assessments for the area and getting more detailed data on their emissions. They aspire for a tool to feed them real-life detailed data and help them track their progress on reduction of GHG emissions.</p>	<p>Innovative Borrowing The county council identified that they are funding some of their climate actions through an innovative programme for interest rate free arrangements.</p>



	<p>Implementation</p> <p>Some of the major challenges encountered by the county council resulted from project delays associated with COVID-19 implications. This has resulted from the fact that climate actions are embedded within other more general programmes and delays within the programmes have been reflected in delays of the implementation of climate actions. The council strives to get more political support and to be able to execute their commitments in a timely manner.</p>	<p>Priority Identification</p> <p>The county council used a matrix tool which helped them identify the feasibility of climate actions. Actions were sorted on an axis assessing whether they were easy or difficult and whether they have low or high GHG reduction potential. Thus, they came up with a low/medium/high feasibility of actions which helped them prioritise their focus areas.</p>
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Recommendations

Regulatory Capacity

1. Inclusiveness⁴

Why Action Plans need to be inclusive?

Individuals who are economically, socially, institutionally and politically marginalised are particularly vulnerable to the effects of climate change. These groups which are often located in the rural or urban poor areas tend to have a limited adaptive capacity, mainly due to their economic status which makes them more vulnerable than other groups of society (UNFCCC, 2018).

The Institute for Fiscal Studies estimates that for the last two years absolute poverty (which measures the fraction of a population who have a household income below a fixed poverty line) has remained unchanged in the UK (Bourquin et al. 2019). In addition, it has been argued that since 2004 food insecurity has worsened among low-income households in the country (Loopstra et al. 2019). Furthermore, the Institute for Public Policy Research estimates that due to the COVID-19 pandemic, 1 million more people in the UK will be under the poverty line (Parkes & McNeil, 2020). Therefore, it is essential that climate action plans take into consideration these implications and aim to ensure a just and equitable transition to Net Zero, addressing the vulnerabilities of marginalised groups.

What is recommended?

It is recommended that local authorities in the UK specify and address in their action plans the vulnerability and exposure of disadvantaged communities to climate change. For instance, some local governments are located in coastal areas which are more prone to climate natural hazards such as floods. While the action plans of these entities acknowledge this vulnerability, they do not specify nor differentiate how floods can impact disadvantaged communities. In this respect, the results of a study conducted in 2018 estimated that flood risks in the UK are higher in socially vulnerable communities, particularly in coastal areas, dispersed rural communities and economically struggling cities. Furthermore, the study details that 50 percent of the

⁴ The criteria set in the project defines inclusiveness as a specific measure to address minority and marginalised groups and includes terms as leaving no one behind; fair or just transition. It includes specific actions to mitigate and adapt the impacts of climate change to the necessities of these communities.

population exposed to flooding in disadvantaged neighbourhoods are concentrated in 10 local authorities⁵ (Sayers et al. 2018).

In addition, it is recommended that action plans address the trade-offs faced by vulnerable groups in relation to the proposed actions to mitigate or adapt to climate change. For example, most of the actions plans propose measures such as retrofitting of households as part of their energy efficiency strategies. However, while whole home retrofits are delivering better energy performance, they can lead to an increase in property value if delivered without sufficient government subsidies. In turn, this can affect the livelihood of vulnerable groups (UK GBC, 2017). Thus, local governments need to be aware of these trade-offs and address them through actions which mitigate the social impacts associated with climate change measures.

How can action plans be more inclusive?

A reduction of the exposure of these communities can be achieved through the adoption of Early Warning Systems. These systems are part of an integrated communication system of adaptation measures which can help vulnerable groups to better prepared for respond to natural hazards (UN, nd). For example, India implemented community-based flood warning systems in the Himalayan region to help 45 vulnerable communities to become more resilient to flooding hazards. The system operates through a sensor and transmitter which detects rising water levels in vulnerable areas. When the water reaches critical levels, the warning is communicated to community members to their mobile devices (UNFCCC, 2013).

Furthermore, during the interview stage the team identified best practices in local authorities, which can be replicated across the country. For instance, an initial step taken by Bradford as part of their inclusiveness strategy was to conduct an equality profiling and impact assessment of the city. Through this process, Bradford was able to develop a clear understanding of poverty rates, unemployment, life expectancy and ethnicity of its population. The information gathered was then used to alleviate these vulnerabilities through specific actions. For instance, Bradford addressed vulnerable areas such as poor-quality housing in the most deprived neighbourhoods. Thus, performing vulnerability assessments can help detect which households are currently below the poverty line and in this way adjust the policy interventions in a way to be inclusive of the most vulnerable communities.

⁵ East Lindsey, Glasgow, Leicester, North East Lincolnshire, Swale District, Tower Hamlets, Hull, Boston, Belfast and Birmingham

2. Costing of the Actions within the Action Plan⁶

Why local authorities need to do costing?

The scale and unpredictability of the climate emergency is likely to challenge or overwhelm response capacity, demanding a mobilisation of all possible resources from the government, society and external bodies. Local and national authorities will have to develop institutional capacity and decision-making processes to evaluate costs and harness appropriate resources as other sectors appear improbable in willingly taking on the associated responsibility and costs of climate action (Davidson et. al., 2020). Additionally – cost information remains one of the main elements of assessing performance (Audit Scotland, 2012).

What is recommended?

Achieving meaningful climate action demands better use of cost information. This will ensure that policy options are assessed according to their efficiency/effectiveness of the services they provide. Consequently, policy decisions will be better informed and realistic, which is especially relevant in the periods of decreased government spending. Additionally, providing services which deliver value for money demands measuring performance according to comprehensive baseline data on costs and quality. Nonetheless, performance can only be managed if a local authority sets clear objectives and tracks progress and impact. Policy options and cost information also have to be transparent and accessible (Audit Scotland 2012).

How can local governments implement costing mechanisms?

A pre-requisite for local authorities to implement costing mechanisms is to obtain information on inputs, processes, outputs and outcomes (what resources are being used, when and where services are being delivered, what is their quality and lastly, their impact). It is essential to access and utilise self-assessment indicators, which will help incorporate costs into key measures of performance.

Furthermore, local authorities can employ financial and management accountancy to acquire financial reports on local authority's performance and support well-informed internal decision-making. Local authorities can use priority-based budgeting, which utilises authorities' objectives as a starting point in assigning budget. This is a best practice from Aberdeen City Council, which carried out a "mapping exercise to understand the links between its objectives, the services involved in achieving those objectives and their costs".

An additional mechanism is the calculation of costs, (defined as the calculated costs for a distinct unit of service), which links the costs of a particular service with its output and can be helpful to evaluate the benefits and disadvantages of pursuing different climate actions. The calculation of costs can also provide a benchmark across time or among local authorities.

⁶ This attribute measures whether costing is specified for the implementation of the actions specified in the action plan.

Furthermore, building partnerships between local authorities can help share information and benefit from the coordinated use of resources (Audit Scotland, 2012). In this way, considering benchmarking performance and costs with other councils (and other organisations) can make value-for money comparisons (Communities and Local Government, 2008).

Lastly, local authorities can use cost budgeting techniques, such as parametric estimating which is particularly helpful when the schedule or scope of the activities is not yet fully developed. This technique provides a high-level outlook on the costs, setting a provisional budget, based on accurate historical data and quantifiable parameters. It is also recommended to predict unplanned changes or risks, thus incorporating the costs of contingency plans (Praxis Framework 2019).

Coordination Capacity

3. Partnerships⁷

Why local authorities need to establish partnerships for the implementation of Action Plans?

Addressing environmental challenges on a local level such as climate change is often a task too complex for a single organisation (Gray & Stites, 2013). Therefore, it is essential for local governments to pursue the creation of cross-sectoral partnerships to more effectively address climate change (Clarke & Ordonez-Ponce, 2017). Partnerships are found to accelerate local climate action by providing access to information, funding, resources and technology (Westman & Broto, 2018). Partner organisations could be public-private (hybrid), governmental and private-private (Crane & Seitanidi, 2014; Bäckstrand, K., 2008). The aim of forming partnerships is that through collaboration and joint projects, parties will be better suited to embed specific actions within their organisations.

The institutional design of partnerships plays a critical role for their success. Successful partnerships involve consideration of stakeholders, pursuit of collective goals, transparent communication as well as mechanisms for ensuring robust monitoring of the progress of the partnership's objectives (Clarke & Ordonez-Ponce, 2017). In addition, successful partnerships should allow a reasonable degree of flexibility of the project scope and allow partner relationships to grow and evolve (Allen et al., 2017).

⁷The local authority pursues the creation of partnerships and encourages working in close coordination with industries and local actors of power to address climate emergency actions.

What is recommended?

It is recommended that local authorities pursue partnerships for the creation and implementation of their action plans. Early partnership identification will be particularly beneficial for the delivery of local authorities' climate commitments. In addition, clear specification of each party's objectives will improve the transparency of information and help enhance the success of the partnership. Thus, improved clarity and transparency will enable partners to more comprehensively understand the nature of their relationship and how could each party accomplish its objectives. As a result, parties will be more satisfied with the performance of the partnership and are more likely to continue working together in the future (Su et al., 2011).

How can Action Plans be focused on partnerships?

Local authorities should outline their strategies and objectives for forming partnerships in order to facilitate cooperation with partner organisations. Establishing priorities and goals in a clear and transparent way will help achieve an easier collaboration between citizens, policymakers and the wider industry. An example of a best practice in pursuing partnerships can be seen in the case of the council of Southampton. In 2019 the council launched the Green City Charter in partnership with residents, local businesses and organisations. The charter encouraged a much bigger conversation on the priorities of the various stakeholders in mitigating climate change. It did so by delivering a leadership framework, which helped companies, communities and residents in pursuing carbon neutrality.

4. Item Ownership⁸

Why local authorities need to define item ownership?

Action plans are complex strategies which cover multiple areas of society such as public health, the economy, the energy sector as well as the transportation and water management sectors. In this respect, action plans include numerous strategies which touch upon different sectors. For instance, there are specific actions for retrofitting of households and public buildings. There are also awareness campaigns to promote behaviour change as well as investments in public transportation and waste management. The complexity of these intervention areas demands a decentralised system and a multi-level governance approach which promotes coordination between departments. In this regard, item ownership can facilitate such coordination.

⁸ Item ownership is defined as the assignment of responsibilities within the local authority to implement and revise the actions and targets proposed. Item ownership is not restricted to the local authority and can also include the assignment of responsibilities to external stakeholders.

What is recommended?

It is recommended that local authorities assign item ownership in their climate emergency action plans. This involves the definition of responsibilities from the process of developing the action plan to its execution and monitoring phase. It is also recommended that local authorities which have already assigned item ownership, express it in their action plans as the assessment showed a lack of clarity in this subject. This in turn will facilitate the monitoring of actions, progress on targets and will maintain the public informed about who is responsible for each action.

How can local authorities assign item ownership?

A way to assign item ownership is through capacity building of the institutional and human strategic dimensions of local governments. Capacity development is particularly important for small and medium local governments (OECD, 2018). In this way, capacity building can enhance the expertise at the local level and facilitate the assignment of responsibilities to different departments, teams or individuals responsible for the implementation of the specific climate actions. This will further help in enabling a more robust and transparent reporting and accountability for the delivery of actions.

A second way to effectively implement item ownership is to build coordination mechanisms across different levels or departments within local governments. Since most of the responsibilities in an action plan are shared, it is crucial to establish governance mechanisms to manage those joint responsibilities. These tools for coordination across different departments in the local authority can include platforms for dialogue, standing commissions and intergovernmental consultations boards (OECD, 2018).

Delivery Capacity

5. Securing Finance⁹

Why the financing of Action Plans needs to be secured?

From a project-based perspective, the financing of climate strategies needs to be secured in order to deliver the baseline plan on time, avoid delays and meet the goals established. Financial security has become one of the main pillars in climate emergency as there is an urgency to act and climate finance is falling short for what is needed under a 2.0 °C scenario (Buchner et al. 2019). In the UK, this happens at a time when the government needs to deliver

⁹Securing Finance is defined as the ability of local authorities to have stable and ongoing financial resources to cover the expenses of the strategies proposed in their action plans.

far-reaching climate action and the economic implication of COVID-19 are still unknown (Robins et al. 2020).

Findings from the interviews revealed that local authorities work constantly in financially uncertain environments as their budgets are highly dependent on the central government and local economy conditions. For that reason, securing investments in highly ambitious targets has become one of the biggest challenges and priorities at the local level where authorities increasingly need to find alternative ways to finance their projects.

What is recommended?

Typically, local authorities have three main sources of revenue, including revenues from government grants, council tax and business rates. In 2018/19, it was estimated that for local authorities, the shares of funding were respectively 31 percent from government grants, 52 percent from council tax, and 17 percent from retained business rates. This leaves some local authorities in a position dependent on the government, because unlike central government, they do not have the availability of funding to finance day-to-day spending (IFG, 2020). Therefore, it is recommended that apart from government funding, local authorities consider pursuing other traditional and alternative sources of funding.

How can the financing of Action Plans be secured?

With the devolution of local authorities and with the shift from local government to local governance, they are better placed to identify and prioritise areas which can 'unlock' city-regional growth. Increasingly this is being channelled through a series of traditional and emergent funding and financing arrangements. As opposed to traditional funding (which includes government grant funding and municipal borrowing), emerging approaches are becoming more attractive to local authorities. These are based on a mix of public and private investments and have shown to generate broader economic benefits such as increases in gross added value and employment and other financial returns such as yields on capital investments over long-term timeframes. (O'Brien & Pike, 2015). These, for example, can be pursued through local authorities' participation in partnerships, industry alliances and enhanced collaboration with local actors. Furthermore, research shows that a hidden financial co-benefit of local investment is enhanced creditworthiness of actors delivering the climate action, provided that the actions result in demonstrable net economic gains to the municipality (Rashidi et al, 2019).

Another way to secure funding for climate action is through the banking sector. This sector has a central role in providing the financial capital and expertise required for the delivery of climate action strategies. This is so because of the pivotal role of banks in the financial system and their reach to the private sector and households. For example, their importance in serving the economy has been further extended as a result of the COVID-19 implications making banks the central transition mechanism to channel support to businesses. Working together with local authorities and providers of alternative finance banks can help pursue climate objectives and design innovative ways to achieving them. In turn, this could be executed through implementation of Local Industrial Strategies and City Deals, as well as net-zero industrial clusters and ongoing financial support mechanisms for community-based business models. For example, an innovative financing model is Community Municipal Investments (CMIs), which is a

bond issued by local authorities through a crowdfunding platform. It aims to give residents the chance to support climate projects directly and some councils such as West Berkshire, Warrington and Leeds will be issuing CMI's in 2020 (Robins et al., 2020).

Another way to provide financial security for climate plans which do not necessarily involve the banking sector is through 'climate finance'. Climate finance as an emerging concept is already opening new opportunities for funding. It is becoming a dominant instrument which helps address the global climate crisis internationally, regionally, but also locally (Mahat et al., 2019). Climate finance can be drawn from private, public, multilateral organisations or alternative sources of financing and it aims to support climate actions (UNFCCC, 2020). Nevertheless, the new landscape of climate finance brings an inherent complexity. Here, a mechanism of blended finance can be introduced on order to ensure a robust risk management of a portfolio of different streams of blended funding (Tonkonogy et al., 2018; Flynn, 2011).

6. Monitoring¹⁰

Why local authorities need to implement monitoring measures?

The results of climate adaptation initiatives in many cases will become apparent over a long period of time (e.g. 20 - 50 years). However, the climate emergency requires that the reporting on those initiatives is in a much shorter timescale. In this respect, monitoring is particularly valuable in climate emergency action as it can provide intermediate outcomes in the short term. In addition, the continuous assessment can give flexibility to the actions to adapt to any internal or external factors. In this way, monitoring does not only serve as a tracking system, but also as a tool for lessons learnt within the government (OECD,2014).

What is recommended?

It is recommended that local authorities implement monitoring measures from the outset of their climate emergency strategies. These measures can include the implementation of data collection and surveillance systems which can provide useful information on climate initiatives. Furthermore, it is recommended that monitoring systems address adaptation and mitigation actions separately in order to distinguish the priorities and impacts of climate change in each area.

In this line of thought, it is advised that local governments cover one or more of the following components to monitor their adaptation and mitigation actions:

¹⁰ Monitoring is defined as the on-going assessment of interventions and progress made in a set of targets or specific actions (OECD, 2014). The outcomes from the monitoring process can include an annual progress report (UK Gov, nd).

For adaptation: i) tracking progress of implementation, including sharing lessons; ii) adaptation goals and targets; iii) assess the adaptive capacity of local communities.

For mitigation: i) greenhouse gas emissions and trends, ii) mitigation goals and targets; iii) policy measures; and iv) projections (UNFCCC, 2019).

How can local governments implement monitoring mechanisms?

In the UK the national government from 2008 to 2010 developed 188 national indicators (NI188) as a guideline to local authorities to prepare for climate change (UK Government, 2010). Since then, these indicators have not been updated and thus they do not reflect the current climate emergency. Furthermore, at the international level there is a lack of a homogenous agreed set of climate indicators for small to medium sized urban centres (Boehnke et al., 2018). Therefore, one of the prerequisites to establish a monitoring system is that local authorities develop a set of metrics and indicators for comparison of progress across local governments in the country. Establishing this set of metrics locally rather than from guidance of the national government will help local governments monitor climate change according to their local context.

In addition, the interview findings revealed that some of the internal challenges faced by local authorities is the lack of trained personnel to collect, monitor and analyse climate change data. Therefore, it is recommended that local governments develop programmes to enhance internal technical knowledge to monitor their own GHG emissions and climate actions. It is important that this process comes from a bottom-up approach which can help local authorities develop their own capacities to better fulfil their core functions and achieve their goals.

Analytical Capacity

7. Co-benefits¹¹

Why local authorities need to include co-benefits in their Action Plans?

Co-benefits occur when there is a 'win-win' situation and synergies are created between sectors (Floater et al, 2016). Co-benefits occur when with a single government action more than one political goal is realised. These can be, for example, reducing inequality, improving health, enhancing resilience, reducing employment and contributing to political stability (Mayrhofer & Gupta, 2016). Evidence shows that citizens are more likely to support climate change action if

¹¹ The action plan pursues to maximise potential co-benefits which focus on synergies and win-win solutions among different sectors (e.g. transport, agriculture, construction, finance, etc.). Benefits may also include the generation of social capital.

the co-benefits of the actions are presented (Bain et al. 2015). Therefore, it is essential for policymakers and local authorities to consider what are the potential co-benefits in their actions plans as it can help achieve a faster and deeper GHG reduction. Furthermore, devolved administrations and cities are best placed to capitalise on the different co-benefits from addressing climate change and to manage competing priority areas impacting on one other (Jennings et al. 2019).

Demonstrating the various co-benefits stemming from climate actions would be particularly useful for enabling the green transition for local authorities by collaborating with citizens, organisations and the wider industry in a spirit of trust and common understanding (Ahluwalia et al., 2020). Establishing the co-benefits with local impact and within a short time further facilitates cooperation and promotes upscaling of climate action (UNECE, 2016). Finally, since the concept of 'co-benefits' has a positive valence, this will help prevent the framing of climate action as a trade-off with other competing priorities (Mayrhofer & Gupta, 2016).

What is recommended?

It is recommended for councils to consider ways in which they could work with organisations and industries to create co-benefits for their communities. Local authorities should establish their priority areas and consider the co-benefits which can be realised through climate action. In turn by including the co-benefits which are to be realised, local authorities will be better placed to create a positive narrative around the delivery of their climate agenda. This will enable a more effective delivery of climate actions while tackling other pressing societal and economic challenges. Therefore, these secondary benefits for society need to be embedded within climate action policymaking in order to help pursue the case of climate action (Floater et al, 2016).

How can action plans be focused on co-benefits?

One way in which action plans can be focused on the realisation of co-benefits is through the adoption of policy frameworks. Frameworks are meant to give local authorities an internal policy design structure which can help them align their specific goals, objectives and priorities with stakeholders to establish the basis for actions and interventions. These policy tools can help pursue a decision-making approach which strives for the highest net-benefit realised in relation to climate, social, economic and environment effects (Floater et al, 2016). Furthermore, research shows that several underlying co-benefits can be realised such as enhanced innovation, employment, technological leapfrogging and sustainable development (Jochem & Madlener, 2003).

For co-benefits to be successful they need to be acknowledged and disseminated across different levels of society. In this respect, local governance presents a unique opportunity to initiate the process of mainstreaming the benefits associated to climate action. For instance, a study conducted in a local authority in the Western Cape of South Africa showed the importance of political champions driving behaviour change. The study revealed that in less than 5 years two senior councillors in the local government were able to implement a mindset change in

their community towards sustainable development (Pasquini et al., 2015). In a similar way, local authorities in the UK can implement leadership programs to mainstream the different co-benefits linked to their climate emergency action plans.

8. Risk Assessment for Climate Actions¹²

Why action plans need to include Risk Assessment and mitigation of their actions?

Risk Assessment is one of the most fundamental aspects of climate change action as it helps governments to address risks associated with the delivery of climate actions. At the same time, risk assessment works as a mechanism to evaluate potential risks and implications associated with the specific actions considered (Gao et al. 2017). Therefore, including risk assessment of each action would enable more effective implementation of actions, as delivery risks will be managed and mitigated. Thus, the climate agenda and commitments will be executed with least delays and budget overruns.

What is recommended?

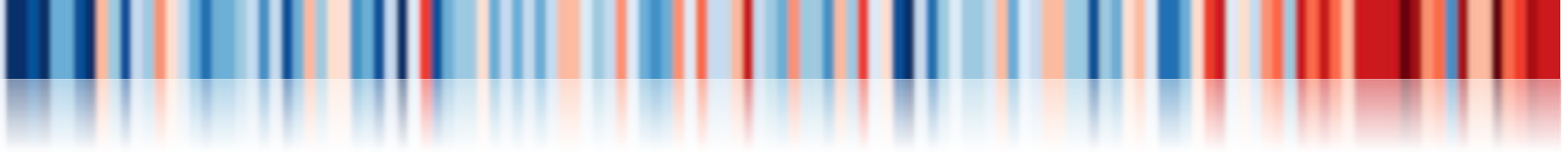
It is recommended that Action Plans be subjected to risk assessments. The risk assessments can be categorised on the basis of overarching issues or sectors or embedded in every action.

How can Action Plans include Risk Assessment?

A first step would be to add risk assessment as a design criterion in the phase of creation of an action plan. This will ensure that, regardless of the type of risk assessment chosen, there will be some insight on their identification and mitigation. A second step would be to designate internal capacities to risk, including identification, mitigation and contingency actions. These tasks can also be delegated to the implementing team of a specific action, with a general risk manager appointed to oversee the process. One of the attributes identified earlier in the study, is "Interim targets". A risk assessment could be made to coincide with this periodic target setting, or revision period. This would help in determining realistic and short-term solutions to overarching risks as well as individual action risks.

Risk management of a climate emergency plan will have to be a hybrid task. On one hand, there are risks associated with climate change (floods, extreme temperatures etc.) which form the underlying origin of most of the risks identified in adaptation and corresponding actions that address it. On the other hand, each action that is identified and planned for will have some exposure to risk in its implementation, such as funding, human resources, political agenda etc. It is essential therefore to separate the high-level overarching risks from which actions originate

¹² Risk assessment is defined as systematic process of evaluation of potential risks in an action plan. The assessment can include a general risk analysis or risk mitigation and adaptation for specific actions.



and the risks involved in the implementation of each action. A good climate emergency Action Plan should have both.

Use of a methodical approach to identify future threats and opportunities is essential. In this respect, the BACILAT (Business Areas Climate Assessment Tool) developed by UKCIP can be useful (UK Climate Impacts Programme, 2012).

Also, according to Adaptation Scotland (2016), threats and opportunities can be categorised in 6 business areas, markets, process, logistics, people, premises and finance. Subsequently a risk matrix is created which portrays how climate hazards affect these aspects.

Finally, a detailed table of Actions and respective measures, Owners and timelines, is essential to keep track of risk management. Most actions in this regard fall into 2 categories: Building adaptive capacities, which is mostly institutional capacities in response to climate change, and Delivering adaptation actions, which involves the practical actions to be taken.



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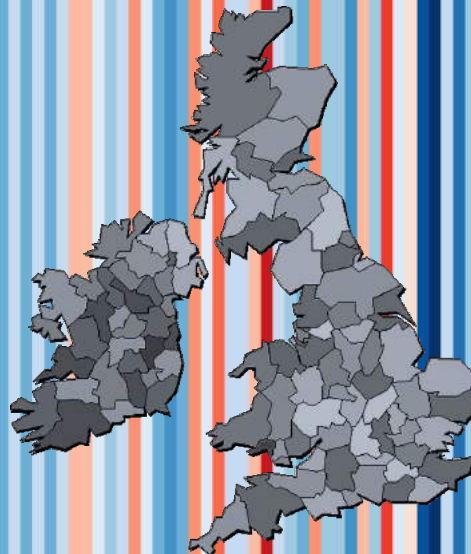
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CLIMATE EMERGENCY ACTION PLANNING

MANUAL FOR
LOCAL AUTHORITIES

September 2020



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We hope to inspire others into developing further research and sound recommendations to address the climate emergency. There is still time.



Anna-Mariya Kandzhova



Jorge Jiménez Solomon



Lorena Cordero Maldonado



Iris Šömen



Okky Oktaviani



Rodon Miraj

I. Introduction

A. Purpose of the Manual

The purpose of this manual is to provide guidance for local authorities in the United Kingdom (UK) in the development and implementation of action plans following a climate emergency declaration. It starts by briefly explaining the difference between a climate emergency declaration and a climate emergency action plan. The manual then suggests desirable contents for action plans and sets out the overarching characteristics an action plan should have. Finally, it gives recommendations on specific challenging areas that were identified from the assessment of current action plans in local authorities in the country.

The findings incorporated in this manual are drawn from a climate emergency dissertation project performed by postgraduate (Master of Public Administration) students from the STEaPP department at UCL. This project assessed the content of 33 action plans from local authorities who by May 2020 had declared a climate emergency.

B. How to Use this Manual?

It is recommended that local authorities follow the 6 steps outlined in this manual.

Step one is composed of a tool that measures the quality of local authorities' climate emergency action plans. The present version of the tool provides an assessment of all climate emergency action plans that have been published as of May 2020 (33 local authorities). The attributes it focuses on lie in the following areas: action plan contents, overarching characteristics and planning processes. The local authorities that have been assessed can use the tool to see where improvement is needed. Other local authorities can compare themselves to a local authority that they set as a benchmark for themselves in terms of climate emergency action planning.

Step two details the attributes used for the assessment of the three areas. The information is divided per area in three different tables. Table 1.2 provides information regarding the desirable contents list. Table 2.2 specifies each of the proposed and assessed overarching characteristics. Finally, Table 3.2 details the proposed and assessed internal processes which a local authority should follow in the development of an action plan.

Step 3 sets out a tool that identifies the performance of local authorities in relation to 4 administrative capacities, namely: delivery capacity, regulatory capacity, coordination capacity and analytical capacity.

Step 4 is composed of analysing the description of the aforementioned administrative capacities detailed in Table 1.3.

Step 5 sets out the attributes on each of the aforementioned areas (desirable content, overarching characteristics and processes) and classifies them according to the 4 administrative capacities. Table 1.5 in this section details the clustering of attributes per capacity.

Step 6 identifies the underdeveloped attributes or challenging areas which emerged from the quantitative analysis. It then clusters these areas according to their administrative capacities and provides sound recommendations for local authorities to address specific challenges.

For details on how to perform the quantitative scoring that is used in the tools, local authorities are referred to the full report of the project (Kandzhova et al., 2020).

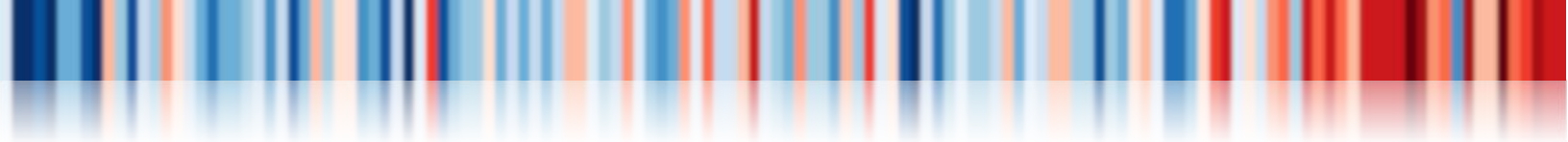
II. Climate Emergency Planning

A. Climate Emergency Declaration

It has been globally recognised that the phenomenon of climate change has led to irreversible changes and damage to our planet. The Paris Agreement, aiming to strengthen the global response to the threat of climate change, describes the necessity to keep the global temperature rise well below 2 degrees Celsius above pre-industrial levels. This is essential in order to reduce the probability of extreme weather events and the impacts on ecosystems, human health and well-being (UN, 2020; IPCC, 2018). Extreme weather events and failure of climate change mitigation and adaptation have been recognised as having the highest global impact, with risks spanning across numerous regions. Additionally, climate-related risks were recognised as having the strongest influence on collateral, particularly social and geopolitical, risks (WEF, 2019).

In this respect, some countries declared a Climate Emergency and developed national strategies to follow a pathway which limits global warming to well below 2.0°. Correspondingly, in 2019, the United Kingdom (UK) became the first major economy to declare a Climate Emergency and enacted a law to achieve Net Zero emissions by 2050. The strategy sets a rapid, ambitious and far-reaching transition in the infrastructure, energy, land and urban systems in the country (UK Government, 2019).

Nonetheless, Climate Emergency remains an emerging concept where, in most cases, governments' reactions are responses to public pressure. Likewise, the situation in the UK followed the demands stemming from the Extinction Rebellion demonstrations (Climate Emergency UK, 2020). Generally declaring a climate emergency aims to scale up action at all levels of climate change governance (Bevan, et al., 2020) for which it is needed to accelerate sustained and meaningful actions to go beyond reforms-as-usual (Spratt, 2019). The goal is to provide maximum protection for the local



communities, people and species globally, especially the most vulnerable, and to enable communities to be strong in the face of any unavoidable disruptive climate impacts. Nevertheless, a climate declaration is not legally binding and remains a form of political obligation, resting on the principles of normative power (Bevan, et al., 2020).

B. Climate Emergency Action Plans

A common next step for local governments in the UK after declaring a Climate Emergency is to issue climate action plans.

These plans typically reflect the national government's decarbonisation commitments and strengthen the already existing sustainable strategies but more often than not, they are developed around an emergency narrative, with even more ambitious decarbonisation targets. The issued action plans detail what are the necessary steps to be taken in order to reach the decarbonisation goals within the local authority.

Focusing on UK local authorities' response to climate commitments, by May 2020 33 local authorities, which encompass districts, unitary counties, boroughs and councils across the country had declared a Climate Emergency and developed action plans. The UK government recognises that these plans should be developed locally, and their decarbonisation commitments and actions need to be reflective of the local context. Nonetheless, the absence of clear instructions for the development of climate action plans is mirrored in the diversity of action plans, which showcase different environmental agendas. More specifically, the lack of guidance and standardisation from the national government is reflected in the different structure and quality of actions plans, which has resulted in varying local policy responses (Karim et al., 2017). In addition, international-level guidance for local governments generally focuses on larger urban zones or mega cities (e.g. C40), leaving behind small and medium cities. This is problematic as 50 percent of the global urban population lives in cities with fewer than 500,000 inhabitants (Boehnke et al. 2018), hence calling for a coherent approach and guidance for all local authorities.

STEP 1: Using the tool below identify the performance of your council (or select a benchmark) in relation the issued climate action plan, its overarching characteristics and the climate action planning process.

Local Authority	Action Plan Content	Action Plan Characteristics	Climate Action Planning Process
Cornwall	74 %	58 %	77 %
Portsmouth	55 %	62 %	67 %
Hampshire	60 %	69 %	70 %
West Midlands	64 %	58 %	60 %
Monmouthshire	50 %	62 %	53 %
North Somerset	62 %	73 %	63 %
Kirklees	67 %	58 %	83 %
Leeds	74 %	54 %	73 %
Nottingham	69 %	81 %	73 %
West Devon	29 %	31 %	60 %
Bournemouth	48 %	65 %	50 %
Plymouth	64 %	58 %	60 %
Southampton	79 %	65 %	80 %
Peterborough	62 %	54 %	77 %
Wandsworth	79 %	85 %	97 %
Harborough	48 %	38 %	40 %
Brent	60 %	54 %	73 %
Bradford	71 %	58 %	53 %
Richmond	88 %	92 %	93 %
Wealden	36 %	46 %	83 %
Winchester	86 %	73 %	73 %
Lambeth	50 %	35 %	57 %
Eastleigh	62 %	46 %	43 %
Sutton	83 %	81 %	57 %
Wirral	50 %	69 %	53 %
Ryedale	55 %	46 %	53 %
Fife	81 %	100 %	90 %
Oxford	62 %	58 %	70 %
Dundee	81 %	77 %	73 %
Carmarthenshire	55 %	58 %	67 %
Northumberland	69 %	58 %	77 %
Stroud	43 %	50 %	40 %
Islington	69 %	62 %	57 %

STEP 2: In order to determine or understand the performance of your local authority on these aspects, refer to the tables below to see what the components of each category are.

Climate Action Plan Content	
Attribute	Description
Vision Statement	The action plan includes a vision statement that is in accordance with the Paris Agreement and with UK's Strategy to achieve Net Zero by 2050.
Executive Summary	The action plan includes an executive summary which explains the objectives of the plan, the local context, the climate emergency background etc.
Engagement strategy	There is an engagement strategy present which engages with the public on the implementation of the action plan. This for example could include its outreach and public participation activities.
Leadership and Revision Periods	It is clearly identified who is responsible for the plan itself and the timeframe of the revision periods of the action plan is included.
Stakeholder mapping	Major stakeholder groups are identified, and stakeholders and participating actors are listed.
Goals and Objectives	Goals and objectives are clearly identified.
Priority areas and sectors	The plan has a sectoral approach and establishes which are the local priority areas. These could be Including Transport, Buildings, Water, Energy, Waste, Land-use, and/or others.
Vulnerability assessment of the Sectors	The plan includes a vulnerability assessment of the city's exposure to current and long-term climate conditions, describes its adaptative capacities and identifies which people/places/institutions/sectors are most vulnerable to climate change.
Adaptive and Mitigating Actions	The action plan prescribes clear adaptive and mitigating actions across sectors
Co-benefits and Synergies	The plan pursues creation of co-benefits, synergies and win-win solutions among different sectors (e.g. transport, agriculture, construction, finance, retail and energy-supply).
Risk Assessment and Risk Mitigation for the Actions	The plan includes risk assessment and risk mitigation of the actions identified.
Item Ownership	Ownership of actions is identified in order to enable reporting and accountability for the delivery of actions.
Timeline of the actions	There is a clear timeline of actions to be implemented.

Climate Action Plan Overarching Characteristics

Attribute	Description
Agile/Flexible	Action plan's measures are reversible or can later be adjusted to keep the option open to adapt when necessary". Being flexible does not mean being vague about the target. Also, it can be interpreted as acknowledgment that implementation can change according to circumstances
Attainable	Based on baseline data, existing resources and capabilities, mandates and capacities. Realistic about their ambitions.
Innovation spurring	Spur innovation locally using best practices and adoption of innovative solutions, working with universities, industries etc. Both fostering innovation and taking advantage of innovations will count towards this Attribute.
Resilient to climate hazards	Demonstrate how the city will adapt and improve its resilience to the climate hazards that may impact the city now and in future climate change scenarios. Mitigation and adaptation solutions are clearly expressed in the action plan. Showing reflection on the topic, (planning for studies or assessment on the topic, in order to pave the way for future assessments)
Carbon neutrality ambition	This attribute measures the CO2 reduction ambition, where scores are assigned in relation to the local authority's ambition to align vs surpass government's 2050 Net Zero plans.
Carbon neutrality interim objectives -	This attribute measures whether there are sufficient interim CO2 reduction objectives specified within the climate plan.
Comprehensive	This attribute measures whether multiple actions are considered across a range of sectors within the city/municipality. E.g. Transportation, Waste, Energy, Buildings etc.
Inclusive	Addresses minority and marginalized groups, includes terms as leaving no one behind; fair or just transition
Integrated	Combines and coordinates economic planning, physical planning and environmental planning to deliver efficient policies that support, rather than undercut each other. Ex: health, education, economic, social inequalities, etc
Costed	This attribute measures whether costing is specified for the implementation of the actions specified in the action plan.
Financial Securitised	This attribute measures whether the funds required for the implementation of the plan are financially securitised. A well-developed financial securitisation strategy inclusive of financial criteria should be in place.
Specific	Explicitly states the changes to be made. The action plan should be focused on addressing concrete challenges clearly stating how these would be tackled. Actions should be specific enough that they can be readily implemented and measured

Measurable/Evaluative	Actions planning should primarily be evaluated on the extent to which they manage to attain the goals and objectives. Attribute investigates whether there are any mechanisms to measure the success of the implementation of actions.
Monitored	This attribute measures whether the action plan has a monitoring mechanism. A rigorous monitoring framework should be in place.
Time-bound	The plan has a clear implementation timeline of actions. Could be integrated in the plan or as a separate annex tables where delivery times are specified for each action.
Perception/Behaviour change	The climate action plan is shaping the preferences of citizens. Actions to incentivize behavioural change are identified or are embedded within the broader set of actions.
Evidence-based	Climate action plans should be evidence-based reflecting scientific knowledge and local understanding.
Responsibility defining/assigning	Actions should be assigned to specific representatives, agencies, organisations, or stakeholders so that those entities can be held accountable for implementation.
Creating cross-sectoral co-benefits	The action plan aims to maximise potential co-benefits, synergies and win-win measures. Benefits may also include the generation of social capital.
Reflective	The plan is reflective of other existing plans and commitments and there is a clear sequence with previous and future actions.
User friendly	The language used in the action plan is jargon free, understandable, clear and easy to comprehend. The action plan includes visual aids such as graphs and tables.

Climate Action Planning Process	
Attribute	Description
Declare a climate emergency	The council has successfully declared a climate emergency.
Setting the vision	The council has set the vision forward for the implementation of climate emergency action planning.
Choose the framework to follow for the plan	The council has considered the climate emergency overarching frameworks and guidelines. For the delivery of its action plan it followed an established framework or worked with an experienced partner.
Develop a public engagement strategy	The council has developed a public engagement strategy to inform and involve the public (citizenship, industries, etc.).
Pursuing of public/ public-private / private partnerships	The council pursues creation of partnerships and encourage working in cooperation, with industries and local actors of power.
Carry out assessments GHG	The council has carried out baseline GHG assessments and has identified GHG inventory and reduction potential.
Sectors assessment - sectoral approach	The council has identified the challenges and opportunities within different sectors (Water, Energy, Transport, Buildings, etc.). An assessment is made of the different sectors and their GHG impact and reduction potential.
Identify priorities and set preliminary goals	Higher priority areas are identified from the assessment (e.g. Contaminated water, pollution etc.)
Identify Actions	Within the sectors identified, clear mitigation and adaptation actions are specified. Potential interventions are studied, considering the interventions already in place and the existing sustainability actions.
Set the requirement to explore co-benefits across sectors	The council has set the requirement to explore co-benefits across sectors and to work with local industries through pursuing partnerships and working in cooperation.
Targets	The council has set clear targets and objectives.
Carry out budgeting of the action plan and costing of the climate actions	The council budgeted the delivery of the action plan. It considered a range of financing options for the delivery of the actions specified (public vs. private, local vs. national vs. international financing options). It performed financial analysis and provided costing options for the delivery of actions.
Identify leadership	The council has identified who owns and leads the process of the creating the action plan.
Develop a timeframe for the creation of an action plan	The council has developed a timeframe on the duration of the creation of the climate action plan.
Appoint monitoring team for the creation of the Action Plan	The council has established the monitoring, evaluation and reporting required for the delivery of the action plan and is monitoring is performed on an on-going basis. The council is transparent to the public and has provided public monitoring mechanisms (e.g. Live trackers available to citizens, live information sections on progress and delivery)

STEP 3: Using the tool below identify the performance of your council in relation the administrative capacities of your council for climate action planning and implementation.

Local Authority	Administrative Delivery Capacity	Administrative Regulatory Capacity	Administrative Coordination Capacity	Administrative Analytical Capacity
Cornwall	68 %	79 %	54 %	83 %
Portsmouth	55 %	64 %	42 %	73 %
Hampshire	66 %	57 %	71 %	70 %
West Midlands	37 %	79 %	50 %	80 %
Monmouthshire	50 %	64 %	38 %	68 %
North Somerset	61 %	64 %	58 %	83 %
Kirklees	66 %	86 %	54 %	78 %
Leeds	63 %	86 %	54 %	78 %
Nottingham	74 %	71 %	79 %	80 %
West Devon	37 %	36 %	38 %	43 %
Bournemouth	37 %	43 %	67 %	68 %
Plymouth	50 %	86 %	63 %	78 %
Southampton	79 %	71 %	67 %	80 %
Peterborough	71 %	50 %	67 %	63 %
Wandsworth	89 %	71 %	100 %	95 %
Harborough	42 %	50 %	38 %	45 %
Brent	55 %	57 %	63 %	75 %
Bradford	55 %	86 %	46 %	78 %
Richmond	87 %	79 %	100 %	93 %
Wealden	61 %	29 %	46 %	55 %
Winchester	92 %	79 %	88 %	78 %
Lambeth	50 %	57 %	58 %	40 %
Eastleigh	58 %	43 %	58 %	63 %
Sutton	76 %	64 %	79 %	88 %
Wirral	45 %	57 %	67 %	65 %
Ryedale	79 %	21 %	67 %	43 %
Fife	89 %	71 %	100 %	98 %
Oxford	61 %	57 %	46 %	80 %
Dundee	66 %	93 %	75 %	88 %
Carmarthenshire	53 %	64 %	67 %	63 %
Northumberland	71 %	64 %	79 %	60 %
Stroud	32 %	57 %	42 %	55 %
Islington	53 %	64 %	58 %	83 %

STEP 4: Having identified the performance of your local authority on the administrative capacities refer to the table below to see their descriptive explanation.

Administrative Capacity	Administrative Capacity Description
Administrative Delivery Capacity	The capability to 'make things happen'. It is related to the resources available to ensure that populations receive services, that revenues are extracted, and that public order is maintained. When private services fail, the public administration is required to step in to ensure that the trains keep running. In another words, delivery capacity is about the resources that are deployed to ensure certain services are maintained.
Administrative Regulatory Capacity	The capacity of the government to control to maintain public order. Derives from the definition of regulation from (Black et al 2005:11), the 'sustained and focused attempt to alter the behaviour of others according to standards or goals with the intention of producing a broadly identified outcome or outcomes, which may involve mechanisms of standard-setting, information-gathering and behaviour modification". Therefore, regulatory capacity is the capacity of the government to control to maintain public order and find the balance between the intended and unintended consequences that sociotechnical innovations bring.
Administrative Coordination Capacity	The government's capacity to be able to communicate with each other internally. It goes beyond the organization of the executive and the allocation of formal capacities to "bang heads together" and agree on something. It applies to areas where collaborative governance is supposed to take place and bring together and aligning organizations from different backgrounds under tricky conditions.
Administrative Analytic Capacity	The way in which executive governments are informed about future projections and current developments. It is also to ensure transparency and legitimacy in the light of popular scepticism regarding the application of knowledge.

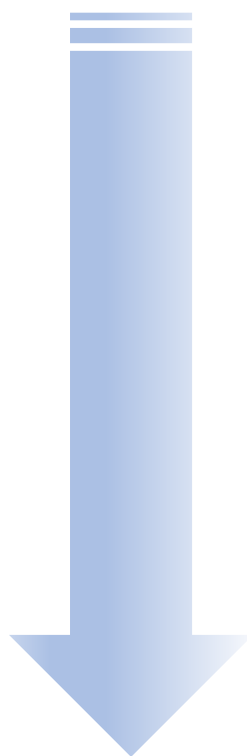
STEP 5: Having read the descriptions on administrative capacities, refer to the table below to see which attributes fall within each capacity.

Administrative Capacities	Action plan attributes
Delivery Capacity	Agile/flexible Financial securitized Measurable/evaluative Monitored, Time-bound Responsibility Defining Engagement strategy Develop a timeframe for the Action Appoint Monitoring Budget (creation an AP) Identify priorities Identify actions Timeline of the actions Adaptive and mitigation actions Priority areas and sectors Pursuing Partnerships Targets Leadership and revision periods Specific
Regulatory Capacity	Innovation spurring Carbon Neutrality Ambition Costed Inclusive perception/behaviour change, Declare a climate emergency Setting the vision
Coordination Capacity	Responsibility Defining Engagement Strategy Timeline of the actions Leadership and revision periods, Comprehensive, Integrated, Responsibility, Assigning Stakeholder mapping Co-benefits and synergies Item ownership Develop and engagement strategy related to public Pursuing of public private partnerships
Analytical Capacity	Interim Objectives Specific Reflective, Vision Statement Sectors assessment Identify priorities Identify actions Priority areas and sectors Targets Goals and objectives Stakeholder mapping, Co-benefits and synergies, Attainable, Resilient to climate hazard Evidence based Vulnerability assessment of the sector Assessments GHG Risk assessment and Risk mitigation for the actions Comprehensive Integrated

STEP 6: Having read the attributes which fall within each capacity, please refer to the colour-coded recommendations in order to address the capacity which needs to be enhanced.

Administrative Delivery Capacity	<ul style="list-style-type: none"> Inclusiveness Costing of the Action Plan
Administrative Regulatory Capacity	<ul style="list-style-type: none"> Partnerships Item Ownership
Administrative Coordination Capacity	<ul style="list-style-type: none"> Securing Finance Monitoring
Administrative Coordination Capacity	<ul style="list-style-type: none"> Co-benefits Risk Assessment and Risk Mitigation of Climate Actions

Recommendations



Regulatory Capacity

1. Inclusiveness¹³

Why Action Plans need to be inclusive?

Individuals who are economically, socially, institutionally and politically marginalised are particularly vulnerable to the effects of climate change. These groups which are often located in the rural or urban poor areas tend to have a limited adaptive capacity, mainly due to their economic status which makes them more vulnerable than other groups of society (UNFCCC, 2018).

The Institute for Fiscal Studies estimates that for the last two years absolute poverty (which measures the fraction of a population who have a household income below a fixed poverty line) has remained unchanged in the UK (Bourquin et al. 2019). In addition, it has been argued that since 2004 food insecurity has worsened among low-income households in the country (Loopstra et al. 2019). Furthermore, the Institute for Public Policy Research estimates that due to the COVID-19 pandemic, 1 million more people in the UK will be under the poverty line (Parkes & McNeil, 2020). Therefore, it is essential that climate action plans take into consideration these implications and aim to ensure a just and equitable transition to Net Zero, addressing the vulnerabilities of marginalised groups.

What is recommended?

It is recommended that local authorities in the UK specify and address in their action plans the vulnerability and exposure of disadvantaged communities to climate change. For instance, some local governments are located in coastal areas which are more prone to climate natural hazards such as floods. While the action plans of these entities acknowledge this vulnerability, they do not specify nor differentiate how floods can impact disadvantaged communities. In this respect, the results of a study conducted in 2018 estimated that flood risks in the UK are higher in socially vulnerable communities, particularly in coastal areas, dispersed rural communities and economically struggling cities. Furthermore, the study details that 50 percent of the population exposed to flooding in disadvantaged neighbourhoods are concentrated in 10 local authorities² (Sayers et al. 2018).

In addition, it is recommended that action plans address the trade-offs faced by vulnerable groups in relation to the proposed actions to mitigate or adapt to climate change. For example, most of the actions plans propose measures such as retrofitting of households as part of their energy efficiency strategies. However, while whole home retrofits are delivering better energy performance, they can

¹³ The criteria set in the project defines inclusiveness as a specific measure to address minority and marginalised groups and includes terms as leaving no one behind; fair or just transition. It includes specific actions to mitigate and adapt the impacts of climate change

lead to an increase in property value if delivered without sufficient government subsidies. In turn, this can affect the livelihood of vulnerable groups (UK GBC, 2017). Thus, local governments need to be aware of these trade-offs and address them through actions which mitigate the social impacts associated with climate change measures.

How can action plans be more inclusive?

A reduction of the exposure of these communities can be achieved through the adoption of Early Warning Systems. These systems are part of an integrated communication system of adaptation measures which can help vulnerable groups to better prepared for respond to natural hazards (UN, nd). For example, India implemented community-based flood warning systems in the Himalayan region to help 45 vulnerable communities to become more resilient to flooding hazards. The system operates through a sensor and transmitter which detects rising water levels in vulnerable areas. When the water reaches critical levels, the warning is communicated to community members to their mobile devices (UNFCCC, 2013).

Furthermore, during the interview stage the team identified best practices in local authorities, which can be replicated across the country. For instance, an initial step taken by Bradford as part of their inclusiveness strategy was to conduct an equality profiling and impact assessment of the city. Through this process, Bradford was able to develop a clear understanding of poverty rates, unemployment, life expectancy and ethnicity of its population. The information gathered was then used to alleviate these vulnerabilities through specific actions. For instance, Bradford addressed vulnerable areas such as poor-quality housing in the most deprived neighbourhoods. Thus, performing vulnerability assessments can help detect which households are currently below the poverty line and in this way adjust the policy interventions in a way to be inclusive of the most vulnerable communities.

2. Costing of the Actions within the Action Plan¹⁴

Why local authorities need to do costing?

The scale and unpredictability of the climate emergency is likely to challenge or overwhelm response capacity, demanding a mobilisation of all possible resources from the government, society and external bodies. Local and national authorities will have to develop institutional capacity and decision-making processes to evaluate costs and harness appropriate resources as other sectors appear improbable in willingly taking on the associated responsibility and costs of climate action (Davidson et. al., 2020). Additionally - cost information remains one of the main elements of assessing performance (Audit Scotland, 2012).

¹⁴ This attribute measures whether costing is specified for the implementation of the actions specified in the action plan.

What is recommended?

Achieving meaningful climate action demands better use of cost information. This will ensure that policy options are assessed according to their efficiency/effectiveness of the services they provide. Consequently, policy decisions will be better informed and realistic, which is especially relevant in the periods of decreased government spending. Additionally, providing services which deliver value for money demands measuring performance according to comprehensive baseline data on costs and quality. Nonetheless, performance can only be managed if a local authority sets clear objectives and tracks progress and impact. Policy options and cost information also have to be transparent and accessible (Audit Scotland 2012).

How can local governments implement costing mechanisms?

A pre-requisite for local authorities to implement costing mechanisms is to obtain information on inputs, processes, outputs and outcomes (what resources are being used, when and where services are being delivered, what is their quality and lastly, their impact). It is essential to access and utilise self-assessment indicators, which will help incorporate costs into key measures of performance.

Furthermore, local authorities can employ financial and management accountancy to acquire financial reports on local authority's performance and support well-informed internal decision-making. Local authorities can use priority-based budgeting, which utilises authorities' objectives as a starting point in assigning budget. This is a best practice from Aberdeen City Council, which carried out a "mapping exercise to understand the links between its objectives, the services involved in achieving those objectives and their costs".

An additional mechanism is the calculation of costs, (defined as the calculated costs for a distinct unit of service), which links the costs of a particular service with its output can be helpful to evaluate the benefits and disadvantages of pursuing different climate actions. The calculation of costs can also provide a benchmark across time or among local authorities.

Furthermore, building partnerships between local authorities can help share information and benefit from the coordinated use of resources (Audit Scotland, 2012). In this way, considering benchmarking performance and costs with other councils (and other organisations) can make value-for money comparisons (Communities and Local Government, 2008).

Lastly, local authorities can use cost budgeting techniques, such as parametric estimating which is particularly helpful when the schedule or scope of the activities is not yet fully developed. This technique provides a high-level outlook on the costs, setting a provisional budget, based on accurate historical data and quantifiable parameters. It is also recommended to predict unplanned changes or risks, thus incorporating the costs of contingency plans (Praxis Framework 2019).

Coordination Capacity

3. Partnerships¹⁵

Why local authorities need to establish partnerships for the implementation of Action Plans?

Addressing environmental challenges on a local level such as climate change is often a task too complex for any single organisation (Gray & Stites, 2013). Therefore, it is essential for local governments to pursue the creation of cross-sectoral partnerships to more effectively address climate change (Clarke & Ordonez-Ponce, 2017). Partnerships are found to accelerate local climate action by providing access to information, funding, resources and technology (Westman & Broto, 2018). Partner organisations could be public-private (hybrid), governmental and private-private (Crane & Seitanidi, 2014; Bäckstrand, K., 2008). The aim of forming partnerships is that through collaboration and joint projects, parties will be better suited to embed specific actions within their organisations.

The institutional design of partnerships plays a critical role for its success. Successful partnerships involve consideration of the stakeholders, pursuit of collective goals, transparent communication as well as mechanisms for ensuring robust monitoring of the progress of the partnership's objectives (Clarke & Ordonez-Ponce, 2017). In addition, successful partnerships should allow a reasonable degree of flexibility of the project scope and allow partner relationships to grow and evolve (Allen et al., 2017).

What is recommended?

It is recommended that local authorities pursue partnerships for the creation and implementation of their action plans. Early partnership identification will be particularly beneficial for the delivery of local authorities' climate commitments. In addition, clear specification of each party's objectives will improve the transparency of information and help enhance the success of the partnership. Thus, improved clarity and transparency will enable partners to more comprehensively understand the nature of their relationship and how could each party accomplish its objectives. As a result, parties will be more satisfied with the performance of the partnership and are more likely to continue working in the future (Su et al., 2011).

How can Action Plans be focused on partnerships?

Local authorities should outline their strategies and objectives for forming partnerships in order to facilitate cooperation with partner organisations. Establishing priorities and goals in a clear and transparent way will help achieve an easier collaboration between citizens, policymakers and the

¹⁵ The local authority pursues the creation of partnerships and encourages working in close coordination with industries and local actors of power to address climate emergency actions.

wider industry. An example of a best practice in pursuing partnerships can be seen in the case of the council of Southampton. In 2019 the council launched the Green City Charter in partnership with residents, local businesses and organisations. The charter encouraged a much bigger conversation on the priorities of the various stakeholders in mitigating climate change. It did so by delivering a leadership framework, which helped companies, communities and residents in pursuing carbon neutrality.

4. Item Ownership¹⁶

Why local authorities need to define item ownership?

Action plans are complex strategies which cover multiple areas of society such as public health, the economy, the energy sector as well as the transportation and water management sectors. In this respect, action plans include numerous strategies which touch upon different sectors. For instance, there are specific actions for retrofitting of households and public buildings. There are also awareness campaigns to promote behaviour change as well as investments in public transportation and waste management. The complexity of these intervention areas demands a decentralised system and a multi-level governance approach which promotes coordination between departments. In this regard, item ownership can facilitate such coordination.

What is recommended?

It is recommended that local authorities assign item ownership in their climate emergency action plans. This involves the definition of responsibilities from the process of developing the action plan to its execution and monitoring phase. It is also recommended that local authorities which have already assigned item ownership, express it in their action plans as the assessment showed a lack of clarity in this subject. This in turn will facilitate the monitoring of actions, progress on targets and will maintain the public informed about who is responsible for each action.

How can local authorities assign item ownership?

A way to assign item ownership is through capacity building of the institutional and human strategic dimensions of local governments. Capacity development is particularly important for small and medium local government (OECD, 2018). In this way, capacity building can enhance the expertise at the local level and facilitate the assignment of responsibilities to different departments, teams or individuals responsible for the implementation of the specific climate actions. This will further help in enabling a more robust and transparent reporting and accountability for the delivery of actions.

A second way to effectively implement item ownership is to build coordination mechanisms across different levels or departments within local governments. Since most of the responsibilities in an action

¹⁶ Item ownership is defined as the assignment of responsibilities within the local authority to implement and revise the actions and targets proposed. Item ownership is not restricted to the local authority and can also include the assignment of responsibilities to external stakeholders.

plan are shared, it is crucial to establish governance mechanisms to manage those joint responsibilities. These tools for coordination across different departments in the local authority can include platforms for dialogue, standing commissions and intergovernmental consultations boards (OECD, 2018).

Delivery Capacity

5. Securing Finance¹⁷

Why the financing of Action Plans needs to be secured?

From a project-based perspective, the financing of climate strategies needs to be secured in order to deliver the baseline plan on time, avoid delays and meet the goals established. Financial security has become one of the main pillars in climate emergency as there is an urgency to act and climate finance is falling short for what is needed under a 2.0 °C scenario (Buchner et al. 2019). In the UK, this happens at a time when the government needs to deliver far-reaching climate action and the economic implication of COVID-19 are still unknown (Robins et al. 2020).

Findings from the interviews revealed that local authorities work constantly in financially uncertain environments as their budgets are highly dependent on the central government and local economy conditions. For that reason, securing investments in highly ambitious targets has become one of the biggest challenges and priorities at the local level where authorities increasingly need to find alternative ways to finance their projects.

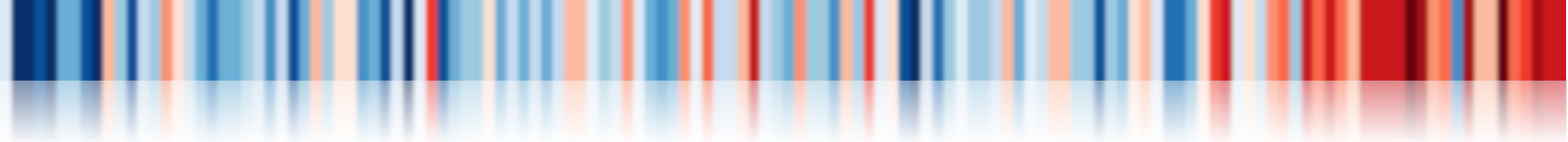
What is recommended?

Typically, local authorities have three main sources of revenue, including revenues from government grants, council tax and business rates. In 2018/19, it was estimated that for local authorities, the shares of funding were respectively 31 percent from government grants, 52 percent from council tax, and 17 percent from retained business rates. This leaves some local authorities in a position dependent on the government, because unlike central government, they do not have the availability of funding to finance day-to-day spending (IFG, 2020). Therefore, it is recommended that apart from government funding, local authorities consider pursuing other traditional and alternative sources of funding.

How can the financing of Action Plans be secured?

With the devolution of local authorities and with the shift from local government to local governance, they are better placed to identify and prioritise areas which can 'unlock' city-regional growth. Increasingly this is being channelled through a series of traditional and emergent funding and

¹⁷ Securing Finance is defined as the ability of local authorities to have stable and ongoing financial resources to cover the expenses of the strategies proposed in their action plans.



financing arrangements. As opposed to traditional funding (which includes government grant funding and municipal borrowing), emerging approaches are becoming more attractive to local authorities. These are based on a mix of public and private investments and have shown to generate broader economic benefits such as increases in gross added value and employment and other financial returns such as yields on capital investments over long-term timeframes. (O'Brien & Pike, 2015). These, for example, can be pursued through local authorities' participation in partnerships, industry alliances and enhanced collaboration with local actors. Furthermore, research shows that a hidden financial co-benefit of local investment is enhanced creditworthiness of actors delivering the climate action, provided that the actions result in demonstrable net economic gains to the municipality (Rashidi et al, 2019).

Another way to secure funding for climate action is through the banking sector. This sector has a central role in providing the financial capital and expertise required for the delivery of climate action strategies. This is so because of the pivotal role of banks in the financial system and their reach to the private sector and households. For example, their importance in serving the economy has been further extended as a result of the COVID-19 implications making banks the central transition mechanism to channel support to businesses. Working together with local authorities and providers of alternative finance banks can help pursue climate objectives and design innovative ways to achieving them. In turn, this could be executed through implementation of Local Industrial Strategies and City Deals, as well as net-zero industrial clusters and ongoing financial support mechanisms for community-based business models. For example, an innovative financing model is Community Municipal Investments (CMIs), which is a bond issued by local authorities through a crowdfunding platform. It aims to give residents the chance to directly support climate projects directly and some councils such as West Berkshire, Warrington and Leeds will be issuing CMIs in 2020 (Robins et al., 2020).

Another way to provide financial security for climate plans which do not necessarily involves the banking sector is through 'climate finance'. Climate finance as an emerging concept is already opening new opportunities for funding. It is becoming a dominant instrument which helps address the global climate crisis internationally, regionally, but also locally (Mahat et al., 2019). Climate finance can be drawn from private, public, multilateral organisations or alternative sources of financing and it aims to support climate actions (UNFCCC, 2020). Nevertheless, the new landscape of climate finance brings an inherent complexity. Here, a mechanism of blended finance can be introduced in order to ensure a robust risk management of a portfolio of different streams of blended funding (Tonkonogy et al., 2018; Flynn, 2011).

6. Monitoring¹⁸

Why local authorities need to implement monitoring measures?

The results of climate adaptation initiatives in many cases will become apparent over a long period of time (e.g. 20 - 50 years). However, the climate emergency requires that the reporting on those initiatives is in a much shorter timescale. In this respect, monitoring is particularly valuable in climate emergency action as it can provide intermediate outcomes in the short term. In addition, the continuous assessment can give flexibility to the actions to adapt to any internal or external factors. In this way, monitoring does not only serve as a tracking system, but also as a tool for lessons learnt within the government (OECD,2014).

What is recommended?

It is recommended that local authorities implement monitoring measures from the outset of their climate emergency strategies. These measures can include the implementation of data collection and surveillance systems which can provide useful information on climate initiatives. Furthermore, it is recommended that monitoring systems address adaptation and mitigation actions separately in order to distinguish the priorities and impacts of climate change in each area.

In this line of thought, it is advised that local governments cover one or more of the following components to monitor their adaptation and mitigation actions:

For adaptation: i) tracking progress of implementation, including sharing lessons; ii) adaptation goals and targets; iii) assess the adaptive capacity of local communities.

For mitigation: i) greenhouse gas emissions and trends, ii) mitigation goals and targets; iii) policy measures; and iv) projections (UNFCCC, 2019).

How can local governments implement monitoring mechanisms?

In the UK the national government from 2008 to 2010 developed 188 national indicators (NI188) as a guideline to local authorities to prepare for climate change (UK Government, 2010). Since then, these indicators have not been updated and thus they do not reflect the current climate emergency. Furthermore, at the international level there is a lack of a homogenous agreed set of climate indicators for small to medium sized urban centres (Boehnke et al., 2018). Therefore, one of the prerequisites to establish a monitoring system is that local authorities develop a set of metrics and indicators for comparison of progress across local governments in the country. Establishing this set of metrics locally

¹⁸ Monitoring is defined as the on-going assessment of interventions and progress made in a set of targets or specific actions (OECD, 2014). The outcomes from the monitoring process can include an annual progress report (UK Gov, nd).

rather than from guidance of the national government will help local governments monitor climate change according to their local context.

In addition, the interview findings revealed that some of the internal challenges faced by local authorities is the lack of trained personnel to collect, monitor and analyse climate change data. Therefore, it is recommended that local governments develop programmes to enhance internal technical knowledge to monitor their own GHG emissions and climate actions. It is important that this process comes from a bottom-up approach which can help local authorities develop their own capacities to better fulfil their core functions and achieve their own goals.

Analytical Capacity

7. Co-benefits¹⁹

Why local authorities need to include co-benefits in their Action Plans?

Co-benefits occur when there is a 'win-win' situation and synergies are created between sectors (Floater et al, 2016). Co-benefits occur when with a single government action more than one political goal is realised. These can be, for example, reducing inequality, improving health, enhancing resilience, reducing employment and contributing to political stability (Mayrhofer & Gupta, 2016). Evidence shows that citizens are more likely to support climate change action if the co-benefits of the actions are presented (Bain et al. 2015). Therefore, it is essential for policymakers and local authorities to consider what are the potential co-benefits in their actions plans as it can help achieve a faster and deeper GHG reduction. Furthermore, devolved administrations and cities are best placed to capitalise on the different co-benefits from addressing climate change and to manage competing priority areas impacting on one other (Jennings et al. 2019).

Demonstrating the various co-benefits stemming from climate actions would be particularly useful for enabling the green transition for local authorities by collaborating with citizens, organisations and the wider industry in a spirit of trust and common understanding (Ahluwalia et al., 2020). Establishing the co-benefits with local impact and within a short time further facilitates cooperation and promotes upscaling of climate action (UNECE, 2016). Finally, since the concept of 'co-benefits' has a positive valence, this will help prevent the framing of climate action as a trade-off with other competing priorities (Mayrhofer & Gupta, 2016).

¹⁹ The action plan pursues to maximise potential co-benefits which focus on synergies and win-win solutions among different sectors (e.g. transport, agriculture, construction, finance, etc.). Benefits may also include the generation of social capital.

What is recommended?

It is recommended for councils to consider ways in which they could work with organisations and industries to create co-benefits for their communities. Local authorities should establish their priority areas and consider the co-benefits which can be realised through climate action. In turn by including the co-benefits which are to be realised, local authorities will be better placed to create a positive narrative around the delivery of their climate agenda. This will enable a more effective delivery of climate actions while tackling other pressing societal and economic challenges. Therefore, these secondary benefits for society need to be embedded within climate action policymaking in order to help pursue the case of climate action (Floater et al, 2016).

How can action plans be focused on co-benefits?

One way in which action plans can be focused on the realisation of co-benefits is through the adoption of policy frameworks. Frameworks are meant to give local authorities an internal policy design structure which can help them align their specific goals, objectives and priorities with stakeholders to establish the basis for actions and interventions. These policy tools can help pursue a decision-making approach which strives for the highest net-benefit realised in relation to climate, social, economic and environment effects (Floater et al, 2016). Furthermore, research shows that several underlying co-benefits can be realised such as enhanced innovation, employment, technological leapfrogging and sustainable development (Jochem & Madlener, 2003).

For co-benefits to be successful they need to be acknowledged and disseminated across different levels of society. In this respect, local governance presents a unique opportunity to initiate the process of mainstreaming the benefits associated to climate action. For instance, a study conducted in a local authority in the Western Cape of South Africa showed the importance of political champions driving behaviour change. The study revealed that in less than 5 years two senior councillors in the local government were able to implement a mindset change in their community towards sustainable development (Pasquini et al., 2015). In a similar way, local authorities in the UK can implement leadership programs to mainstream the different co-benefits linked to their climate emergency action plans.

8. Risk Assessment for Climate Actions²⁰

Why action plans need to include Risk Assessment and mitigation of their actions?

Risk Assessment is one of the most fundamental aspects of climate change action as it helps governments to address risks associated with the delivery of climate actions. At the same time, risk assessment works as a mechanism to evaluate potential risks and implications associated with the

²⁰ Risk assessment is defined as systematic process of evaluation of potential risks in an action plan. The assessment can include a general risk analysis or risk mitigation and adaptation for specific actions.

specific decision actions considered (Gao et al. 2017). Therefore, including risk assessment of each action would enable more effective implementation of actions, as delivery risks will be managed and mitigated. Thus, the climate agenda and commitments will be executed with least delays and budget overruns.

What is recommended?

It is recommended that Action Plans be subjected to risk assessments. The risk assessments can be categorised on the basis of overarching issues or sectors or embedded in every action.

How can Action Plans include Risk Assessment?

A first step would be to add risk assessment as a design criterion in the phase of creation of an action plan. This will ensure that, regardless of the type of risk assessment chosen, there will be some insight on their identification and mitigation. A second step would be to designate internal capacities to risk, including identification, mitigation and contingency actions. These tasks can also be delegated to the implementing team of a specific action, with a general risk manager appointed to oversee the process. One of the attributes identified earlier in the study, is "Interim targets". A risk assessment could be made to coincide with this periodic target setting, or revision period. This would help in determining realistic and short-term solutions to overarching risks as well as individual action risks.

Risk management of a climate emergency plan will have to be a hybrid task. On one hand, there are risks associated with climate change (floods, extreme temperatures etc.) which form the underlying origin of most of the risks identified in adaptation and corresponding actions that address it. On the other hand, each action that is identified and planned for will have some exposure to risk in its implementation, such as funding, human resources, political agenda etc. It is essential therefore to separate the high-level overarching risks from which actions originate and the risks involved in the implementation of each action. A good climate emergency Action Plan should have both.

Use of a methodical approach to identify future threats and opportunities is essential. In this respect, the BACILAT (Business Areas Climate Assessment Tool) developed by UKCIP can be useful. (UK Climate Impacts Programme, 2012).

Also, according to Adaptation Scotland (2016), threats and opportunities can be categorised in 6 business areas, markets, process, logistics, people, premises and finance. Subsequently a risk matrix is created which portrays how climate hazards affect these aspects.

Finally, a detailed table of Actions and respective measures, Owners and timelines, is essential to keep track of risk management. Most actions in this regard fall into 2 categories: Building adaptive capacities, which is mostly institutional capacities in response to climate change, and Delivering adaptation actions, which involves the practical actions to be taken.

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Overarching Criteria - Checkpoint 1		Cornwall	Portsmouth	Hampshire	West Midlands	Momnouthshire	North Somerset	Kirklees	Leeds	Nottingham	West Devon	Bournemouth	Plymouth	Southampton	Peterborough	Wandsworth	Harborough	Brent	Bradford	Richmond	Wealden	Winchester	Lambeth	Eastleigh	Sutton	Wirral	Ryedale	Fife	Oxford	Dundee	Carmarthenshire	Northumberland	Stroud	Islington		
	Attribute	Description																																		
1	Agile/Flexible	Action plan's measures are reversible or can later be adjusted to keep the option open to adapt when necessary". Being flexible does not mean being vague about the target. Also, it can be interpreted as including an acknowledgment that implementation can change according to circumstances	2	1	1	1	1	1	2	1	2	2	1	2	2	2	2	2	2	0	1	1	2	2	2	2	2	2	2	2	2	2	2	1	1	
2	Attainable	Based on baseline data, existing resources and capabilities, mandates and capacities. Realistic about their ambitions.	1	1	1	2	1	1	2	2	1	2	1	1	2	1	2	2	1	1	2	1	2	1	2	2	2	1	2	1	1	1	1	1	2	
3	Innovation spurring	Spur innovation locally using best practices and adoption of innovative solutions, working with universities, industries etc. Both fostering innovation and taking advantage of innovations count towards this attribute.	1	1	2	2	1	1	1	2	1	0	1	2	2	0	1	0	2	2	1	0	2	0	0	2	1	0	2	2	2	2	2	0	2	
4	Resilient to climate hazards	Demonstrate how the city will adapt and improve its resilience to the climate hazards that may impact the city now and in future climate change scenarios. Mitigation and adaptation solutions are clearly expressed in the action plan. Showing reflection on the topic, (planning for studies or assessment on the topic, in order to pave the way for future assessments)	1	1	0	1	0	2	1	1	2	0	1	1	1	0	2	1	1	2	2	0	0	0	2	2	2	1	2	0	2	1	0	2	1	
5	Carbon neutrality ambition	This attribute measures the CO2 reduction ambition, where scores are assigned in relation to the local authority's ambition to align vs surpass government's 2050 Net Zero plans. 0- Aligns with the national government 1- between (2030- 2049/44 accordingly) 2- by 2030	2	2	0	1	2	2	1	2	2	2	0	2	2	2	2	2	2	1	2	0	2	2	2	0	0	0	0	0	1	2	2	2	2	
6	carbon neutrality interim objectives - IN RELATION TO CO2 !	This attribute measures whether there are sufficient interim CO2 reduction objectives specified within the climate plan. 0- without interim objectives 1- with only 1 interim objective 2- with many interim objectives It should be an overall specific, (amount of savings, and date) Eg: a. Phase 1 20% reduction by 2020. b. Phase 2 40% by 2025. c. Carbon Neutral by 2035.	2	1	2	2	0	0	1	1	1	0	0	2	2	2	1	1	0	1	1	0	2	0	1	1	1	0	2	2	2	1	0	1	0	2
7	Comprehensive	This attribute measures whether multiple actions are considered across a range of sectors within the city/municipality. E.g. Transportation, Waste, Energy, Buildings etc.	2	1	2	1	2	2	1	2	2	0	2	2	2	1	2	1	2	2	2	2	2	1	2	2	2	1	2	2	2	2	2	2	2	
8	Inclusive	Addresses minority and marginalized groups, includes terms as leaving no one behind; fair or just transition	2	1	1	2	0	0	2	2	2	0	1	1	0	0	1	2	1	2	2	0	2	2	0	1	1	0	2	0	2	0	0	1	2	
9	Integrated	Combines and coordinates economic planning, physical planning and environmental planning to deliver efficient policies that support, rather than undercut each other Examples: health, education, economic, social inequalities, etc	2	1	2	2	1	2	2	1	2	1	2	2	2	1	2	1	2	2	2	0	0	1	2	2	1	1	2	2	2	1	2	2	2	
10	Costed	This attribute measures whether costing is specified for the implementation of the actions specified in the action plan. 0- No costing of the overall plan, and no costing of the actions. 1- Costing of only either overall cost or only Action Plans. Also if the overall cost is estimated but less than 70% Actions 2- Stating the overall cost of the plan implementation or on 70% of the Actions	1	0	0	0	0	0	1	1	0	0	0	2	0	0	2	0	0	1	2	1	1	0	0	1	0	0	0	0	2	0	0	0	0	

11	Financing Secured	This attribute measures whether the funds required for the implementation of the plan are financially secure. A well-developed financial security strategy inclusive of financial criteria should be in place. 0- No strategy on securing financing 1- funding might be available upon application for funds. Have a list of potential investors, organization etc. 2 - Developed securing finance strategy, including a reflection on financial criteria, preferably at the interim level	2	1	0	0	0	0	1	1	1	0	0	1	1	1	1	0	0	2	0	1	2	0	0	2	0	0	1	2	1	1	1	1	1	1	2
12	Specific	Explicitly states the changes to be made. The action plan should be focused on addressing concrete challenges clearly stating how these would be tackled. Actions should be specific enough that they can be readily implemented and measured	2	1	1	1	1	2	2	2	2	1	0	1	2	2	2	2	1	2	1	2	0	2	1	1	2	1	2	2	2	2	2	1	1	0	2
13	Measurable/Evaluative	Actions planning should primarily be evaluated on the extent to which they manage to attain the goals and objectives. Attribute investigates whether there are any mechanisms to measure the success of the implementation of actions.	1	1	0	1	2	2	1	2	1	2	2	0	2	2	1	0	1	1	2	1	2	1	0	2	0	2	1	1	1	0	2	0	0		
14	Monitored	This attribute measures whether the action plan has a monitoring mechanism. A rigorous monitoring framework should be in place. 0-no monitoring framework 1-some monitoring farmework/groups 2-have a rigorous monitoring framework	1	2	2	0	1	2	1	0	1	0	0	0	2	2	1	1	0	1	2	1	2	1	1	2	0	2	2	0	2	1	2	0	1	2	1
15	Time-bound	The plan has a clear implementation timeline of actions. Could be integrated in the plan or as a separate annex with tables where delivery times are specified for each action.	1	0	1	1	1	0	2	1	2	0	0	0	2	1	2	1	0	2	2	1	2	1	2	0	2	2	1	1	1	1	1	0	1		
16	Perception/Behavior change	The climate action plan is shaping the preferences of citizens. Actions to incentivize behavioral change are identified or are embedded within the broader set of actions. 0- behavior change actions are not stated 1- somehow present in few sectors 2- specific behavior change actions and intentions. Most of the sectors incentivize behavioral change. Behavior change is a necessary component	1	1	1	2	2	2	1	2	1	0	1	1	2	2	1	1	1	2	2	1	2	2	2	1	2	1	2	2	2	2	2	1	1	1	1
17	Evidence-based	Climate action plans should be evidence-based reflecting scientific knowledge and local understanding.	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2	1	2	2	2	2	2	2	2	1	2	2	2	2	2	2	1	2	1	2	
18	Responsibility defining/assigning	Actions should be assigned to specific representatives, agencies, organizations, or stakeholders so that those entities can be held accountable for implementation. 1- Less than 70% 2- Actions need to be attributed to responsible persons or sectors, in more than 70% of the actions	0	0	1	0	0	2	1	1	1	1	1	0	0	1	2	0	0	0	2	0	2	1	1	2	1	2	2	0	1	2	2	0	0		
19	Creating cross-sectoral co-benefits	The action plan aims to maximize potential co-benefits, synergies and win-win measures. Benefits may also include the generation of social capital.0- no mention of co-benefits 1- mentioning co-benefits without quantifying them 2- mentioning and quantifying co-benefits.	1	1	2	2	0	2	1	1	1	1	1	0	1	1	2	1	2	1	2	0	1	0	0	1	0	0	2	1	1	0	1	1	0		
20	Reflective	The plan is reflective of other existing plans and commitments and there is a clear sequence with previous and future actions.	2	2	2	2	2	0	1	2	1	1	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
21	User friendly	The language used in the action plan is jargon free, understandable, clear and easy to comprehend. The action plan includes visual aids such as graphs and tables.	2	2	2	2	2	1	1	2	2	1	2	2	2	1	0	1	2	2	2	1	2	1	2	2	2	2	2	2	2	2	2	2	1	2	
Checkpoint 2 - Content																																					
Attribute																																					
22	Vision Statement	The action plan includes a vision statement that is in accordance with the Paris Agreement and with UK's Strategy to achieve Net Zero by 2050.	2	2	2	2	2	2	0	2	0	1	2	2	1	2	0	0	1	2	0	2	0	2	2	2	0	2	2	2	2	2	2	2	2	2	
23	Executive Summary	The action plan includes an executive summary which explains the objectives of the plan, the local context, the climate emergency background etc.	0	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	0	2	2	0	0	2	1	2	1	2	2	2	2	2	2	2	1	2	
24	Engagement strategy	There is an engagement strategy present which engages with the public on the implementation of the action plan. This for example could include its outreach and public participation activities.	2	1	2	2	2	0	2	2	2	0	2	2	2	2	2	2	1	2	2	0	2	1	2	2	2	1	2	1	2	1	1	1	1	2	

25	Leadership and Revision Periods	It is clearly identified who is responsible for the plan itself and the timeframe of the revision periods of the action plan is included.	1	1	2	0	2	2	1	0	1	2	1	1	1	1	2	1	1	0	2	0	2	2	2	0	1	2	2	0	1	1	2	1	1	
26	Stakeholder mapping	Major stakeholder groups are identified, and stakeholders and participating actors are listed.	0	1	2	2	0	1	1	1	1	0	2	2	0	2	2	2	1	2	2	1	2	0	0	2	2	1	2	0	2	2	2	2	1	2
27	Goals and Objectives	Goals and objectives are clearly identified.	2	2	2	2	2	2	2	2	2	0	1	2	2	1	2	1	2	2	2	1	2	0	0	2	1	0	2	2	2	1	1	0	2	
28	Priority areas and sectors	The plan has a sectoral approach and establishes which are the local priority areas. These could be Include Transport, Buildings, Water, Energy, Waste, Land-use, and/or others. 0- no priority areas mentioned 1 - priority areas mentioned but not explained in detail 2 - priority areas mentioned and explained in detail	2	2	2	1	2	2	2	2	2	1	1	2	2	1	2	1	2	2	2	2	2	2	2	2	2	2	2	2	1	1	0	2	2	
29	Vulnerability assessment of the Sectors	The plan includes a vulnerability assessment of the local authority's exposure to current and long-term climate conditions, describes it's adaptative capacities and identifies which people/places/institutions/sectors are most vulnerable to climate change.	2	2	0	2	2	2	1	1	1	1	2	0	1	0	2	1	2	2	2	0	1	0	0	1	1	0	2	2	2	1	0	2	0	
30	Adaptive and Mitigating Actions	The action plan prescribes clear adaptive and mitigating actions across sectors	1	2	2	0	1	2	1	1	2	0	1	1	1	1	1	1	1	2	0	1	0	0	2	2	1	2	2	2	0	1	2	1		
31	Co-benefits and synergies:	The plan pursues creation of co-benefits, synergies and win-win solutions among different sectors (e.g. transport, agriculture, construction, finance, retail and energy-supply).	1	1	2	2	0	2	1	1	2	1	2	0	2	1	2	0	0	1	2	0	1	0	0	2	0	0	2	1	1	0	1	1	0	
32	Risk Assessment and Risk Mitigation for the Actions	The plan includes risk assessment and risk mitigation of the actions identified.	1	0	0	0	1	1	0	1	1	1	2	0	0	0	1	1	0	0	0	2	0	1	0	2	1	0	2	0	1	1	0	0	2	
33	item ownership	Ownership of actions is identified in order to enable reporting and accountability for the delivery of actions.	0	0	0	0	0	1	0	0	1	0	0	0	0	1	2	0	2	0	2	2	2	2	0	2	1	2	2	0	1	2	2	0	0	
34	Timeline of the actions	There is a clear timeline of actions to be implemented.	1	0	0	0	0	0	0	1	2	0	0	1	2	1	2	0	2	2	2	2	2	1	2	1	1	2	2	1	1	1	1	0	0	
	Checkpoint 3 - Process of creating the Action Plan																																			
	Attribute	Description																																		
35	Declare a climate emergency	The local authority has successfully declared a climate emergency.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
36	Setting the Vision	The local authority has put forward a vision for the implementation of climate emergency action planning.	2	2	2	2	2	2	2	1	2	1	1	2	2	1	2	0	0	2	2	0	0	0	0	2	2		2	2	2	2	2	2		
37	Choose the Framework to follow for the plan	The local authority has considered the climate emergency overarching legal frameworks and guidelines. For the delivery of its action plan it has either followed an established framework or worked with an experienced partner.	2	2	2	1	1	1	2	2	0	1	2	1	2	2	1	2	2	1	2	2	1	2	0	0	2	2	2	2	2	1	2	1	2	
38	Develop an Engagement strategy - related to public	The local authority has developed a public engagement strategy to inform and involve the public (citizens, industries, etc).	2	1	0	1	0	0	2	2	2	0	2	2	2	2	2	0	2	0	2	2	2	2	1	2	2	0	2	2	2	1	0	0	2	
39	Pursuing of public/ public-private / mprivate partnerships	The local authority pursues creation of partnerships and encourage working in cooperation, with industries and local power actors.	1	2	2	2	0	0	1	2	2	2	1	2	2	2	2	1	1	0	2	2	2	1	0	2	2	2	2	2	2	2	2	2	1	2
40	Carry out assessments GHG	The local authority has carried out baseline GHG assessments and has identified GHG inventory and reduction potential.	2	2	2	2	1	2	2	2	2	2	2	2	1	2	2	0	2	2	2	2	2	2	2	2	2	0	2	2	2	2	2	1	2	
41	Sectors Assessment - Sectoral Approach	The local authority has identified the challenges and opportunities within the different sectors (Water, Energy, Transport, Buildings, etc). An assessment is made of the different sectors and their GHG impact and reduction potential.	2	2	1	1	2	2	2	2	2	1	2	2	2	1	2	0	2	1	2	1	1	1	0	1	0	0	1	2	2	2	1	1	1	
42	Identify priorities and Set Preliminary Goals	Higher priority areas are identified from the assessment (e.g. contaminated water, pollution etc)	2	2	1	2	2	2	2	2	2	0	1	2	2	2	1	2	2	2	2	2	2	0	1	2	1	2	2	2	2	1	1	1	2	
43	Identify Actions	Within the sectors identified, clear mitigation and adaptation actions are specified. Potential interventions are studied, taking into account the interventions already in place and the existing sustainability actions.	2	1	1	1	2	2	2	2	2	1	2	2	2	2	2	0	2	2	2	2	2	2	1	2	1	2	2	2	2	2	1	2	0	1

44	Set the requirement to explore Co-benefits Across Sectors	The local authority has set the requirement to explore co-benefits across sectors and to work with local industries through pursuing partnerships and working in cooperation.	1	0	2	2	2	0	2	1	2	1	0	0	2	1	2	1	1	0	2	0	0	0	0	0	1	0	2	0	1	0	1	0	1	0	0		
45	Targets	The local authority has set clear targets and objectives.	1	2	1	2	2	2	2	2	2	2	1	2	2	1	2	1	1	1	2	2	2	1	2	2	0	0	2	2	2	2	2	2	1	1	2		
46	Budget / Cost the actions of creating an AP	The local authority has budgeted the delivery of the action plan. It has considered a range of financing options for the delivery of the actions specified (public vs. private, local vs. national vs. international financing options). It has performed financial analyses and provided costing option for the delivery of actions.	2	0	0	0	0	0	0	1	0	1	0	0	1	0	2	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
47	Identify leadership (who owns and leads the process of creating the action plans)	The local authority has identified who owns and leads the process of the creating the action plan.	0	0	2	0	0	2	2	0	0	2	0	0	0	2	2	0	2	1	2	2	2	2	1	0	0	2	2	0	1	2	2	2	1	1	1		
48	Develop a timeframe for the creation of an action plan	The local authority has developed a timeframe on the duration of the creation of the climate action plan.	2	2	1	0	0	0	1	1	2	0	0	0	0	1	2	2	2	2	2	2	2	2	2	0	0	2	2	1	0	2	2	0	0	0			
49	Appoint monitoring team for the creation of the Action Plan and future plans	The local authority has established the monitoring, evaluation and reporting required for the delivery of the action plan and is monitoring is performed on an on-going basis. The local authority is transparent to the public and has provided public monitoring mechanisms (e.g. live trackers available to citizens, live information sections on progress and delivery)	0	0	2	0	0	2	1	0	0	0	0	0	2	2	2	2	1	0	2	2	1	0	0	1	0	2	2	0	0	0	0	0	2	1	0		