

Urban Climate Justice for Whom?

A comparative discourse analysis exploring the concept of climate justice
in urban climate strategy action plans.



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Abstract

Despite an increased emphasis on the role of cities in reaching the EU's ambitious climate goals, attention has been lacking paid towards climate justice on an urban level. Simultaneously, following international directives, urban adaptation plans are expected to consider climate justice in their approach and acknowledge the effects and benefits of climate action on their most exposed citizens. This research aims to study how and to what extent aspects of climate justice are understood and translated into local climate action strategies. The climate action plans of Budapest, Dublin, and Stockholm are analyzed through a qualitative discourse analysis applying the “What is the problem represented to be?” (WPR) methodological approach exploring the implicit portrayals of climate justice in the documents. Guiding the analysis, the concept of climate justice has been applied by adopting Bulkeley et al. 's (2014) conceptual framework categorizing suggested actions implying climate justice into recognition, distribution and procedural justice. The findings show that urban climate action plans do include implications of climate justice, however, to varying extents and portrayals. Budapest's and Dublin's action plan include all three categories and offer a complementary framing of climate justice to different extents. In contrast, in Stockholm's climate plan, climate justice implications are almost entirely absent.

Keywords: climate change, climate justice, urban justice, urban climate action, adaptation, policy analysis, EU climate action

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1 Introduction

Climate change, as one of the most urgent global challenges of our time, has taken a dominant role in the global political debate. The unequal effects of climate change and action have been contested subjects when establishing global climate adaptation policies raising questions such as: Who bears the most responsibility for emissions, and who is the most affected by climate changes and climate action? International politics have advocated climate strategy by recognizing vulnerable groups and communities as more affected by environmental change and including them actively in action, thereby acknowledging climate justice. Global climate targets such as the United Nations (UN) Sustainable Development Goals have, therefore, recently included aspects of climate justice in their target plans, ensuring that climate action considers these groups as well (UN General Assembly, 2015).

A recent emphasis, especially in the European Union, has been put on the role of cities in reaching ambitious international climate objectives. Cities are responsible for a dominant part of global Green House Gas emissions (GHG) and, at the same time, provide homes to 75% of the EU's population (The World Bank, 2021). Cities' climate action plans are expected to incorporate international climate objectives. Consequently, they must also regard climate justice in their adaptation plans in coherence with the international goals. Decision-makers on the urban level are, therefore, responsible for translating the global vision for climate action, operationalizing the notion of climate justice on the urban level. Strategies need to consider the structural inequalities in urban areas that expose vulnerable groups to conditions such as income inequality, lack of political representation, and lack of access to services. Due to these disparities, climate initiatives, such as regulations of car fuels, can risk disadvantageing some groups disproportionately to the rest of society.

Climate justice as an ambiguous concept offers a challenge to urban policy adaptation being coherent across national borders. Academics have discussed the role of the formulation and organization of climate action plans determining how cities adopt sustainable measures. They mean that policies inherently risk strengthening unequal social structures through action prioritizations if they neglect to consider social

inequalities and to assess costs and benefits for *everyone* affected by the suggested solutions (Bulkeley et al., 2014; Bulkeley & Betsill, 2005).

This paper seeks to study the contemporary discourse on climate justice at city level in the EU. The concept of urban climate justice is still, in many ways, an unmapped research area. To find implicit implications of climate justice, this study will adopt a coding scheme based on Bulkeley et al.'s (2014) conceptual framework of climate justice. The coding guides the discourse analysis using Bacchi's (2009) "What is the problem represented to be?" approach to reflect on similarities and differences in how climate justice is presented in urban climate action strategies.

1.1 Research aim and question

This study aims to explore the portrayal of climate justice in local urban climate adaptation strategies. The paper describes how climate justice is understood and applied in adherence on a local level in cities which follow the same international climate targets and thereby explores how local decision-makers translate global initiatives to local strategies. The study aims to contribute to climate justice representation in urban policy research, studying how cities include marginalized groups in climate action. Using the climate plans of Budapest, Dublin and Stockholm, the cases provide insight into the context of the EU and further analyse the union's attempts to make cities' climate action more comprehensive in local policy planning.

This study seeks to answer the following question:

How and to what extent do Budapest, Dublin, and Stockholm's local climate change adaptation action plans frame climate justice approaches in their strategy formulations?

The paper will first introduce the contextual background of the topic ([section 2](#)), followed by the introduction of the conceptual framework of climate justice ([section 3](#)) and the WPR methodology ([section 4](#)). Followingly [section 5](#) presents the analysis of the climate adaptation plans. Finally, a discussion and concluding remarks will be found in [section 6](#).

2 Background

The following section will provide contextual background to the research topic regarding cities' role in climate action, the history of the concept of climate justice, and describe the currently available academic research on climate justice in urban areas.

2.1 Cities as climate actors

Urban climate action is vital to reaching the required climate targets. There is a vast ongoing urbanization, where cities are expected to provide homes to 85% of European citizens by 2050 (UN Environment Program, n. d.). Urban activity is estimated to represent 75% of global GHG emissions (UN Environment Program, n. d.). In Asia and Europe, the top 25 cities are responsible for 52 % of the total GHG emission (Wei, Wu, and Chen, 2021). At the same time, because of the high concentration of technology and infrastructure, cities provide an ultimate catalysator for extensive and innovative climate action (Huovila et al.,2022; European Commission, n. d.-a). Urban action can determine the path to reach international-scale climate targets.

2.2 Global urban climate action

The role of urban transition in sustainable development is stated in the UN's Agenda 2030. Goal 11, sustainable cities and communities, align with the EU mission "100 Climate Neutral and Smart Cities" 2030, which also has a clear connection to goal 13, climate action. Similarly, several other goals are discussed in the proposed city transition: goal 7, affordable and green energy, and goal 9, industry, innovation and infrastructure (United Nations, 2016). Urban climate transition has been recognized as a crucial part of climate action after the 2015 Paris Agreement for Climate Action, which emphasized subnational initiatives to reach the required emission reduction for keeping the temperature below 1.5 degrees (United Nations, 2015, article 7:2).

Moreover, there is a significant push internationally to enhance urban climate action in the form of transnational cooperation. Several international organizations aim to provide a platform for local actors to exchange innovative ideas and technologies

(Castán Broto, 2017). Some main collaborations are C40 Cities, Climate Leadership, Covenant of Mayors EU and The World Mayors Council on Climate Change (C40 Cities, n.d.; European Commission, n.d.; Global Covenant of Mayors for Climate and Energy, 2022).

2.3 EU urban climate action

Recently, more intensified urban climate action has been initiated, especially within the European Union. European cities have committed to reaching carbon neutrality by 2050, and 100 cities have already taken upon the additional challenge of reaching carbon neutrality by 2030 (Castán Broto, 2017; European Commission, n.d.).

The EU mission, "100 Climate Neutral and Smart Cities", is currently high on the agenda of the EU's short-term climate action (Huovila et al.,2022; European Commission, n. d.-a). The mission is a part of the European Green Deal, one of the European Union's most extensive packages of climate policy initiatives (European Commission, n.d.-a). The European Commission in April 2022 selected 100 climate-neutral and smart cities from all 27 member states within the so-called Cities Mission. The objective is for these cities' carbon neutrality by 2030. The chosen cities present preceding innovation hubs for the rest of the union's cities to follow to reach 2050 targets (European Commission, n.d.).

The EU has further adopted a "New Strategic Agenda 2019-2024" there. They include a promotion for an inclusive and sustainable green transition. The strategy aims to include social fairness and participation in the EU's climate policy development recognizing the unequal effects of climate change. It advocates holistic green transition involving private and public stakeholders with particular attention to social issues, generational inequalities, socioeconomic groups, and gender (European Council, 2019). The strategy aligns with the general academic view that urban climate governance initiatives need to have a socially inclusive approach, initiating transition with a bottom-up, pro-poor direction as preexisting structural conditions can determine the most suitable climate adaptation (Bulkeley et al., 2014

2.4 Climate justice

The general idea of climate justice in the academic discussion is directed towards the disproportionate inclusion of vulnerable communities due to the unequal distribution of costs and benefits of climate change and action (Biermann et al., 2020; Dolšák & Prakash, 2022). However, there is no consensus on the concept, and justice in climate action has been an ambiguous area of academic discussion.

The concept of climate justice originated from environmental justice, which emerged during the 20th century. These two concepts are relatively similar and share the idea of disproportionate effects of climate change exposing vulnerable communities more to the risks of climate change (Dolšák & Prakash, 2022).

A distinction of climate justice from environmental justice is the focus on not just the inequity of climate impacts but also the inequity of who is most affected by climate *action*. Consequently, policies need to recognize who benefits from climate action and inaction to avoid reproducing biased patterns. For example, a push for renewable energy sources, such as rooftop solar, might indirectly exclude low-income households for whom an installation would not be financially beneficial. Therefore, factors of economic, political, and social inequalities need to be considered for just climate action (Dolšák & Prakash, 2022). It is necessary to clarify, however, that the two concepts are not separate, and academics have not yet reached a consensus on their distinction.

2.5 Previous research

Academic research on climate justice in urban policy-making has been rare. The topic has been touched upon in different ways, such as pro-poor climate adaptation in developing countries or the role of governance and power distribution in urban climate policies (Mose & Satterhwaitem, 2008; Castán Broto, 2017; Neij & Heiskanen, 2021; Bulkeley & Betsill, 2005). Climate justice in research has generally been focused on justice on a global scale, discussing the disproportionate distribution of benefits and costs of climate change and action dividing responsibilities between the global north and south (Dolšák & Prakash, 2022; Bulkeley et al., 2014).

Less research has been conducted on climate justice on the sub-national level in urban areas. One of the most prominent studies on urban climate justice and climate action

plans, conducted by Bulkeley et al. (2014) switched focus from governance structures and developed a new climate justice framework which they applied to Bangalore, Monterrey, Hong Kong, Philadelphia and Berlin. The research stressed how climate policies could recreate inequalities through their climate action policies. However, the authors recognize the current lack of research on climate justice in the context of urban climate action plans.

3 Theoretical and Analytical Framework

The following section will clarify the choice of the conceptual framework of climate justice and present the theoretical lens of the “WPR” approach, which the analysis will be guided by.

3.1 The conceptual framework of climate justice

The study is centered around the concept of climate justice, which entails a theoretical difficulty when used in research. As mentioned in [section 2.5](#), conceptualizations of climate justice differ in distribution views and focus on stakeholders, which indicates the various notions of justice in these frameworks.

The study adapts the conceptual framework formulated by Bulkeley et al.(2014) to adjust the concept of climate justice to the research question. This framework includes a combination of frames of justice, avoiding the limitation of adopting one philosophical view of justice.

Bulkeley et al. (2014) have recognized the need for a framework applicable to local climate adaptation following the view that climate adaptation is a multilevel process (Bulkeley et al., 2014). Their framework builds on the idea that justice can be recognized differently within policies, such as distributional justice, procedural justice, responsibilities, rights and recognition. The framework examines these five elements to determine how environmental justice is included in a climate strategy. The framework means that for a policy to consider climate justice properly, it needs to recognize it in all five aspects.

To exemplify, a climate action policy can recognize that a more disadvantaged suburban area does not have a climate-resilient infrastructure (recognition justice).

Still, it also needs to actively suggest action to address the inequality, such as giving extra-governmental funds to develop the infrastructure in the area (distributional justice), thereby including two forms of climate justice. In Bulkeley et al. 's (2014) view, a climate strategy can only be considered to have a fully climate-just approach when they have acknowledged all five facets of justice.

The framework provides a base for an initial coding of the documents to determine the sections in the material where climate justice can be detected and helps identify the framings of climate justice visible in the strategies. In line with the framework, the study examines the forms of justice most present in the policies based on the forms of action the documents suggest (Bulkeley et al., 2014). However, when adopting the framework for this study, a simplified version is used with only three forms of justice suggested by Bulkeley et al. (2014) (recognition, procedural and distributional justice). These will later be further explained in [section 4.2](#).

3.2 Social constructivism in “WPR?” Approach

The methodology of Bacchi's approach is grounded in social constructivist epistemological theory (Bacchi, 2009, p.48). Social constructivism is based on the premise that there is no objective conception of reality. When conducting discourse analysis, a text's language usage and formulation indicate different conceptions of reality (or conception of a problem) (Bacchi, 1999, p.49). In discourse analysis, the core question is "What version of the world does the document present?" in this case, this question regards what version of climate justice is present in the selected policies.

Bacchi's policy analysis is based on Foucault's post-structural view. Foucault indicates that discourses (knowledge of a problem) are constructed by society, specifically, policymakers formulating policies (Bacchi & Goodwin, 2016, pp.14-16). Through deciding what action needs to be taken to solve a problem, policies present a way to look at social issues. Therefore, the policy decision-makers and authors influence how society describes and views a problem (Farthing, 2016, pp. 170-171). In view of this, the way policymakers choose to translate international guidelines into local strategies determines how climate justice will be perceived and implemented in the cities. In line with the post-structural view, Bacchi's framework uncovers the implications of the

language formulations. Therefore to study the discourse of climate justice in policies, the framework provides a suitable theoretical lens for the analysis

4. Methodological Approach

To conduct the analysis, a combined methodology of coding, based on the conceptual framework, following the “What is the problem represented to be?” discourse analysis approach is adopted.

4.1 Research design

This research is designed as a descriptive qualitative discourse analysis using Bacchi’s “WPR” framework to explore the different approaches to the ambiguous concept of climate justice.

Firstly, to operationalize the concept of climate justice prior to the WPR analysis, the documents are reviewed through an initial coding scheme to identify their usage of the *concept* of climate justice. The coding narrows down the data to analyze only the relevant sections of the documents. These sections provide the material the WPR analysis is based on. Climate justice as a phrase is not expected to be present in the document; therefore, indicators based on forms of categories by Bulkeley et al. (2014) provide a tool to find climate justice implications in the document.

4.1.1 What's the Problem Represented to be? Approach

As discussed, climate justice is a complex concept where the framing of justice in policies is often implicit. Consequently, to find the document's view on climate justice, the analysis needs to focus on “behind the text” implications and implicit formulations of the concept.

Unlike traditional discourse approaches, the WPR method takes a backwards approach and focuses on the *representation* of problems in policies (Bacchi, 2009, p.33). The framework assumes that depending on how policy addresses a problem with a particular action, it implicitly suggests a problem formulation. Therefore there can be different and contradictory problem formulations in one policy document depending on the present recommendations (Bacchi, 2009, p. 26, 27). The WPR backward

approach helps uncover underlying premises assumed or held quiet in a policy (Bacchi, 2009, pp.4-7).

Following the WPR approach, a problem representation reveals how particular representations of problems can suggest a normative agenda benefiting certain groups (Bacchi, 2009, p. xi., 41). Accordingly, if, e.g. a policy presents environmental solutions without addressing climate justice, the policies neglect the idea that unequal social structures affect the quality of climate action.

4. 2 Data collection

The data collection is based on a coding schedule grounded in the climate justice conceptual framework. Firstly, to operationalize the conceptual framework of climate justice with the WPR approach, the policy content is coded and categorized to identify different forms of climate justice. The used categories of justice *recognition*, *procedural* and *distributional* justice are based on the framework presented by Bulkeley et al. (2014).

The choice of categories (forms of justice) was chosen after studying previous literature connected to Bulkeley et al. 's (2014) theory. This revealed that climate justice had been more extensively discussed in the form of distribution justice, recognition justice and participation (procedural) justice (Holland, 2017). As all forms of justice suggested by Bulkeley et al. (2014) are highly interconnected, aspects of *rights* and *responsibilities* will be automatically incorporated into these categories.

These forms of justice provide the categories to determine what form of climate justice the policies' actions indicate the most:

1. *Recognition of justice* enhances the importance of including the excluded and marginalized, such as women, the elderly, and poor households.
2. *Procedural justice*, as the name suggests, focuses on transparent processes, access to information, and participation, giving opportunities for unrecognized vulnerable groups to partake in decision-making.
3. *Distributional justice* or substantive justice considers the distribution of benefits, burdens, responsibilities, and costs to those paying and benefiting the most (Gupta et al., 2023).

4.2.1 Operationalization of climate justice

A coding matrix has been developed to operationalize Bulkeley et al.'s (2014) theoretical framework. The coding matrix is based on Miles and Huberman's coding approach, following a preliminary identification of potential concepts, phrases, and actions that indicate the different forms of justice and general labels connected to the groups (Robson&McCartan, 2016, p.472). The scheme interprets three different framings of climate justice in the policy documents through keywords. The relevant parts of the policy will be identified, suggesting parts of the document where actions related to climate justice can be identified using the keywords. Below, the reader can find a simplified version of the matrix; for the more extensive version, see [Appendix 2](#).

The coding matrix:

Categories of justice	Codes	Examples of actions in policy
Recognition justice	poverty, inequality, vulnerable groups	1. explicit recognition of vulnerable groups
Procedural justice	transparency, participation	2. provides place & opportunity for vulnerable groups and individuals to take part in decision-making
Distributional justice	distribution, equality, benefit	3. financial assistance offered for economically more exposed groups

4.3 Data analysis

Following the initial coding, the analysis is guided by a set of questions provided by the WPR approach to identify the implicit information and implication of different climate justice framing in the policy. To see a set of questions formulated initially by Bacchi (2009), see [Appendix 1](#).

As suggested by the WPR framework to most sufficiently answer the research question, the provided list of questions has been altered, including only the essential questions for this analysis (Bacchi, 2009, p.48). The analysis contains questions one, two, and four. The selection of the questions was made to complement the initial coding of the material answering the research question most sufficiently. By focusing on how the documents frame the concepts differently or similarly, the three questions can be used to expose the "behind the text" implications of different framings of climate justice. The sampling of the questions aims to narrow down the research, focusing solely on the detectable climate justice framing in the documents. The excluded questions, three, five and six, aim to consider external, contextual factors such as the documents' background and consequences (Bacchi, 2009, p.48). The information uncovered by these questions is relevant to the topic but not necessary to answer the research question therefore, they are not included in the analysis.

The adjusted questions to be used are:

1. What is the 'problem' (climate justice) in a specific policy or policy proposal?

This question aims to detect which of the three (or if any) forms of climate justice is visible in the document and in what way it is detectable based on the findings after the coding. What is the representation of climate justice suggested by the policy actions (Bacchi, 2009, p.3)

2. What presuppositions or assumptions underpin this representation of the 'problem'?

With question number two, the keywords and found concepts in the document will be assessed, dissecting the attached meanings and implications of the different concepts.

This question aims to identify underlying premises that support the representation of climate justice in the documents (Bacchi, 2009, pp.4-7).

3. What is left unproblematic in this problem representation? Where are the silences? Can the 'problem' be thought about differently?

The last question intends to identify the aspects of climate justice that are not included and assess presentations if they truly align with the concept of climate justice or if there are some simplifications (Bacchi, 2009, p.13).

4.4 Sampling and material

The selected cases for analysis are Stockholm, Budapest and Dublin. These three cities are part of the “100 Climate Neutral and Smart Cities” EU mission to reach carbon neutrality by 2030. Furthermore, they are all part of the Covenant of Mayors Europe responding to the EU:s climate and energy objectives and which makes the cities also members of the global network of the Covenant of Mayors providing a comprehensive framework and platform for cities to follow in their climate action plans (European Commission, n.d.). All three cities are expected to follow the same international climate targets and translate the same climate action directives into their local strategies.

The choice of cases and documents was further based on practical aspects. As Farthing (2015) mentioned, an aggravating factor in urban research is difficulty accessing documents and additional information on those (p.138). The accessibility of local action plans, prior to the final sampling, offered a challenge as the documents were solely available on the cities’ websites, requiring search in the original language. Therefore, the availability of the documents in a language understood and used by the researcher was critical. The documents to be analyzed are available in English, however, additional research required searching in the original language. The documents were attained through each municipality's website and published with open access. Thereby, the data collection avoided the issue of consent and ownership (Scheyvens, 2014, p.84).

Additionally, followed by a statistical review of EU capitals, the chosen three cities showed similarities in social factors such as population inequality and unemployment;

parallels in internal factors can increase the cases' comparability. The selected cities share similar income inequality rates, Sweden 0.276, Hungary 0.286, and Ireland 0.292 (2016) (where 0 is complete equality and 1 is complete inequality). In population size, all three are between 1,5 million to 2,4 million, where Stockholm sticks out marginally with 2,9 million inhabitants (Eurostat, 2021a; Eurostat, 2021b; Eurostat, 2021c). These similarities only increase some comparability qualities but, as Farthing (2016) highlights, due to the high conditional differences in urban areas, urban research, as in this case as well, aims to provide examples for cases of comparison rather than aim for full generalization. The selected policies provide the latest climate action plans in the chosen cities.

The documents to be analyzed are the following:

Budapest

Budapest Főváros Városépítési Tervező Kft. (2021). "Budapest Climate Strategy and Sustainable Energy and Climate Action Plan."

Dublin

Codema (2019). "Dublin City Council, Climate Change Action Plan"

Stockholm

Environment and Health Department (2019). "Climate Action Plan 2020–2023"

4.6 Limitations and ethical considerations

Considering that the research is based on a fixed research design, there is a risk of self-confirming bias during the analysis. By using predetermined forms of climate justice, the researcher risks subconsciously searching for a particular result where potential other themes can be ignored or relevant aspects of data risk being excluded (Robson&McCartan, 2016, p.469).

Even though there is an aspiration for a common planning system in the EU, urban research is highly dependent on local conditions; it requires an extensive sample to attain any form of generalisability (Farthing, 2016, pp.193-195). The sampling of the cases presents limitations to external validity due to only including three cities in the analysis. However, since the study aims to explore how climate justice implications

are portrayed in local urban climate adaptation strategies by providing examples of cases, further generalisability is outside of the aim and scope of this study.

As documents have been produced outside of the research with an external agenda, the context of the policies is essential to consider (Scheyens, 2014, p.90). The documents also need to be revised in their contextual preparation. The sampled documents vary in length; Dublin's action plan is up to 164 pages, Budapest's 90 pages and Stockholm's 64 pages, which can offer varying opportunities for the inclusion of climate justice aspects. Furthermore, the documents have different publishing contexts with different publishing dates and authorities of the authors; Dublin, 2017; Budapest, 2021; Stockholm, 2020. The municipality or Council were involved in creating documents in each city, but they were not the main authors in all cases. Dublin's action plan was prepared with the energy agency Codema in collaboration with the Environment Strategic Policy Committee and the Elected Members of Dublin City Council. Similarly, Stockholm's action plan was developed by the Environment and Health Department and adopted by the city council. In contrast, Budapest's action plan was written by a private urban planning company, "Budapest Főváros Városépítési Tervező Kft", at the request of the municipality of Budapest. These contextual differences can highly affect the content of the policies and therefore need to be taken into account in the results.

Similar to the document's origin, the researcher's background and political view must be considered when conducting discourse analysis. Bacchi (2009) emphasizes the importance of reflecting on the presupposed conception of the problematization in the researched material (Bacchi, 2009, p.19). The analysis can also likely be affected by the researcher's inherited epistemological bias toward justice (Biermann & Kalfagianni, 2020). One of the aims of implementing the categorization matrix of climate justice is to mitigate the issue of the researcher's interpretation of forms of climate justice.

5. Analysis of urban climate justice

The following section will present the analysis of the document sections selected after the initial coding. First, a summary of each city's policy document will be provided, followed by an in-depth analysis applying the three WPR questions. The analysis of the cities will be presented separately in the order: Stockholm, Dublin and Budapest.

5.1 Stockholm's action plan

Stockholm's action plan aims to reach two main goals in Stockholm's urban action. Firstly "A fossil-free and climate-positive Stockholm by 2040" and secondly, reaching "a fossil-free organization by 2030". The action plan assessed the required emission-reduced level of GHG emissions. It set out a targeted action plan for transport, energy usage, electricity and gas production and usage. Furthermore, the policy suggested other measures in consumption sectors such as air travel, food and building materials and participation with the focus on increasing environmentally conscious consumption to lower emissions in these sectors (Environment and Health Department, 2019, p.59).

5.1.1 Question 1. Problem representation

What is the 'problem' in a specific policy or policy proposal?

Based on the initial coding of the document, it became apparent that climate justice is not directly addressed in the policy. Answering Bacchi's (2009) first question, Stockholm's action plan has mainly suggested actions indicating procedural justice. One of the suggested actions is called Climate-Smart Stockholm, to broaden the participation of communities, people and civil society.

"Climate Smart Stockholmers" knowledge, commitment and action on the climate issue are prerequisites for achieving the city's climate goals. This is achieved through communication and dialogue with the city's residents" (Environment and Health Department, 2019, p.59)

The initiative aims to include everyone in the transition process through knowledge spreading and participative ambitions in Stockholm's climate strategy. In this section,

the document recognizes the resident's role as an active agent in reaching the climate goals targeted in the policy. The initiative suggests that study circles and focus groups increase general knowledge and interest in climate-friendly consumption (how households' own' consumption is essential to the transition). However, the Climate-Smart Stockholm initiative does not explicitly prioritize vulnerable groups or present any additional initiative to include disadvantaged groups or areas in these initiatives. As the exact participants and structure of the study groups and focus groups remain unformulated, it can not be assumed as procedural justice as the participation of vulnerable groups is not addressed (Paavola & Adger, 2006).

Additional framing of the climate justice approach as distributional justice was vaguely visible in the suggested actions. One of the primary emission sources addressed in the policy was traffic, where a vital action suggested initiating new car purchases with low-emission fuel such as ethanol and biogas (Environment and Health Department, 2019, p.25-26). Although no explicit recognition was made of low-financial groups needing help purchasing new cars, the document acknowledged the high costs of electric and biogas vehicles (Environment and Health Department, 2019, p.27).

“Electric and biogas vehicles are more expensive than other technologies.”
(Environment and Health Department, 2019, p.27)

As a solution, an initiative called "Bonus-Malus" taxation provides a bonus to buyers purchasing low-emission vehicles (Environment and Health Department, 2019, p.25). This initiative can ease the opportunity for people with a strained economy to access cars with low-emission. On the other hand, taxation is not directed to low-income groups; it is accessible assistance for everyone.

Furthermore, the policy also suggests a stronger push for converting petrol cars into ethanol cars. Changing petrol pumps into ethanol is an inexpensive way to reduce car emissions considerably (Environment and Health Department, 2019, p.26). The suggested technology can provide easier and cheaper access to low-emission cars for everyone, lowering the pressure to purchase a new car. Again, this action is not directly directed to increase access for low-income groups. Still, it can indirectly benefit economically-strained households as a cheaper solution to lower car emissions.

5.1.2 Question 2. Assumptions for problem representation

What presuppositions or assumptions underpin this representation of the 'problem'?

In the climate strategy of Stockholm, the framing of climate justice is not precise and requires strong assumptions about the suggested actions to conclude them as framing for climate justice. Keywords of procedural justice were the most dominant in the document, such as government, collaboration, network, and participation.

Participation was used as a key concept for procedural justice, which, on the other hand, indicates citizens' involvement and responsibility. However, the “Climate Smart Stockholmers” (Environment and Health Department, 2019, p.59) program has a more educational objective, opening up for dialogues rather than participation in decision-making. Therefore the concept assumption of participation suggests that citizens do not have the power to engage in active decision-making but rather should adjust to a trickle-down approach to climate action. Considering the context of the keywords in the document, they are not entirely in line with the procedural justice form of climate justice.

The generally absent concepts indicating recognition justice further strengthen the image that the document assumes an equal benefit of these actions to citizens without apparent differences that need to be considered. To clarify, the recommendation of easier purchase of electric cars with external financial assistance does target a specific group. The initiative does not address the problem of unequal incomes affecting the opportunity to purchase a new car.

5.1.3 Question 3. Silences in problem representation

What is left unproblematic in this problem representation? Where are the silences? Can the 'problem' be thought about differently?

One of the main patterns visible in the problem representation of climate justice in Stockholm's climate action plan is the vague inclusion of social awareness in the policy document and lacking recognition of inequalities related to climate justice. The

document does not include vulnerable groups as active decision-makers. Therefore, indicators of recognition of justice are absent in the document. Fragments of distributional justice are left unmentioned even in part it could be evident to consider the interest of groups with varying income, such as the purchase of electric cars or energy effectiveness of buildings. Based on the answer to question number two, there is no acknowledgement of varying effects or benefits of the suggested actions, and it is only speculation if the document intends to include climate justice as part of its problem formulation.

5.2 Dublin's action plan

Dublin's Council developed the action plan in cooperation with Dublin's four local authorities to find a collaborative strategy for responding to climate change impacts. The action plan is focused on five main areas: Energy and buildings, transport, flood resilience, nature-based solutions and resource management. By addressing these core areas, the action plan aims to provide a plan for reaching the targets:

- "1. A 33% improvement in the Council's energy efficiency by 2020 A 40% reduction in the Council's greenhouse gas emissions by 2030.
2. To make Dublin a climate-resilient region by reducing the impacts of future climate change-related events
3. To actively engage and inform citizens on climate change" (Codema, 2019, p.4)

Firstly the document gives a contextual basis for climate threats and action in the case of Dublin. Continuing the document establishes a baseline in defining the main challenges the document later addresses with suggested actions. Lastly, the action plan of the five main areas is explained in detail, suggesting the actions that must be taken (Codema, 2019).

5.2.1 Question 1. Problem representation

What is the 'problem' represented in a specific policy or policy proposal?

Dublin's climate action plan involved framing climate justice in several ways. The most prevailing problem formulation of climate justice aspects was through

indications of recognition justice. The document explicitly considered social inequalities as part of problem formulation.

Firstly, the action plan established a contextual background clarifying the main climate targets it will address and why. In this section, the document referred to sustainable development goals 8 (climate change for an equal and equitable society) and 7: as well as goal 7, affordable clean energy. By citing these goals, the document early suggested a recognition of social inequalities as part of their approach (Codema, 2019, p.13).

Secondly, the primary indicator for recognition justice is apparent in the section on the main climate challenges the city must address, specifically the threats of extreme weather events. In this part, vulnerable groups are expressly addressed as more exposed to climate threats:

“A warming climate may cause stresses to *vulnerable* populations, such as *children* and the *elderly*.” (Codema, 2019, p.34)

Similarly, vulnerable groups are recognized as increasingly affected by air pollution:

“Air pollution and air quality risks mainly relate to health and risks to ecosystems. Vulnerable citizens (children, pregnant women, the elderly and those of ill health) are the most likely to be at risk.” (Codema 2019, p.45)

These recognitions were a part of the initial assessment of climate threats, as the document presented a risk assessment and risk matrix to map the future threat of climate change for the most vulnerable (Codema, 2019, p.27).

Furthermore, aspects of recognition justice are visible later in the adaptation actions. One of the main climate risks Dublin is exposed to is flooding. The threat of flooding is described as most urging to expose *vulnerable* areas (Codema, 2019, p.84).

Other recurring keywords in the document were implications of procedural justice. One of the main targets of the action strategy is "actively engage and inform our citizens on climate change" (Codema, 2019, p.9). The document also suggests several programs and networks that include citizens in climate action by spreading information or active decision-making. Such as the "recycling ambassador program",

Tidy Towns, and sustainable energy communities (Codema 2019, pp.101, 24). The participatory target is expressed clearly:

“Finally, as citizens are crucial for solutions to climate change, DCC will set out to actively inform and engage the public through a range of innovative programmes and partnerships and, where possible, facilitate bottom-up, community-led solutions.” (Codema 2019, p.9)

By enhancing "bottom-up" and "community-led solutions", the document recognises citizens to actively participate in climate action indicating procedural justice measures as an essential part of the strategy (Codema 2019, pp. 9, 23, 24). However, considering the context and exact framing, it is only partially in line with procedural justice related to climate justice, as there is no additional focus on including vulnerable groups in the programs. As Paavola and Adger (2006) argue that for climate justice, "fair" participation is necessary where affected parties participate in the decision-making and can work for their interest; equal participation for or all does not necessarily mean "putting the most vulnerable first".

As part of the energy transition and resilience target, the document partially addresses social inequalities in its solution suggestions implying distributional justice by presenting plans to upgrade buildings inhabited by members of vulnerable groups:

"The Council is also planning on retrofitting a number of additional buildings throughout the City, including its homeless facilities, senior citizen units and social housing complexes" (Codema, 2019, p.61)

A more implicit indication of climate justice is refurbishing social housing as an initiative to increase building energy efficiency (Codema, 2019, p.34). Social housing is publicly owned, more easily purchasable accommodation for all citizens. Investing in clean energy in buildings predominantly inhabited by disadvantaged groups can address structural inequalities such as poverty and improve energy efficiency (Simon, Bumpus, & Mann, 2012).

Furthermore, an implicit spatial recognition of less advantageous areas is visible in the document when approaching traffic measures. One of the initiatives to reduce pollution in Dublin is the gradual lowering of speed limits. This has successfully

started to be implemented in the city center, and now it is considered to be extended to suburban areas (Codema, 2019, p.73). An additional focus on suburban areas can imply an investment to reduce inequalities. According to the most recent deprivation index (indicating spatial differences between residents of income groups) (2016), suburban areas are more at risk of being impoverished than areas in the city center (Pobal, 2016). Therefore, after recognizing some groups as more vulnerable to GHG emissions, additional efforts to spread the emission-lowering initiatives to suburban areas can be interpreted as a framing of climate justice in the form of distributional justice.

To summarize, all three framing of climate justice represents the problem of climate justice; recognition, procedural and distributional; a strong focus on recognition justice is visible early in the document establishing the biggest challenges for Dublin, while the other framings are more apparent later in the document in the suggested actions.

5.2.2 Question 2. Assumptions for problem representation

What presuppositions or assumptions underpin this representation of the 'problem'?

In the document of Dublin climate strategy, the key concepts indicate different framings of climate justice. The most dominant keywords appearing were related to recognition justice.

One of the most reappearing concepts was “vulnerable” and “vulnerable groups” which indicated the portrayal of climate justice in the form of recognition justice. Groups such as the elderly, children and women were mentioned as connected to the "vulnerable groups" formulation (Codema 2019, pp. 20, 27, 34, 45, 84, 85, 108). The concept of "vulnerable groups" were used in contexts related to unequal effects of climate change hazards, emphasizing the importance of risk adaptation actions (Codema 2019, pp. 34, 45, 84).

Notably, the keywords are merely used in the section describing the climate threats Dublin is facing, strengthening the assumption of the policy that vulnerable groups are more exposed to climate change effects in the city.

In the action section of the document, keywords related to climate justice shifted to words implying more procedural and distributional justice. Keywords, such as *bottom-up*, *citizen*, *community*, and *participation*, related to procedural justice support the assumption that climate action needs to have a bottom-up approach too. However, as vulnerable groups are not explicitly focused on in these participatory approaches, procedural justice is not considered a form of climate justice in the document. Either there is an underlying assumption that the programs are equally available to vulnerable groups as to other citizens, or the document disregards the more exposed citizens in the participatory initiatives.

Nevertheless, in the section dealing with Energy Efficiency (Codema, 2019, pp.60-61), the concepts indicate distributional justice by suggesting targeted action to improve social housing and facilities for senior and homeless citizens. This is based on the assumption that these facilities need additional investments to achieve energy efficiency.

However, as question one points out, to interpret improvements in social housing as a distributional justice approach, one must assume that low-income groups commonly live in social housing. The historical context supports this assumption, but it goes against the official statement by the Dublin City Council. The general notion is that social housing mainly aims at low-income or unemployed people unable to house themselves (Kelly, 2019). In contrast, according to the Report of the Public Housing Working Group (2021) conducted by the Council of Dublin, social housing is not explicitly aimed at low-income groups; it is accessible to everyone (Dublin City Council, 2021). Due to the contradictory message from the report and the common belief, it becomes questionable whether improvements in social housing are directly aimed at prioritizing low-income groups or are more targeted because of high emissions.

5.2.3 Question 3. Silences in problem representation

What is left unproblematic in this problem representation? Where are the silences? Can the 'problem' be thought about differently?

Dublin's climate action plan recognizes climate justice as a climate change-induced challenge. The most dominant framing of climate justice is related to recognition justice. However, a major silence in the problem formulation is the less evident recognition of justice in actual climate action. Even though signs of procedural justice framings are frequent in the document due to the lack of explicit focus on vulnerable groups or areas, it requires unsupported assumptions to be interpreted as an active framing of climate justice in climate action. Based on the WPR problematization framework, these silenced vulnerable groups are not considered critical active agents; therefore, climate justice as a form of procedural justice is not part of climate action in the Dublin action plan. However, indicators of distributional justice implicitly suggest that climate justice is considered in adaptation measures such as investment in social housing and homeless facilities. Nevertheless, one must rely on assumptions to regard this as a climate justice approach, as mentioned in [section 5.2.2](#).

5.3 Budapest's action plan

Budapest's Sustainable Energy and Climate Action Plan is developed by Budapest Főváros Városépítési Tervező Kft (Capital Urban Planning Company) on behalf of the Municipality of Budapest. The plan has three main action areas with targeted subgoals: emission reduction, adaptation and awareness raising and climate consciousness. The document suggests cutting emissions efficiently, and the city should focus on refurbishing residential buildings and replacing emissions in the traffic sector. Energy efficiency improvement in buildings, industrial production and transport infrastructure is suggested as a primary action area while also increasing green areas. The adaptation plan first establishes the most significant environmental challenges Budapest faces, determining the main areas of risks and vulnerabilities, and continues by presenting a goal vision for the city to reach in 2030, followed by a detailed description of the action plan to reach these objectives (Budapest Főváros Városépítési Tervező Kft., 2021).

5.3.1 Question 1. Problem representation

What is the 'problem' represented in a specific policy or policy proposal?

Similar to the previously analyzed documents, Budapest's action plan also suggested more than one way of climate justice framing. The most apparent of the framing was the recognition of justice. The document repeatedly recognized vulnerable groups in their action plan. Already in the beginning of section 1.2 General Overview, the document enhances the inequalities in the population:

"Although the inhabitants of Budapest are less vulnerable compared to the national average as they are in a more advantageous situation in respect of their education and income, the most vulnerable groups, such as the elderly, unemployed or homeless people, are also present in high numbers." (Budapest Főváros Városépítési Tervező Kft., 2021, p.9)

In the section on "Risk and Vulnerability assessment," the document continues to recognize some groups, such as the elderly, as more exposed to climate hazards than other groups (Budapest Főváros Városépítési Tervező Kft., 2021, p.19). A framing that signifies the action plan is the recognition of energy poverty. Energy poverty is a highly discussed factor of the current climate transition challenges, where low-income households are particularly affected by energy shortcomings in energy transition with changing energy prices (Clancy et al., 2017). A vital part of the action plan is improved energy efficiency in buildings. Here the document recognizes the varying opportunity to realize a refurbishment program for some households (Budapest Főváros Városépítési Tervező Kft., 2021, p.46).

Furthermore, indications of climate justice in the form of recognition justice appear in the section, especially regarding the elderly in the section "City Vision for 2030":

"Climate consciousness appears not only in campaigns, but it is also part of the decisions made in numerous fields indirectly related to the topics of a healthy environment, healthy living, cost reduction and sustainability (healthcare, workplace environment, elderly care[...])." (Budapest Főváros Városépítési Tervező Kft., 2021, p.36)

Continuing recognition is also visible later in the document in the targeted adaptation plan, where vulnerable groups, specifically the elderly, are recognized as needing protection from extreme weather effects.

Indicators of climate justice in the form of signs of procedural justice are also apparent in the Budapest climate strategy. One of the main targets is to "include citizens in the decision-making and planning processes more than ever before" (Budapest Főváros Városépítési Tervező Kft., 2021, p.26). One of the main ways to do so is by a citizen's assembly. Before the document was published, the municipality of Budapest formed an assembly consisting of a selected group representing the division of the city's population. The assembly aimed to represent the interest and opinion of the city's population regarding climate action prioritization (Budapest Főváros Városépítési Tervező Kft., 2021, pp. 29-30). Implementing the assembly indicates an approach to climate justice in the form of procedural justice. The group's participants "portrayed the composition of the population in terms of sex, education and age", which implies that the interest of vulnerable groups is actively included in the decision-making, in line with the concept of procedural justice (Budapest Főváros Városépítési Tervező Kft., 2021, p.29; Paavola & Adger, 2006).

Indicators of procedural inclusion concerning social aspects in the city are also visible in the previously implemented participatory budgeting project. The idea of the initiative is that 1 billion forints (approximately 2,6 million euros) of the municipality's yearly budget be allocated to finance the realization of urban development ideas submitted by the citizens (Budapest Főváros Városépítési Tervező Kft., 2021, p.31). One of the three main target areas projects is the involvement of disadvantaged areas/ communities, and already, several projects have been accepted benefiting vulnerable groups. For example, one of the projects accepted in 2021 aims to renovate currently empty buildings to provide homes to people experiencing homelessness (Budapest Municipality, 2021).

In the Citizen Assembly's suggestions for the municipality's priorities, framings of climate justice in the form of distributional justice were prevalent. The citizens proposed financial assistance with favourable conditions to support the refurbishment of residential buildings as a part of the energy efficiency transition. Following these suggestions, the refurbishment action plan has distributional justice aspects when

setting supplementary focus on the facilities providing homes to exposed groups (Budapest Főváros Városépítési Tervező Kft., 2021, p.43).

Furthermore, in the section “Emission reduction action plan”, extra support is presented to households experiencing energy poverty:

“[...] assistance and consultancy for households in need, in poverty or energy poverty” (Budapest Főváros Városépítési Tervező Kft., 2021, p.46)

The document suggests increased efforts to create a more "integrated transport organization" and presents car-sharing and car-pooling systems as part of the solution. These activities can benefit economically strained people by eliminating the additional costs of a car and creating a more accessible city center with decreasing car jams (Budapest Főváros Városépítési Tervező Kft., 2021, p.53). Furthermore, presented action on traffic improvements can also be interpreted as indicators of distributional justice. However, these are not explicitly directed to vulnerable groups; therefore, it relies on assumptions to determine whether the action can be connected to climate justice.

Budapest's climate action plan includes framing climate justice following the three categories. The action plan recognizes the inequalities in Budapest's population and how they need to be considered in climate action. The document further emphasizes the involvement of citizens in decision-making and presents additional actions of support directed towards vulnerable groups.

5.3.2 Question 2. Assumptions for problem representation

What presuppositions or assumptions underpin this representation of the 'problem'?

Indications of recognition justice were apparent in Budapest's action plan in the form of keywords such as vulnerable groups, elderly, homeless and poverty. The most prominent implying recognition of justice was vulnerable groups. As the concept was repeated both in the section where the climate risks Budapest was facing were established and later in the adaptation plan, one can assume an underlying premise that vulnerable groups are more exposed to the risks the city is facing, and the groups need to be taken into consideration in climate action too.

Furthermore, similarly to Dublins and Stockholm's documents, when discussing participation, indicating procedural justice, the Citizen Assembly does not explicitly give voice to more disadvantaged citizens; it is not a direct platform for vulnerable groups to express their needs more than other citizens. Here, the document assumes that everyone has equal access to the program, and it should be sufficient to represent vulnerable groups' interests too. Therefore it can not be identified as procedural justice despite the positive effects of the assembly.

5.3.3 Question 3. Silences in problem representation

What is left unproblematic in this problem representation? Where are the silences? Can the 'problem' be thought about differently?

The Budapest document includes framing of climate justice in all three forms throughout the document. One of the primary visible forms of climate justice is recognizing vulnerable groups. However, it is unclear if more than elderly and homeless people are considered part of the concept. In one of the formulation, the elderly are mentioned in direct connection to vulnerable groups, which one can risk interpreting as the document only acknowledge the elderly as the "vulnerable group":

“The population must be made aware of the adverse effects of heatwaves on human health and the necessary and possible ways of protecting against them, with special regard to vulnerable groups of the society (the elderly).”
(Budapest Főváros Városerépítési Tervező Kft., 2021, p.78)

This formulation then disregards other members of the society, risking being disadvantaged by climate action and unequal social structures. In the UN's New Urban Agenda (2016), vulnerable groups are mentioned implying homeless people, persons in vulnerable situations, low-income groups, persons with disabilities and marginalized communities (United Nations, 2017). The formulation mentioned above implies that other groups, such as marginalized communities or people with low-income are not part of the issue of climate justice. A "silence" about other members of disadvantaged groups risks diminishing the otherwise extensive inclusion of climate justice approaches in the document.

6. Discussion and conclusion

This research aimed to explore the different framings of climate justice in urban climate policies to reveal how these framings align or differ in the cases of Budapest, Dublin and Stockholm.

Answering the research question, following a version of Bulkeley et al. (2014) theoretical framework based on the three different forms of climate justice, the analysis showed that the portrayal and inclusion of climate justice differ in the extent and way it is included in the climate action strategies.

Generally, approaches to climate justice were least visible in Stockholm's document. The adaptation plan was strongly focused on technical, innovative solutions to improving energy efficiency and electrification in the traffic sector. Meanwhile, both Dublin and Budapest showed early recognition of climate justice in their climate risk and threat formulation and differed later in the extent and way they indicated climate justice in their adaptation plan. Stockholm's action plan did not show explicit recognition of vulnerable groups. Compared to the other cities, Stockholm's adaptation plan was the shortest, with 64 pages, which could decrease the opportunity to include extensive consideration of climate justice. At the same time, the absence of inclusive approaches can show a lack of prioritization to address the risks of social inequalities.

However, there were some similarities in the document's attempt to include climate justice in their action plans. All three cities extensively focused on including citizens, increasing the general knowledge of local climate action and providing platforms where citizens can actively participate in climate projects (Climate-Smart Stockholmers, Recycling Ambassador program in Dublin and Citizens Assembly in Budapest). Although Dublin more explicitly promoted a bottom-up, community-led solution, it was in the Budapest strategic plan that extensively described an active inclusion of citizens into the decision-making. Through the Citizen Assembly and Participatory Budgeting, vulnerable people got the chance to partake in the decision. Dublin's and Stockholm's initiatives do not expressively consider the possibility that some groups and communities are harder to reach and include in the programs. According to Bulkeley et al.'s (2014) usage of procedural justice, socially more exposed groups need to benefit from participatory approaches and be recognized as active agents.

Budapest and Dublin presented direct external assistance for energy efficiency improvements in buildings, such as the refurbishment of social housing in Dublin and special facilities for elderly and homeless people in Budapest. Through these initiatives, the strategies indicate that climate injustice, as in unequal social structures in housing, needs to be addressed. Approaches of distributional justice were visible in Budapest's and Dublin's documents following Bulkeley et al.'s (2014) usage of the concept but less evident in Stockholm's case. The interpretation of "Bonus-Malus" taxation requires stronger assumptions to interpret it as a sign of climate justice as it is not intentionally directed to financially strained groups. Therefore, it does not necessarily indicate that climate injustice is part of the problem to be addressed, which risks reproducing existing social inequalities.

During the analysis, it became apparent that categories, as Bulkeley et al.'s (2014) emphasize, are highly interconnected, and to take into account climate justice fully, all framings are necessary. This was not evident in all the documents. The different framings aim to be complementary; therefore, optimally, all three frames should be apparent in the documents. For example, Dublin strongly *recognized* the high vulnerability of some groups, such as children and pregnant women. Nonetheless, the suggested actions never further addressed these groups in the adaptation plan either explicitly or implicitly.

Following Bulkeley et al.'s (2014) conceptual framework, Budapest's climate action was in most coherence in including a combination of climate justice approaches, most evidently showing aspects of recognition, procedural and distributional justice directly benefiting vulnerable groups in the suggested actions. While Dublin's plan similarly included all three frames, it required stronger assumptions to interpret its actions as signs of climate justice.

Nevertheless, it is vital to acknowledge when conducting a discourse analysis the contextual circumstances of the documents that can add an altering factor to the document content. In the cases of Budapest, Dublin and Stockholm, the documents were produced in different contexts, which can strengthen their differing approach to climate action, as mentioned in [section 4.4](#).

The conceptual framework provided a tool to gain insight into how climate justice is portrayed in these documents through clear categorization of climate justice frameworks. Regardless, some actions could often be interpreted as similar framings

as these categories are not clear-cut and provide a simplification of the document content. Despite the attempt at a clear conceptualisation of the climate justice concept, the difficulties the concept ambiguity entails are still apparent.

Based on the analysis of the three cities' climate action plans, it became clear that despite the shared international targets, the city's implementation and approach to climate justice in their climate action differ widely. Interestingly all three cities make a mention of the Paris Agreement. Additionally, Budapest's and Dublin's documents also refer to the Kyoto Protocol and the European Covenant of Mayors but choose to focus on different goals of these initiatives. While acknowledging that cities differ widely in their local conditions, to reach the shared mission of "100 Climate Neutral and Smart Cities", more straightforward directions could be necessary to include social aspects in cities' action plans. As the analysis showed, otherwise, the action plans risk neglecting climate justice aspects (see Stockholm) in their climate action.

In conclusion, this research revealed that the discourse of climate justice in urban adaptation plans of Budapest, Dublin and Stockholm is present but highly varying in extent and framing. Different approaches to climate justice are often more dominant in documents depending on section and focus area rather than considering social injustice comprehensively throughout the document. This study focused on a narrow sample of cases, however, to be able to conclude a more generalisable characteristics of the concept of climate justice in adaptation policies, more extensive sampling is required opening up for future research. Moreover, building on the findings, applying Bacchi's full list of questions in a more extensive policy analysis can give additional insight into climate justice application in urban policies exposing contextual factors affecting policy formulations. This study building on previous research, confirms that further research on the discourse of urban climate is necessary to reach a just urban climate action coherent with international targets.

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Appendices

Appendix 1.

The list of the original WPR questions by Bacchi (2009):

- “1. What is the 'problem' represented to be in a specific policy or policy proposal?
2. What presuppositions or assumptions underpin this representation of the 'problem'?
3. How has this representation of the 'problem' come about?
4. What is left unproblematic in this problem representation? Where are the silences? Can the 'problem' be thought about differently?
5. What effects are produced by this representation of the 'problem'?
6. How/where this representation of the 'problem' has been produced, disseminated and defended? How has it been (or could it be) questioned, disrupted and replaced?”

(Bacchi, 2009, p.48)

Appendix 2.

An extensive version of the coding matrix:

Categories of justice	Codes	Examples of actions in policy	Keywords
Recognition justice	poverty, inequality, vulnerable groups	1.1 explicit recognition of vulnerable groups 1.2. actions against segregation 1.3. accessible urban changes (ex. transportation)	vulnerable, equality, inequality, inclusion, women, poor, poverty, youth, elderly, disabled people, segregation, minority, homeless, social
Procedural justice	transparency, participation	2.1. provides place & opportunity for vulnerable groups and individuals to take part in the decision-making	Government, authorities, participation, participatory, meeting, network, decision, vote, decision-making, civil, residence, network, community, citizen, bottom-up, public awareness, assembly
Distributional justice	distribution, equality, benefit	3.1. financial assistance offered for changes within households; 3.2. government investment takes into account all city districts; 3.3. expected action doesn't cost more than benefit for anyone	equality, costs, income, assistance, segregation, integration, funds, public, suburbs, household, support, tax

