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Consumption-based Targets for Food: Investigation of the differences in their adoption by C40 Cities

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Abstract

Cities are the future. Nearly half the population of the world lives in cities and this trend is set to continue in the years to come (Balha et al., 2020; van der Heijden, 2019). Cities are a major contributor to climate change but also face the consequences most severely (van der Heijden, 2019). However, at the same time, cities are widely considered to have the best potential to adapt and mitigate climate change (IPCC, 2018). They join city networks or Transnational Municipal Networks (TMNs) to reduce emissions at local level and respond to climate change by setting ambitious targets and taking impactful actions to reduce their local emissions. There are two approaches to account for a cities' emissions: production-based and consumption-based. This study focuses on consumption-based emissions which provides a more complete overview of a city's climate impact.

One of the biggest sources of urban consumption-based emissions is the food sector (C40 et al., 2019). The C40 Good Food Cities Declaration is selected as an initiative for cities to mitigate these emissions through Consumption-based targets (CBTs). The declaration is only signed by 14 of the 94 C40 cities to promote planetary health diet by 2030, which begs the question of the different influences that act on C40 cities. To understand the reasons behind the influences, first the CBTs set by the cities so far were described. Then, the enabling factors that a city needs to set the CBTs and carry out climate action was explored by comparing 28 cities and validating the data with case studies.

The findings highlight that the CBTs set so far focus mainly on waste, health and climate. To promote more food-related consumption emissions policies, one should use the important agendas that the cities are concerned with at the moment as key entry points. A motivated local champion, horizontal and vertical coordination through collaboration with stakeholders, and acquiring the city-network's benefits are three enabling factors that the data suggested to be important for the adoption of CBTs. Additional factors that were highlighted through interviews are the resource capacity of the city and the recognition of the food-climate nexus. Nonetheless, even with the most desirable conditions to enable target setting, commitment to the cause is not guaranteed. Therefore, knowledge and motivation are crucial first steps in enabling engagement and commitment for future cities adopting CBTs.

Key concepts: Consumption-based Targets (CBTs), Food-Climate Nexus, C40 Cities Network, Urban Climate Governance

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1 Introduction

1.1 Local solution for global issues

Cities are the future. Nearly half of the global population lives in cities and this trend is set to continue in the years to come making them the point-source of activities and behaviours that contribute to climate change (Balha et al., 2020; van der Heijden, 2019). For instance, 60 to 80 percent of the CO_2 emissions stem from urban areas (Hakelberg, 2014; Bulkeley, 2010). The high demand for energy and resources contributing to these emissions comes from the concentration of people, industries and infrastructure in cities. Thus, it is often stressed that that the consequences of climate change will most severely be felt in cities (van der Heijden, 2019). However, at the same time, cities are widely considered to be the places where behavioural, economic, and technological interventions for climate change adaption and mitigation have the best potential to be implemented and scaled up (IPCC, 2018). Though the complex nature of climate issues calls for global action, some articles suggest that 50 to 75 percent of the emissions could be reduced by actions taken by the local governments (Hakelberg, 2014). The local level and the authorities responsible for its regulation are recognized for their strong position and place where concrete goals are achieved (Sassen, 2009).

1.2 Emissions Accounting

Cities are leading in tackling climate breakdown by setting ambitious targets and taking impactful actions to reduce their local emissions. This work has mostly focused on transport, buildings, energy and waste in order to reduce greenhouse gas (GHG) emissions that are emitted within the city. This method is based on production-based emissions, which is an approach to producing emission inventories that focus on activities occurring within a boundary (C40, 2019). However, to fully consider the impact of cities on climate change, it is crucial that emissions from consumption should be measured. According to the C40 report on the future of urban consumption, "Consumption-based emissions account for the total climate impact accumulated around the world, of a good or service, allocated to the place where an end-product is used or consumed" (C40, 2019). In other words, consumption-based emissions are those which are produced indirectly through the consumption of goods and services in cities that 'embody' carbon or greenhouse gas emissions. Hence, they give a complete picture of a city's climate impact (C40, 2019). Since consumption-based accounting is a fairly new

approach to measure emissions of a city, not much is known and clear. However, the significance is well acknowledged by scholars.

1.3 Transnational Municipal Networks

Currently, there are not many cities that are adopting targets for their consumption-based emissions but the need to set them has become crucially important since many cities consume a far greater quantity of CO_2-emitting products than they produce (C40, 2019). The cities that have set consumption-based targets (CBTs) are doing so by joining transnational municipal networks (TMNs), such as the C40 Cities Climate Leadership Group. In recent years, many cities have joined TMNs, which were set up in response to climate change and to increase action at local level (Bulkeley, 2010; Bansard et al., 2017). Many of these TMNs have started to propose consumption-based accounting as a method and established initiatives for cities to engage in order to set targets for the reduction of their GHG consumption emissions. For example, the Ellen Macarthur Foundation (EMF) and the Global Environmental Facility (GEF) among other have brought forward initiatives which many cities have signed up to. However, as each city is different, not all the cities of the TMNs take up these initiatives, which commences this research to investigate the difference in impacts the cities experience when they participate in TMN's initiatives in order to adopt CBTs.

C40 is a network of global mega-cities concentrating especially on climate action (C40, n.d). In recent years, there have been a few initiatives by TMNs addressing the reduction of consumption-based emission for food, however, not all their member cities join them, leading to the problem definition and literature of this research.

1.4 Food-Climate Nexus

Food has a huge potential to nurture human health and support environmental sustainability but instead it has become a threat to both. The challenge that we face is providing a growing global production with healthy diets from sustainable food systems (Willett et al., 2019). While global food production has increased with population growth, still 800 million people lack sufficient food (Willett et al., 2019; EAT Network, n.d). Moreover, global diet trends have shifted to unhealthy diets that are high in calories, heavily processed as well as animal source foods. These trends have resulted in deficiencies and are contributing to obesity and diseases. Hence, there is an urgent need to greatly transform our diets (Willett et al., 2019; Adebiyi et al., 2021).

Additionally, food production constitutes the single largest cause of global environmental change (Willett et al., 2019). It is responsible for 30% of global greenhouse gas

emissions, 70% of freshwater use and occupies nearly 40% of global land. Food production has huge impacts on the natural ecosystems. Changing land use to cropland and pastures is a large factor that is causing species to be threatened with extinction (Willett et al., 2019).

In general, the food-climate nexus is a very complex connection that requires the regulation of the state of the ecosystems as well as human health. There is an urgent need to radically rethink how we produce food. A way to influence the food systems is through dietary changes, responding to consumption-based emissions (Willett et al., 2019).

Food is the biggest source of urban consumption-based emissions for C40 cities in 2017, representing 13% of the total, and they could increase by 38% by 2050 without further climate action scenario (C40 Cities, Arup, & University of Leeds, 2019). Food consumption is the focus in this research due to its importance for mitigating climate change.

1.5 Problem definition and literature gap

The concept of consumption-based accounting has been investigated in literature by various scholars, but its practical governance application has been overlooked. Many academics have done comparisons between the two accounting methods and tried methodically calculating it for various countries (Grasso, 2018; Tukker, 2019; Davis and Caldeira, 2010; Mozner, 2012). Examining the current CBTs of cities is the key to understand and identify mechanisms and strategies employed to achieve commitment to policies, as well as to ensure implementation and help design better targets for the future.

Additionally, although many scholars have addressed the broader phenomenon of transnational climate governance and the benefits TMN's can have, little is known about the way cities engage within the city network and the city's motivations and conditions for enabling this (Acuto et al., 2017). In interest of the increasing importance of consumption-based accounting as a method for cities to examine their local emissions, this research focusses on CBTs set by cities and specifically the way in which cities are engaged in these networks to set them.

1.6 Research Aim and Research Question

The aim of this research is to investigate the Consumption-based Targets (CBTs) for food set by the C40 cities so far and understand the differences these cities experience in adopting them in order to help more cities set CBTs in the future. To achieve this aim, the following research question is proposed:

What explains the varying degree of influences on the C40 cities for the adoption of Consumption-based Targets (CBTs) for food?

1.7 Scientific and Societal Relevance

This study will help explain the link between the adoption of consumption-based targets (CBTs) and the enabling factors by questioning what factors explain the different influences that work on cities to enable CBTs for food. First of all, the research contributes to the new research topic and ongoing broader discussion of consumption-based accounting. It recognizes the importance of consumption-based emissions as complementary to production-based emissions which cities are rapidly growing interest in (C40, 219). Secondly, it tries to broaden the understanding of consumption-based policy implications that only a few scholars have considered by examining the targets set by C40 cities so far. The current literature of consumption-based policy encounters a number of challenges as it targets individual behaviours that affect the activities that produce consumer goods as well as those that arise from waste disposal (Grubb et al., 2020). Understanding the actions and targets that have been set so far is critical for policy effectiveness (Ekins et al., 2019). Additionally, the underlying structural conditions that are needed within cities to set policies and targets for consumption-based emissions is a crucial step in promoting more cities to set CBTs in the future (van der Heijden, 201). Urban climate governance struggles to gain understanding of the factors that enable cities to govern local climate action effectively (van der Heijden, 2019). This study aims to contribute to this knowledge gap by analysing and comparing a broad range of cities and case studies.

1.8 Research Framework

In order to answer the research question, the research framework (Figure 1) presents the steps needed to be taken. First, an extensive literature review on the theory of urban climate governance and consumption-based targets (CBTs) will provide insights to build the conceptual framework. Based upon the concepts defined in the conceptual framework, the research methods to gather and analyse data will be developed. The results will be presented descriptively, first detailing the network, the CBTs set by their members and the enabling factor, and then evaluating the enabling factors that facilitated the cities. Finally, results will be combined and discussed in order to answer the research question.
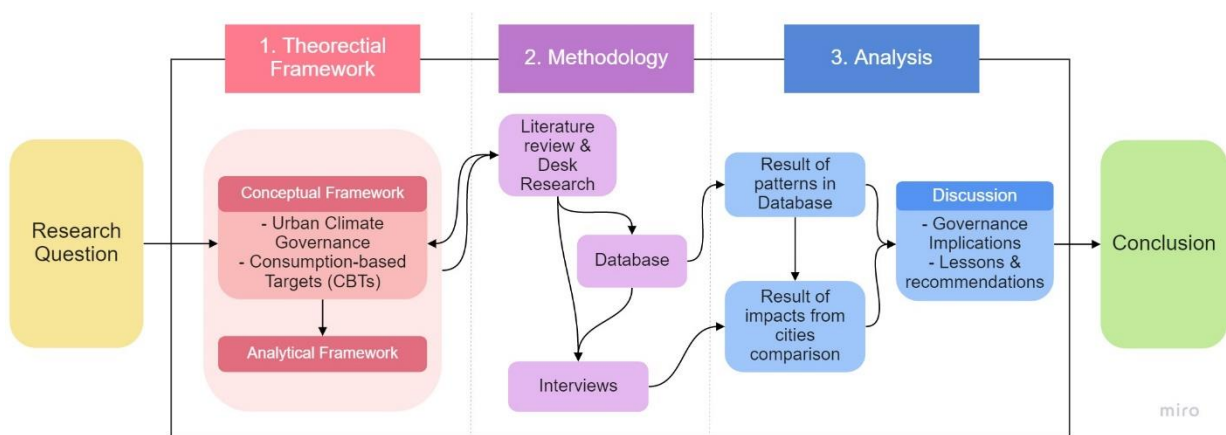

Figure 1: Research framework

2 Theory

To address the research question, the following section introduces the context of urban climate governance in which the research is set, as well as the concept of CBTs and the underlying factors that enable cities to set actionable mitigation strategies and targets.

2.1 Urban Climate Governance

The research field of urban climate governance recognizes cities as strategic arenas where urban governance and climate change governance become necessarily intertwined (Bulkeley, 2013). It identifies cities not only as the key source of climate change and a key victim of it but also as promising sites for climate action (van der Heijden, 2019). While cities only cover 5% of the globe, it has been estimated that they consume 70% of global resources, which accounts for 70% of global GHG emissions (UN, 2016). However, this impact is also most severely experienced in cities since most of the world's largest cities are situated near the coast, and sea-level rise resulting from climate change is a major urban concern along with extreme droughts and flooding (Hallegatte et al, 2013). Cities are considered the only hope that can make changes to have an actual impact, be it technological or behavioural change. Nonetheless, climate change remains ungoverned in cities and, if it is addressed, it is a complement, rather than a key topic, to urban governance since most cities have more urgent matters than climate change to worry about, such as housing provision, sanitation and waste disposal (Bulkeley, 2013). Nonetheless, cities are making progress in understanding how to improve the behaviour of individual, households and organisations and reduce their resource consumption and waste production through regulatory or economic incentives (Van der Heijden, 2014). In most cases, the municipalities have higher climate governance ambitions than the nation states to which they belong (Van der Heijden, 2018).

Additionally, scholars have recognized that the context within which urban actors are responding to climate change is shaped by the structures and processes of governance taking place at other scales and through multiple networks (Bulkeley, 2010). A critical factor, across a wide of range of literature, that is shaping urban climate governance is the development of (transnational) networks. Transnational Municipal Networks (TMNs) are organizations of local governments that voluntarily come together to improve climate governance (Kern & Bulkeley, 2019). TMNs can be labelled as "international collaborative partnerships among municipalities", which have no formal authority over their constituents, other than enforcing responsibilities relating to membership conditions (Fünfgeld, 2015; Kern & Bulkeley, 2019). Whereby they provide opportunities, knowledge and resources including best practice, tools and access to financial resources through third party funding (Fünfgeld, 2015). There are the

three defining characteristics of TMNs: firstly, they consist of member cities that are autonomous and voluntarily join the network; secondly, they have a non-hierarchical, polycentric and horizontal structure, hence suggesting a form of self-governance; lastly, decisions taken within the network are directly implemented by their members (Fünfgeld, 2015; Kern & Bulkeley, 2019). Moreover, there are three groups of actors identified in most TMNs including an international secretariat and national/sectoral co-ordinators; a Presidency, Board and General Assembly; and member cities (Kern & Bulkeley, 2019). Additionally, TMNs are headed by (political) boards consisting of a president, various vice-presidents and additional board members, who are usually powerful representatives, like mayor or vice-mayor, of the most active cities which represent their city and are directly involved in local politics and policy-making (Kern & Bulkeley, 2019). Each one of them are responsible for general decision-making between General Assembly meetings. However, policy changes on the ground depend on the existence of such network brokers or policy entrepreneurs who connect the TMNs with the local policy network.

2.2 Setting of Targets

This subsection provides a general overview of the methodological considerations when setting climate targets for cities according to Kramers et al. (2013). They have divided them into four categories: object for target setting, temporal scope of target, unit of target, and range of target

Firstly, the object of target setting requires demarcation of boundaries in terms of spatial boundaries of the city as well as the activities which fall within the object. Two methods are generally employed for setting the spatial boundaries of a city which are as follows: The most commonly used method is geopolitical delimiting, i.e. the geographical boundaries of a city (Kramers et al., 2013). It can be set for an entire city or even certain regions or districts within the city. The second method involves the use of a functional area, such as the boundaries of a mass transit system within the city (Kennedy et al., 2010; Sovacool and Brown, 2010). Next, the activities within the boundary are selected and defined. The activities included in climate target are difficult to define, since they depend upon the city's purpose with its targets. One method of defining these activities can be production or consumption based (Kramers et al., 2013).

Secondly, the temporal scope of targets is delineated. It refers to the question of when the target should be reached. A target may be set in relation to a reference year, which would facilitate calculations relating to the scope and pace of change by comparing the state of target year or current year, with the previous state which existed in the reference year (Kramers et

al., 2013). Additionally, a time frame is essential to target planning, and specifies the rate at which changes need to be take place at a certain point of time in the future. It might also include the need for interim targets, acting as points of evaluation to check whether the city has been keeping up with its targets (Kramers et al., 2013).

The unit of target can be formulated in terms of GHG and/or energy use. GHG emissions generally include CO_2 emissions as well as five other important GHG (ICLEI, 2009; IPCC, 2008). Since climate change is majorly affected directly from GHG emissions, most cities commonly include these and exclude energy use. Targets can also be set for an entire city, or per capita, i.e. per person living in the city.

Lastly, the range of the target, where different perspectives of emissions are considered to answer the question "Should emissions from production or consumption within the geographical boundaries be the focus, or is a combination preferable?" (Kramers et al., 2013). A life cycle perspective would essentially require the entirety of emissions to be accounted for, beginning from collection of raw materials to the production chain as well as waste management. It is immaterial whether the emissions take place within or outside the city limits (Kramers et al., 2013). This perspective can be used in varying degrees, to include or exclude certain products and services, or to assess only a part of the entire cycle. Three main methods for handling life cycle perspectives are process LCA, input–output analysis and hybrid LCA (Finnveden et al., 2009; Suh, 2009). In this research, the focus is on consumption-based emissions perspective, which is highlighted in the next section.

2.2.1 Consumption-based Targets (CBTs)

Consumption-based targets (CBTs) are targets set for consumption-based emissions for a given boundary, like country or city. The consumption-based approach captures the indirect and lifecycle GHG emissions of goods and services (such as food, clothing, electronic equipment, etc. including those from raw materials, manufacture, distribution, retail and disposal) and allocates GHG emissions to the final consumers of those goods and services, rather than to the original producers of those GHG emissions (C40, 2019; Tukker et al., 2020; Jakob et al., 2014). In figure 2, the differences between the two approaches of GHG emissions accounting are shown. This research is especially interested in the consumption of the imported goods and services.

Most research on CBTs focuses on the accounting of such emissions and rarely goes into the policy implications (Grasso, 2018; Tukker, 2019; David and Caldeira, 2010; Mozner, 2012). Barret et al. (2013) highlights the following typical actionable mitigation strategies for CBTs:

- Actors could try to help suppliers to improve their environmental performance, or shift to low-impact suppliers of the same (final or intermediate) products

- Actors could shift expenditure to alternative low impact products or services that provide a similar functionality

- Actors could refrain from purchasing products with high impact supply chains and shift expenditure to low-impact products and related activities

- Actors could simply reduce purchases of products overall (Barret et al., 2013).
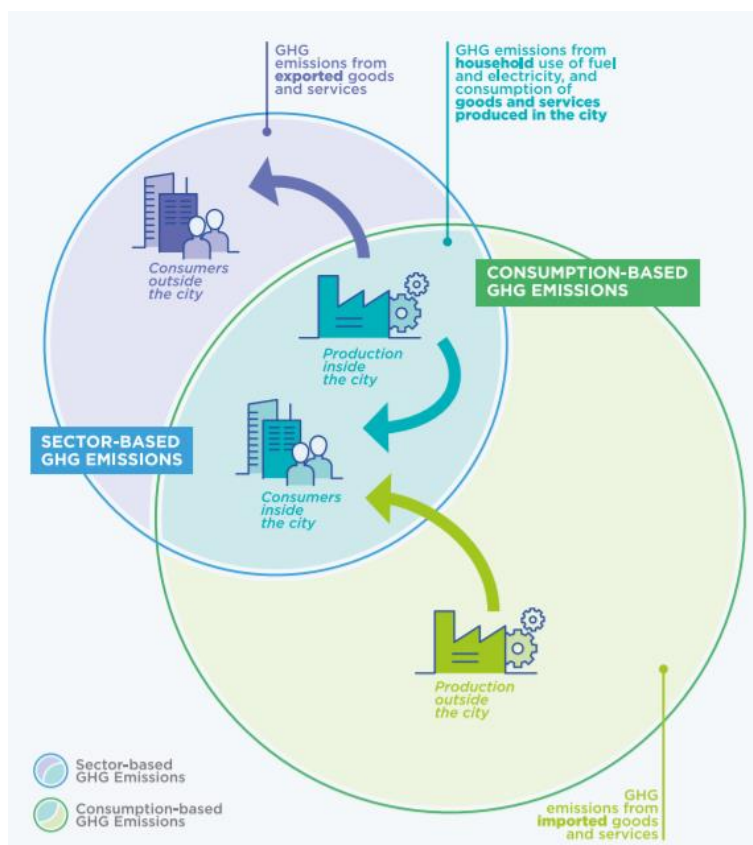
Figure 2: Overlap between consumption-based GHG inventories and sector-based GHG inventories (C40, 2019)

Moreover, over the years, many methodologies have been introduced for cities to set GHG targets. These methodologies are not specific for CBTs but are used to set science-based targets. Science-based Targets are "Measurable, actionable, and time-bound objectives, based on the best available science, that allow actors to align with Earth's limits and societal sustainability goals", of which consumption-based is an emission scope (Science Based Targets Network (SBTN), 2019).

A few of the most prominent methodologies are the D2020, EcoAct, OPCC and Tyndall Centre. The D2020 methodology, also known as the Deadline 2020, developed for the cities of the C40 Network, shows a detailed pathway of what these cities need to do to achieve the

Paris Agreement commitments (C40 Cities and Arup, 2016a). It provides approximate target per capita emissions reduction trajectories for each city, based on their current emission per capita and GDP per capita (C40 Cities and Arup, 2016b).

The EcoAct methodology was developed to target carbon neutrality for France's ten biggest cities but can be replicated on an international level (EcoAct and WWF France, 2018). It uses population and Human Development Index (HDI) to get the global carbon budget per country. This national budget is then allocated between the cities based on a budget/habitant (EcoAct and WWF France, 2018; SBTN, 2020).

OPCC, which stands for One Planet City Challenge, is WWF's methodology based on the latest data from IPCC's special Report on 1.5°C and builds up on D2020 and EcoAct's methods, integrating new considerations of fair emissions budgets allocation (WWF, 2019). The OPCC is suitable for any type of city that is in line with the reporting requirements of the Global Covenant of Mayors, a global city climate reporting initiative, currently representing over 9,000 cities from all over the world (WWF, 2019; SBTN, 2020).

Lastly, the method by Tyndall Centre called the Setting City Area Targets and Trajectories for Emissions Reduction (SCATTER) methodology, which was developed to calculate carbon budgets for any part of the United Kingdom, to set carbon emissions targets that are consistent with the United Nations Paris Climate Agreement (SBTN, 2019). It designates a global remaining CO_2 budget between countries based on different assumptions of "developing and developed countries" and allocates each country's budget among cities proportionally to their recent emissions profile.

To conclude, to set GHG targets, the methodologies use indicators such as demographic data such as the population, GDP per capita, country HDI and City GHG emissions inventories. Similarly, these indicators can be used to set CBTs by using consumption-based emissions or deriving them using national ratio of consumption-based to sector-based emissions (SBTN, 2020).

2.3 Influences on Cities to set Targets

In order for cities to adopt actionable mitigation strategies and set targets for consumption-based emission, certain motives, enabling factors and conditions have been identified in the literature of urban climate governance, which have an influence on cities' engagement in climate action.

There are various reasons why cities set ambitious mitigation targets. One of them being that *cities are seen as a source and victim of climate change*, as previously explained

(van der Heijden, 2019). Hence, to prevent the devastating effects of climate disasters and to save cost of operating cities, municipalities implement regulatory interventions, subsidies and taxes to steer citizens towards more environmentally sustainable ways of living (Schragger, 2016). Another motive revolves around the *rise of green growth and ecological modernisation thinking in cities* (Van der Heijden, 2018). This comes from the assumption that city policymakers are mainly interest in economic prosperity, creating jobs and gaining votes by keeping citizens happy. Thus, it is observed that cities compete with each other to become the most climate-friendly city in order to attract investors and citizens (Van der Heijden, 2018).

Additionally, there are many other factors that motivate but also enable cities to govern climate change action. Firstly, a *supportive regional and national political and legal context* is important for cities to facilitate climate action (Salon et al., 2014; Van der Heijden, 2018 & 2019). It is often seen that cities are more likely to engage if the contexts are supportive since the policies, legislation actions at the national level push cities to develop on their own as well as allows and provides sufficient niches in which cities may experiment (Wilkinson, 2010; NeJaime, 2009: Van der Heijden, 2019).

Furthermore, a vital enabling condition for cities comes from their *autonomy* for taking urban climate action and governing local affairs (Bulkeley and Betsill, 2013; Johnson, 2018; Van der Heijden, 2019). In order words, the movement for climate action depends on the decisions-making power of the city governments and other local actors in the area. The process of decentralization and privatization has also given city government more autonomy across a range of local policy area that national governments may not have in place, giving them complete authority to govern and implement local climate actions (Garvin, 2014; Van der Heijden, 2019).

Another important factor is the *access to funding for climate action* (Bulkeley, 2013; Salon et al., 2014; Van der Heijden, 2019). Having the financial resources is a relevant condition for urban climate governance as often national financial support for local initiative is limited and cities cannot acquire funding the same way as national governments. Hence, cities make themselves subject to the requirement set and the political agendas pursued by external funding suppliers (Van der Heijden, 2019).

Moreover, a key enabler of climate action in cities are their *residents* (Salon et al. 2014). Successful environmental policy implementation can usually be seen when residents strongly support sustainability and climate action, in contrast to cities whose residents think other issues are more immediately important (Salon et al. 2014).

The *presence of a local champion or entrepreneur* is another condition, which has been consistently investigated in literature, where mayors and other urban political leaders have

been seen as essential for effectively enabling climate action (Salon et al., 2014; Broto, 2017; Hudges et al., 2018).

Coordination within cities, horizontal, and between cities, vertical, is crucial for urban climate governance. Successful cities do not act in isolation as they are embedded in multi-level networks that create a supportive context for climate action, linking the local, regional, national and international actors and issues to be effective (Bulkeley et al., 2013; Johnson et al., 2015; Van der Heijden, 2019). In similar fashion, synergies across different departments, agencies and organizations at the city level is relevant to prompt climate action (Knieling, 2016).

Generally, it is considered that *collaboration with and participation of stakeholders* improves the outcomes of urban climate governance (Broto and Bulkeley, 2013; Van der Heijden, 2019). They help with solution of policy problems that are too complex for an individual organization to solve alone as well as increase transparency of decision-making (Van der Heijden, 2019).

Lastly, a substantial condition and enabling factor for climate action and setting of targets, is *being part of capacity-building and learning networks* (Broto, 2017; Van der Heijden, 2019). Most urban activities are undertaken via some form of city-network or TMNs and there is evidence that city networks help overcome regional and national barriers to climate governance, including the difficulty of developing and implementing mandatory regulation in the case of lacking institutional capital, particularly, in smaller municipalities (Van der Heijden, 2014). In recent years, an increasing number of articles and book chapters which investigate TMNs and their role in urban climate governance have been published. Moreover, there have been many contributing to the development of theoretical frameworks, which describe the roles, function and benefits of TMNs (Busch et al, 2016; Heikkinen et al., 2020). Most of them highlight their influencing factors of information sharing, learning, shaping initiatives, and increasing resources (Heikkinen et al., 2020). Additionally, there is a lot of literature specifically about the C40 network, including the papers of Lee & van de Meene (2012) and Lee & Koski (2015), where they investigated the learning and mitigation in C40 member. Their results showed that the impact of being a C40 member included learning, information sharing, motivation of local policy and action (Lee & van de Meene, 2012; Lee & Koski, 2015).

2.4 Theoretical Framework

In order to analyse the adoption of Consumption-based targets for food (dependent variable) and the varying degree of influences that impact cities to set targets (independent targets), this research will be grounded on the internal and external enabling factors in the context of urban climate governance.

There are various factors and conditions to enable and impact climate action in cities from literature (Section 2.3). Many of these factors may be overlapping in some ways as their boundaries are blurred and in the real-world settings often intertwined (Bulkeley et al., 2018). Therefore, grouping them in categories will make them more comprehensive (figure 3). For example, the factors of horizontal and vertical coordination can be seen as overarching categories for some of the other enabling factors. In addition, the categories of internal and external factors are used to encompass many of the enabling factors under two general terms, where external refers to conditions outside the city's boundaries that still influence the city.
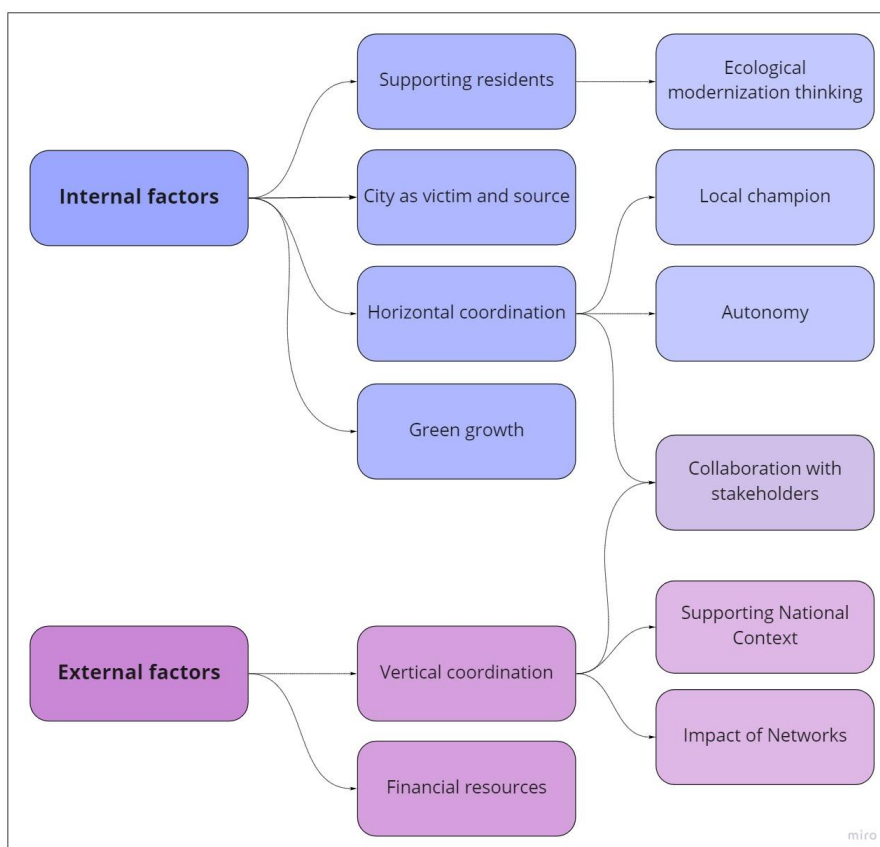
Figure 3. Relationship between the enabling factors of cities to set Targets

3 Methodology

This section will present the research strategy including the research materials, data collection and data processing to analyse CBTs of the C40 Cities Network and the differences these experience in adopting them.

3.1 Research Strategy

To answer the research question of '*What explains the varying degree of influences on the C40 cities for the adoption of Consumption-based Targets (CBTs) for food?,* the research strategy is done in an explorative manner. The focus of this research is on the impacts on C40 Cities from adoption of CBTs in the food sector. Thus, the attention is on the cities and not the network, however, the enabling factors for the adoption of CBTs will be investigated from both perspectives.

The research is of qualitative nature, because the goal is to explore the enabling factors and motivations. Davidson & Gleeson (2015) argue that to obtain a deeper underlying motivation, key actors' attitudes and roles should be examined qualitatively with document analysis and semi-structured interviews with experts. Qualitative research has its focus on the variation and nature of an issue and tries to understand, explain, and explore (Kumar, 2005). It is therefore more descriptive and narrative in its nature. This type of research has a much smaller sample size and aims to cover a broad variety of issues from a fewer number of respondents (Kumar, 2005).

The research design provides a framework for the collection and analysis of data (Bryman, 2012). Since this study aims for a deepened understanding of the influences on the C40 cities, between the cities that have set consumption targets for food and those that have not, a comparative case-study method is used as a framework in which the research takes place. A case-study is a mode of research that investigates a contemporary phenomenon within its real-life context (Yin, 2009). Generally, case-study research is concerned with the complexity and particular nature of the case in question (Bryman, 2012). Due to its in-depth nature, case-study methods would likely improve our understanding of the relationship between individual cities and networks (Lee & Meene, 2012).

This study highly expects contextual factors in cities to be of influence on their adoption of consumption-based target and case-studies provide an opportunity to investigate that (Yin, 2009)

3.2 Data Collection

The data collection for this research is divided into two steps. The first part uses secondary data to compile a database to analyse the patterns between the member cities and the adoption of CBTs to see the type of CBTs being set and what factors enabled the cities to set them. From that information a few cities are chosen to be further interviewed along with the city-network which makes up the primary dataset, to investigate the reasons behind the influences that the cities experienced by engaging within the C40 network. This study is narrowed down to cities that are linked to the TMN of C40, which draws the attention to similarities and differences between their motivations and driving forces, instead of differences between TMN's.

To understand the differences in influences on the C40 Cities for the adoption of CBTs, the Good Food Cities Declaration is chosen due to its interest in consumption-based emissions accounting in the food sector (C40 Cities, n.d). Moreover, currently, 14 global cities have committed to the Declaration, including Copenhagen, Guadalajara, Lima, London, Los Angeles, Milan, Paris, Quezon City, Seoul, Tokyo and Toronto (C40 Cities, 2019b). Although, at the present the C40 has 97 cities, only 14 cities of them joined the initiative even though it should be something all C40 city members should consider. This makes the declaration an excellent tool to investigate the differences the cities experience when adopting actions and targets for consumption-based emissions.

3.2.1 Database Compilation

For the data collection of the database, firstly, the cities of the C40 Network and the cities that signed up for the initiatives are identified. The cities that signed up for the initiative are analysed further by what their targets are at the city level and what actions are being taken to achieve it (C40 et al., 2019). This information can be found on the network's website (https://www.c40.org/other/good-food-cities).

In order to analyse pattern between the member cities and the adoption of CBTs, to see the type of CBTs being set and what underlying structural conditions and motivations enables them, the cities are differentiated based on city typologies and indicators that correlate with the theoretical framework (figure 3). The data is obtained through the C40 website, Covenant of Mayors (CoM) website and Carbon Disclosure Project (CDP). The results will be collected in an Excel datafile and presented descriptively and discussed.

To compare the 14 cities that signed the declaration with other cities that decided not to join the initiative, additional 14 cities that are also members of the C40 network were chosen

systematically, according to their population size, GDP, geography and their socio-economic and political characteristics through the differentiation of global north or global south.

3.2.2 Interviews

For the second part of this research, interviews are done to validate the secondary data from the dataset compilation. Two cities are further investigated to understand how and why they signed the declaration, how it came to be and which enabling factors made it possible for them. Through the form of semi-structured interviews, starting with more open questions about the reasons for and against participating in the initiative and ending with more concrete questions about the enabling factors, one does not only learn about which enabling factor is important but also the reason behind it.

Previous scholars studying TMN's have identified interviews as a method to provide thorough understanding of the connection between individual cities and TMN's (Lee & Meene, 2012). Moreover, Davidson & Gleeson (2015) found that document analysis and semi-structured interviews can provide a thorough understanding of deeper underlying motivations of actors. Following this line of argumentation, all interviews are semi-structured, using a list of questions to be covered based on the operationalisation of the factors (Bryman, 2012). The list followed during the interviews with the city representatives are included in appendix 2 and the topic list used in the interview with the C40 employees is included in appendix 1. Interviews have been conducted online through Google Meets or Microsoft Teams. All interviews have been recorded with the in-build options of their software, to increase accuracy of collected data (Kumar, 2005).

A total of 5 interviews were conducted for this study with a length varying from 30-45 minutes. The interviews were deliberately lengthy, because only a few people carry the right knowledge and experience related to the main research questions. The people that were interviewed for this study are the people responsible for food-related action and the C40 network within their municipality. Also, one employee at the C40 network was interviewed to give a comprehensive outline of all functions the network offers as well as to see how the network tries to engage cities and how they understand the differences between cities that joined and those that have not. Furthermore, two expert interviews with academics were executed to gain more insight about what their views on the conditions and motives of cities are, that enable them to set CBTs for food (appendix 3). The cities' engagement and possible enabling conditions are therefore seen from different perspectives: two perspectives from city officials, one from a perspective of the C40 network and two from academics. The perspective of the C40 network is taken with the senior network manager for food systems within the C40.

Before joining the C40 Network, they worked with the City of Milan, for the mayor of Milan, developing the Milan policy and the Milan Food Policy Pact. The perspective of the city officials is captured through the interview with the manager of Toronto's food strategies, who is also an advisor to C40 that provides pro bono consulting and was part of the drafting team for the Good Food Cities Declaration. The other one is done with the head of health promotion department in the municipality of Lima. Lastly, the additional expert interviews that are necessary to triangulate the data and give the result section a more in-depth analysis was acquired through two scholars who have been researching about how cities respond to climate change and engage in TMNs. The interviews are referenced by the name of the city/institution, the number of the interview and the year during which the interview has been recorded respectively.

3.3 Data Analysis

For the analysis of this data, this study uses a directed content analysis represented using a framework method. The goal of a directed approach to content analysis is to validate or extend a theoretical framework (Hsieh & Shannon, 2005). Directed content analysis is guided by a structured process using existing theory or prior research (Hsieh & Shannon, 2005). This method is suitable for this study, since important themes and concepts have been established in the theoretical framework and the aim is to identify these themes during the compilation of the database and interviews. Following this method, the researcher starts by identifying key concepts or variables as initial coding categories (Hsieh & Shannon, 2005)

Since this research has established important underlying structural conditions from the literature and seeks to identify these factors in the compilation of the database and interviews, an analytical framework is developed based upon the theoretical framework (table 1). Then the interviews are transcribed manually through highlighting important coding in an excel spreadsheet. The analytical framework will be applied to the secondary data and the interviews. The main concepts of the enabling factors are used as coding key words. Each of these main concepts have sub-categories or indicators according to the analytical framework which is elaborated in the next subsection. The framework method allows for a systematic procedure and a visually straightforward matrix, that makes it easier to recognize patterns in data (Gale et al., 2013).

3.3.1 Operationalization of variable

In this research, setting of Consumption-based Targets (CBTs) as dependent variable and the different influences on cities as the independent variable are measured (see table 4).

CBTs can be set through influencing lifestyle decisions that change longevity of use, substitution, and shifts to services, for which examples include the reduction of food waste, changes in diet of the population, increase of organic and seasonal food as well as urban agriculture and edible food gardens. The influences acting on the cities for the adoption of CBTs can be analysed through the enabling factors and structural conditions of cities.

For the database compilation these enabling factors are converted into measurable indicators which can be easily found through secondary data. These include the country, region, population, GDP and HDI as well as criteria like, the annual GHG emissions, the economy/political role of the city, national policy and funding for food related climate action and if the city is mayor-led.

Table 1: Analytical Framework

	Variables	Measure	Indicators		
Dependent	Setting of Consumption-based Targets	lifestyle decisions that change longevity of use, substitution, and shifts to services	Food waste reduction		
			Dietary changes		
			Organic and seasonal food		
			Urban Agriculture and edible gardens		
Independent	Influences on cities	City as source and victim	Annual GHG emissions	High or low GHG Emissions	
		Green Growth	GDP	Creation of green jobs and competition with other cities	
		Supporting residents	HDI	Engaging civil society, Ecological modernization thinking through education and awareness	
		Horizontal Coordination	Autonomy	Decision making within city departments through privatization and decentralization	
			Local Champion	Mayor-led city	
			Collaboration with stakeholders	Initiatives and projects with city stakeholders and organizations	
		Vertical Coordination	Collaboration with stakeholders	Initiatives with national and global stakeholders and organizations	

			Networks benefits	Membership type (Steering Committee, Innovator City, Megacity, Observer City)
				Information sharing, learning, shaping initiatives, and increased resources
			Supporting national context	National policies on consumption-based emissions for food
		Financial resources	GDP, funding for food actions	Many projects and initiatives funded by national governments or other stakeholder

3.4 Trustworthiness

A case study must be evaluated in terms of trustworthiness to determine of the quality of research as well as its findings. Since any research method is extremely vulnerable to being influenced according to the researcher's own perspective, certain measures will be taken to ensure that this does not become a shortcoming.

This case study can be evaluated so as to ascertain its trustworthiness using four criteria: credibility, transferability, dependability, and conformability.

The first canon of credibility concerns with good practice. It means staying true to the findings of the research and submitting them to the society and its members. Language barrier is an issue that generally framed problems regarding credibility, since it is possible for valuable data and information to get lost in translation. For this case study, all the interviews were conducted in the English language and most of the interviewees were native English speakers, thus ensuring no data loss in translation. However, since a few interviewees were not native English speakers, their oral submissions were recorded and confirmed repeatedly during the interviews so as to remove any possible misunderstandings and ensure respondent validation.

In order to confirm the data collected from interviews and provide an additional and informed perspective, an employee at C40 cities has also been interviewed. In addition, secondary data from official documents discussing strategies related to the research have been evaluated to reach thoroughly researched answers to the questions posed by the

research. Thus, multiple sources of data have been studied to confirm the answers and ensure triangulation, a steppingstone to successfully secure credibility.

Transferability concerns with detailing every topic in the study in rich description. To ensure the same, twenty-eight cities have been studied in some detail and their main similarities and differences have been studied and addressed in 3.2.1 database compilation. However, the study is not aimed at generalisation and an in-depth research has been conducted regarding two cities.

Lastly, dependability and conformability have been secured by sharing an analytical framework to code the interviews, since the study is more concerned with increasing objectivity.

4 C40 Cities and CBTs

Now that the concepts and methods have been identified, this chapter is the beginning of the result chapters that answer the research question "*What explains the varying degree of influences on the C40 cities for the adoption of Consumption-based Targets (CBTs) for food?".* To answer this question, a solid description of the C40 Cities Network is needed to provide a context for this study. It does so by explaining the C40 network and the consumption-based targets the cities have set through the Good Food Cities Declaration. Together with chapter 5, the case-study description, it provides an overview of the data gathered within the boundaries of this study. The data used for this chapter stem from theory, information on the C40 website and an interview with a C40 employee, who is the network manager of the Food Systems work stream.

4.1 Network of Megacities

The C40 Cities Climate Leadership Group is a group of 97 cities around the world that represent one-twelfth of the world's population and one quarter of the global economy (C40, n.d.). The C40 is created and led by cities who are focused on fighting climate change and driving urban action that reduces greenhouse gas emissions and climate risks, while increasing the health, wellbeing and economic opportunities of urban citizens (C40, n.d.).

Figure 4: Map of all C40 Cities based on their type of membership (C40, n.d)

As of 2019, Mayor of Los Angeles, Eric Garcetti, serves as the C40's chairperson, former mayor of New York City, Michael Bloomberg, as president of the board, and Mark Watts as executive director (C40, n.d.). All three work closely with the 13 members of the steering committee, the board of directors and professional staff (Lee and van de Meene, 2012). The rotating steering committee of C40 mayors provides strategic direction and governance (Lee, 2013). The steering committee members include Accra, Bogota, Boston, Buenos Aires, Copenhagen, Dhaka, Dubai, Durban, Hong Kong, London, Los Angeles, Milan, Seattle, and Stockholm (C40, n.d).

C40 provides three types of membership categories, megacities, innovator cities and observer cities, based on the following criteria (Davidson et al., 2019):

Megacities (formerly Participating City):

- Population: City population of 3 million or more, and/or metropolitan area population of 10 million or more, either currently or projected for 2025.

  OR

- GDP: One of the top 25 global cities, ranked by current GDP output, at purchasing power parity (PPP), either currently or projected for 2025.

Innovator Cities (formerly Affiliate City):

- Cities that do not qualify as Megacities but have shown clear leadership in environmental and climate change work.

- An Innovator City must be internationally recognized for barrier-breaking climate work, a leader in the field of environmental sustainability, and a regionally recognized "anchor city" for the relevant metropolitan area.

Observer Cities:

- A short-term category for new cities applying to join the C40 for the first time; all cities applying for Megacity or Innovator membership will initially be admitted as Observers until they meet C40's year-one participation requirements, for up to one year.

- A longer-term category for cities that meet Megacity or Innovator City guidelines and participation requirements but, for local regulatory or procedural reasons, are unable to approve participation as a Megacity or Innovator City expeditiously.

The C40 provides a series of services across multiple sectors and initiative areas in support of member cities' efforts that include direct technical assistance; facilitation of peer-to-peer exchange; and research, knowledge management & communications (Davidson et al.,

2019). C40 is also positioning cities as a leading force for climate action around the world, defining and amplifying their call to national governments for greater support and autonomy in creating a sustainable future (Lee, 2013).

C40 networks connect city practitioners and Mayors around the world to enable stronger collective climate action. C40 currently has 17 networks that cover the mitigation, adaptation and sustainability topics to the C40 cities with the potential for the greatest climate impact (C40, n.d.). Through C40 networks, city practitioners from around the world advise and learn from one another about the successes and challenges of implementing climate action.

The C40 has five overarching themes or networks, namely Adaptation Implementation, Energy and Buildings, Transportation and Urban Planning, Air Quality, and Food, Waste and Water (C40, n.d.). Within the Food, Waste and Water Network, there are three initiatives, namely, the Waste to Resource, Sustainable Waste Systems, and the Food Systems. The Food System is a network of 54 cities that convenes city officials to work together to achieve solutions to their food systems challenges by supporting citywide efforts to create and implement integrated food policies that reduce GHG emissions, increase resilience and deliver health outcomes (C40, n.d). It builds on the work commenced by the Milan Urban Policy Pact and works in partnership with the EAT initiative (C40, n.d). There are five focus areas that the workstream aims at, specifically the procurement, environment, waste, regenerative agriculture and governance (C40, n.d.). The Good Food Cities Declaration belongs to this initiative.

It has not been that long since the food topic or workstream has been created. The senior manager and the network manager within C40 explained that in 2016 when they joined the C40 Network they started creating the workstream around sustainable food as the 17th workstream (C40, 2021). When they began, they only had a small number of cities by asking the cities whether they were interested in working together on that specific topic. After five years the workstream has expanded to 60 cities which the network manager works with. There are a few ways of implementation within the workstream (c40, n.d.). One way is that the cities themselves come up and request to the manager to help them around specific challenges. For example, by finding other cities that have gone through those challenge already which they usually do. Thus, they are put in contact with the other cities so they can help each other out. Another way is that the C40 Network has their own agenda where they try to surface good practices that are happening all around for the others to get acquainted about the work, the successes and the challenges in order to potentially replicate that in their own city (C40, 2021).

4.2 Good Food Cities Declaration

The Good Food Cities Declaration currently has 14 global cities that have committed to the Declaration, including Copenhagen, Guadalajara, Lima, London, Los Angeles, Milan, Paris, Quezon City, Seoul, Tokyo and Toronto (C40 Cities, 2019b). The declaration was announced at the C40 World Mayors Summit in Copenhagen on 10 October 2019 (C40 Cities, 2019a). It wants to achieve a 'Planetary Health Diet' for all by 2030, based on a research released by The EAT-Lancet Commission in January 2019, that "would dramatically reduce emissions, provide a balanced, nutritional diet for 10 billion people, and save 11 million lives each year" (C40 Cities, 2019b). The Planetary Health Diet was introduced by the EAT-Lancet Commission for a healthy planet and people (Eatforum, n.d.). It provides flexible guidelines to a broad range of food groups that is optimal for the human health and environmental sustainability. It promotes plant-based diet where whole grains, fruits, vegetables, nuts and legumes are given a larger proportion than meat and dairy (Eatforum, n.d.).

Under the C40 Good Food Cities Declaration, cities commit to (C40, 2019b):

- "Align food procurement policies to the Planetary Health Diet ideally sourced from organic agriculture.
- Support an overall increase of healthy plant-based food consumption in our cities by shifting away from unsustainable, unhealthy diets.
- Reduce food loss and waste by 50% from 2015 figures; and
- Work with citizens, businesses, public institutions and other organizations to develop a joint strategy for implementing these measures and achieving these goals inclusively and equitably, and incorporating this strategy into the city's Climate Action Plan" (C40, 2019b).

C40 (2021) explains that a declaration usually forms when a few cities really want to have it. Hence, a declaration is an additional tool that the C40 uses to bring forward the climate agenda. They sell their vision though their declaration, of which they currently have seven within the overarching five themes (C40, 2021). It is also to some extent a challenge to which cities take leadership on for the different topics.

The Good Food Cities Declaration was made throughout the year of 2019, where the text and commitments were drafted. Then it was approved by 14 mayors during the C40 World Mayors Summit in Copenhagen in October of 2019. The declaration started off with a small number of cities (Milan, Copenhagen, Toronto, Oslo) that made up the core team and initiated the initiative. The leading city of the Food System Network is Milan and according to C40 (2021) they really wanted to have a new and extremely ambitious commitment. In 2015, the

City of Milan launched the first city level international network on Food policy, the Milan Urban Policy Pact (MUPP), now including over 200 cities from around the world. It's a non-binding agreement that consists of 5 priorities, 16 directions and 48 actions to be implemented in 5 years (2015-2020). After all the major commitments, Milan wanted to "bring it up a level" (C40, 2021). Therefore, they requested the C40 to have a declaration with C40's supports in shaping that. Thus, the discussion was broadened to the whole group of cities that are working on food systems and the network manager sent everyone an email saying that "Milan is really eager to get, you know, a new commitment, very ambitious on the food and planet nexus. Would you be interested in help shaping that?" (C40, 2021). The mayors that approve the commitment then finalize the targets and the commitment is made public. All declarations are potentially still open for other mayors to join as well.

The Good Food Cities Declaration is a convergence target, where the people that are overconsuming and the people that are underconsuming, should get the same diet that is good for health and for the planet (C40, 2021). If the access to that diet is not aligned because of poverty and other constraints, then the declaration would want those barriers to be lifted. At the same time, if one is overconsuming and causing disturbances to their body and the planet then the declaration would want them to change that. In other words, if you are eating too little then the declaration wants you to eat more and if you are eating too much then it wants you to decrease your consumption. Ultimately, it is a delicate balance for people or for the planet that needs to be stabilized.

4.3 Current CBTs for Food by C40 Cities

Most targets focus on decreasing food waste loss, meat consumption and increasing organic and seasonal plant-based diet. However, 5 of the 14 cities have not given any additional targets that they are pursuing, namely Barcelona, Guadalajara, Lima, Quezon City, Toronto. All C40 Cities within the declaration target to reduce food waste by 50% by 2030 as a commitment to it (C40 Cities, 2019a).

Additionally, promotion of plant-based food or the reduction of meat is addressed through targets that want to "increase the rate of 'eco-friendly food products' for public meal services to 70% by 2020, and to expand high levels of plant-based product consumption" like in Seoul or want to "target by 2020 to serve 50% sustainable food (organic, MSC, Sustainable fishing, Label rouge) by promoting a purchasing policy, sustainable public and relying on managers of collective restaurants" like in Paris (C40 Cities, 2019a).

Moreover, specific stakeholder groups within the city were targeted such as school canteens, restaurants and catering. For example, in Milan "school canteens will fully eliminate

red meat in all school menus for children between 3-14 years" and Paris aims to make "90% sustainable food in Parisian canteens in 2050" and "reduce products by 20% meat in collective catering". Targets like these are concrete and easier to achieve than targets that aim the whole city (C40 Cities, 2019a).

Some cities have given targets for their overall emissions for the city. "To be fossil fuel free in 2040" and "by 2050, become a 'Zero Emission Tokyo'" are both loose targets by Stockholm and Tokyo respectively. A more detailed one stems from Copenhagen which "target(s) to reduce CO_2-emmisons for the public meals by at least 25% per citizen before 2025" (C40 Cities, 2019a).

Upon requests from cities which often happens, the C40 also create somehow urban and peri urban agriculture, which is a tough engagement for the C40 as C40 (2021) states, but they know that many food teams around the world and in the network of cities have urban peri urban agriculture as one of their tasks. Therefore, they let those cities use the platform to discuss that as well but of course in terms of consumption lens rather than the production lens. Examples of city's targets that concentrate on (peri-)urban agriculture are for instance to "leverage public property for urban agriculture by increasing the number of edible gardens in City parks and public libraries by 50% by 2021", by Los Angeles, or like Paris that wants to "achieve 20% of useful agricultural area dedicated to organic farming in Ile-de-France compared to 2.7% in 2017" and "bring 75% of Parisian households to regularly buy products from organic farming in promoting access for all to these products" (C40 Cities, 2019a).

Equally as important as the targets set are the actions that were described to achieve those targets. Actions determine how the targets can be achieved, examples include advertising, expenditures or subsidies by the municipality for local initiatives that try to achieve the aim of the networks' initiatives in cities, such as for schools and public canteens to make and have more organic and local seasoned plant-based food. For instance, in Milan the "Request private caterers/restaurants/actors to offer vegetarian and sustainable menus" and in Stockholm they want to "promote the use of climate-friendly menus and seasonal food, increase the share of plant-based foods like fruits, vegetables, grains and legumes and reduce consumption of e.g. dairy products and meat" (C40 Cities, 2019a)

Overall, there is a consistent theme among the targets and actions. Although, the cities examined varied in their size and include global north and south cities, the overarching focus was on climate, waste and health.

Table 2: Overview of the CBTs set by the cities that signed the Good Food Declaration (C40 Cities, 2019a)

City	Targets
Barcelona	- No additional targets than the ones they are committing to through the declaration.
Copenhagen	1. reduce CO2-emmisons for the public meals by at least 25 % per citizen before 2025 2. 90% organic in the public meals 3. reduce food waste by 15% from 2015 baseline in the municipality's kitchens and institutions.
Guadalajara	- No additional targets than the ones they are committing to through the declaration
Lima	- No additional targets than the ones they are committing to through the declaration
London	1. Align food procurement of the GLA Group (7 million meals per year) to the planetary health diet 2. reduce food waste per person 20% by 2025 and 50% by 2030.
Los Angeles	1. Establish a healthy food cart program by 2021 to increase healthy food options and access in neighbourhoods and work towards our goal of ensuring all low-income Angelenos live within 1/2 mile of fresh food 2. Leverage public property for urban agriculture by increasing the number of edible gardens in City parks and public libraries by 50% by 2021 3. to eliminate organic waste going to landfill by 2028.
Milan	1. school canteens will fully eliminate red meat in all school menus for children between 3-14 years 2.Reducing food loss and waste by 50% from a 2015 baseline.
Oslo	1. reduce meat consumption and increase the share of organic food to 50 percent of the total. (The share of fruit, vegetables and legumes will be increased, and the city will use more seasonal food) 2. reduce food waste with 30 percent by 2025, and 50 percent by 2030, according to UN Sustainable Development Goals.
Paris	1. achieve 20% of useful agricultural area dedicated to organic farming in Ile-de-France compared to 2.7% in 2017 2. bring 75% of Parisian households to regularly buy products from organic farming in promoting access for all to these products 3. target by 2020 to serve 50% sustainable food (organic, MSC, Sustainable fishing, Label rouge) by promoting a purchasing policy sustainable public and relying on managers of collective restaurants 4. 90% sustainable food in Parisian canteens in 2050 5. reduce products by 20% meat in collective catering
Quezon City	- No additional targets than the ones they are committing to through the declaration
Seoul	1. increase the rate of "eco-friendly food products" for public meal services to 70% by 2020, and to expand high levels of plant-based product consumption

Stockholm	1. Half of the total amount of money that the city spends on meals and food shall be spent on organic foods by 2020. 2. Our target is that 70 percent of all food waste should be collected by the year 2021, this would amount to an increase of more than 400%. 3. reducing food waste by 50% by 2030. 4. to be fossil fuel free in 2040
Tokyo	1. by 2050, become a "Zero Emission Tokyo". 2. established the Tokyo Style Reducing Food Waste Program, to halve food waste by 2030.
Toronto	- No additional targets than the ones they are committing to through the declaration

5 Enabling Factors

Now that the network and the CBTs have been described, the cities and the case-studies will be discussed. The theoretical framework shows that in order to answer the main research question of what explains the varying impacts on the C40 Cities for the adoption of CBTs for food, we first need to know the cities' enabling factors, underlying structural conditions and motivations, to engage in activities of the TMN's. This chapter describes these elements in broad terms about the 28 cities analysed in the database and detailed for two cities respectively, using data collected from the interviews.

5.1 Overview of Cities

In this subsection, the selected cities are evaluated using the database (See attached excel file). The database uses the indicators of the theoretical framework with the enabling factors that influence cities. In total 28 cities were analysed, 14 cities that signed the Good Food Cities Declaration and 14 that did not. The 14 cities that did not sign the Declaration have similar characteristics to those that have and are also part of the C40 Network. The 34 cities vary in their geographical locations, population and economic/political role.

Most cities are capital cities with an economic focus on finance or service sector. 9 out of the 14 cities that joined are capital cities while 7 of the other cities are capitals. According to the C40 membership classification, 5 steering committee cities have signed the declaration compared to the three steering committee cities that did not sign. Furthermore, the declaration has two innovator cities while there is only one in the sample of the cities that did not join. Lastly, there are 7 megacities within the initiative and 9 megacities outside.

In total, there are 12 European cities, of which 7 signed the declaration, 9 North American cities, of which 4 signed the declaration and 5 Asian cities, of which 2 signed. Of the 28 cities, 22 are from the global north, scattered through North America, Europe and Asia. There are three Global South cities, Lima, Quezon City and Guadalajara, that signed the Declaration which are contrasted with Buenos Aires, Curitiba and Chennai as the global south cities that did not join the initiative, belonging to South America and Asia. Correspondingly, the HDI of these cities is lower than the global north cities, varying from 0.645 of Chennai to 0.84 of Buenos Aires, whereas global north cities range from lowest of Lisbon with 0.864 to highest of Chicago with 0.956. Moreover, the population size of the cities analysed ranges from 500 thousand of Lisbon, Portugal to 14 million of Tokyo, Japan.

The cities GDP varies from Curitiba with 57.7 billion to Seoul with 846 billion. The average GDP of the cities within the declaration is 357.57 billion whereas the average of the cities that didn't join is 265.5 billion.

As stated on the C40 website, four cities outside the declaration do not have a mayor-led city compared to only Tokyo that does not have a mayor while cities that did not join the declaration have

A majority of cities within the initiative have allotted a separate budget and funding for food related initiatives and programmes. For instance, Los Angeles has a commitment of roughly $200M in facility upgrades and new construction over the next 10 years and Barcelona has allotted € 40,000 with additional call for grants to support citizen projects of this nature. Milan, London and Quezon City have municipal and city funds allotted for this purpose. Lima has requested support from private companies and Milan is using CSR funds for securing lower food prices and other initiatives. Seoul has allotted roughly 815,623 USD for programmes to cut sodium and sugar consumption and raise fruit and vegetable consumption. In contrast, none of cities outside the initiative have any visible specified budgets or funding for food programmes.

Out of the cities that signed the initiative, 9 cities have formulated national policies on Consumption-based emissions for Food. However, only Amsterdam has a national policy of such nature among the cities outside the initiative.

Most cities that are part of the initiative have implemented various local projects to increase consumption of nutritious food and avoid waste. A majority of these initiatives target school children, including programmes like morning fruit breaks, on-campus events attracting students and markets, and most importantly providing healthy food in school canteens and even in areas surrounding schools. The same applies to public cafeterias, where nutritious food like salads and fruit is being served even through vending machines. Programmes are being aimed at reducing food waste within academic institutions as well as other organisations.

While the local efforts were aimed at certain targeted groups, global projects like the Milan Urban Food Policy Pact and the Climate KIC-project have been focussed towards cooperation on a global level to acquire and allocate resources in order to maximise efficiency. Additionally, some cities have been cooperating with international organisations like Oslo with EAT foundation, Los Angeles with the United Nations Food and Agriculture Organisation, as well as the sustainable diner project which was a collaboration between Quezon City and WWF (C40 Cities, 2019a). On the other hand, none of the cities outside the initiative have any local or global initiatives supporting the cause of consumption-based food emissions and reducing wastage of food.

Table 3: Enabling factors of cities analysed

City	Internal					External			
	City as victim and source	Supporting Residents	Horizontal coordination			Financial Resources	Vertical Coordination		
			Autonomy	Local champ	Collab. With stakeholder		National Support	Network	Collab. with Stakeholders
Barcelona		x	x	x	x	x	x		x
Copenhagen		x	x	x	x	x	x	x	x
Guadalajara			x	x	x		x		
Lima	x		x	x	x	x			
London	x	x	x	x	x	x	x	x	x
Los Angeles	x	x	x	x	x	x		x	x
Milan		x	x	x	x	x	x	x	x
Oslo		x	x	x	x		x	x	x
Paris		x	x	x	x				
Quezon City			x	x	x	x			x
Seoul	x	x	x	x	x	x			
Stockholm		x	x	x	x		x		x
Toronto		x	x	x	x		x	x	
Tokyo	x	x	x		x			x	
Amsterdam		x	x	x			x	x	
Athens		x	x	x					
Berlin		x	x	x					
Buenos Aires			x					x	
Chennai	/		x						
Chicago	x	x	x	x					
Curitiba			x	x				x	
Hong Kong	x	x	x						
Lisbon		x	x	x					
Madrid		x	x	x					
New York	x	x	x	x					
Phoenix		x	x	x				x	
Singapore	/	x	x						
Warsaw		x	x	x			x		

5.2 Toronto, Canada

This subchapter describes Toronto's engagement in the C40 network. Based on the interviews (with the former manager for the Toronto Food Strategies) as well as strategy- and vision documents of the city, the following subchapter has been constructed. Toronto is the largest city in Canada and the capital city of the Ontario province. With a population of 2.956.024 in 2018, it is the most populous city in Canada (Toronto.ca, n.d.). The population density is 4.334 inhabitants per kilometre. The city had an unemployment rate of 6.4% in 2018 (Toronto.ca, n.d.). It is an international centre for business and finance and as reported by the C40 (n.d.), the Gross Domestic Product (GDP) is 276 billion US Dollars. The Human Development Index (HDI) of Toronto is 0.929, which is considered very high (Toronto, n.d.). The current mayor is John Tory, a conservative, whose top priorities are tackling transit and traffic congestion (Toronto, n.d).

Firstly, understanding the context in the city is necessary to comprehend the reasons and the process behind the signing of the Good Food Cities Declaration. This was assessed through the interview with the former manager for the Toronto Food Strategies. They explained that Toronto works top down and bottom up by always trying to change policy but also work at the grassroots level. Toronto has pushed for multiple interventions and policy initiatives to promote healthy sustainable food system. As their work has evolved, it became clearer to them that linking and integrating with climate work and climates interventions is very important in order to make some progress because of the obvious links between concept with consumption-based solutions and the food component of that.

"Toronto thinks it is very ahead on this kind of work, but it actually isn't" (Toronto, 2021). The manager emphasized that the whole process has been a struggle since food related parts of any climate change and environmental strategies were not appreciated.

The former mayor of Toronto and a senior person of the C40, David Miller, was really pushing other mayors around the world to take climate action seriously. The manager brought him in for this work to push C40 a little further and for him to use his connections to push the food-climate work in Toronto. However, the current mayor was not focusing enough on food because the food portfolio and interventions around it are much more complex than for example changing the cities bus fleet to electric. These types of actions are very concrete, high profile, high impact and much easier. Additionally, the City of Toronto and its environmental departments are very involved with the C40. They were doing a lot of work with the C40 on the waste reduction file but on all other components besides food.

Therefore, the manager and her team decided to really make a push and push the colleagues in the city to recognize the importance of this work as well as get some political profile for including food. The mayor at the time, who is still the mayor, was getting more interested in this work and seems to be taking action on climate initiatives, even though "he's a pretty conservative mayor" and "not sure how deep his commitment goes" (Toronto, 2021). Nonetheless, the mayor of Toronto went to the Copenhagen meeting for C40 with a big delegation to make some commitment on climate change. Many people chose to go to that meeting even though none of them were involved in food. Furthermore, Toronto was very involved with the C40 with constant strategizing and interacting. The C40 also helped with getting political support by seeking to other people inside the city organization to get them to be open to this and to recognize that this declaration is as important as other declarations.

Additionally, a separate source of funding was secured by the manager of Toronto Food Strategies to go and combine it with other work, for example with the Global Food Systems work through the FAO in Rome and The Milan Urban Food Policy Pact. In doing so, they were able to get resources to engage with all three and thus push the project harder to be part of the mayor's agenda.

Moreover, a useful strategy was used to gain political support and to build some bridges inside the city government, particularly with the environment's division, who were doing a lot of fabulous consumption-based work but not considering food. The manager and team actively approached them about the declaration to see what their criticism was and whether they could support proceeding with it. The same was done with the solid waste reduction department, resulting in real progress. However, they wanted to push all the work back to them, losing valuable time since they did not have the data and science to do the calculation.

In order to get help with consumption-based analysis and calculations, the Cool Food Pledge by the World Resource Institute (WRI) came at the perfect opportunity. The WRI was in an early stage of the making of the pledge for which they had not yet connected with cities but managed to secure some funding to provide technical support to a few places. They were very interested to have some high-level cities and Toronto was one of them. Toronto explained to them "that this [declaration] is something we can bring to the table" which opened up the door for collaboration with the environment folk because it would bring more capacity to this work.

After having secured financial resources and capacity, political steps with the mayor of Toronto were taken by inviting him to come to the press conferences for the signing in Copenhagen as the first signatory cities to demonstrate their leadership. The former manager approached the mayor and the counsellors accessible and explained the key piece of the

consumption emission and convinced them to sign the WRI Cool Food Pledge at the same time as the declaration so that capacity and resources could be leveraged (Toronto, 2021). They clarified with conviction to the counsellors, who are the champions, that "this is going to leverage capacity for us to do calculations to have some concrete deliverables for our consumption-based emission targets and to integrate food into that and that the declaration is a high-level commitment for us to continue this work on sustainable food systems" (Toronto, 2021). However, nobody on the council understood neither the Good Food Cities Declaration nor the Cool Food Pledge and what they were agreeing to.

Leading up to the singing of the declaration, when the EAT-Lancet report on 'Planetary Health Diet' came out, people from the EAT Foundation came to work with Toronto on a series of public engagement and information events, where not only the residents but also senior decision makers were invited to understand the food-climate nexus. Additionally, different divisions were brought together, for example the public health staff, who work on nutrition and health promotion, that had never talked to the environment staff, who are acting on climate change, and the other way around. All in all, "the report, action orientations and good seekers were very helpful to bring that together" (Toronto, 2021). Combined with very big public events, where anyone from the public was invited to come and hear the presentation on this, the mayor, John Tory, was strategically invited to speak at a few of these events to get him to understand the food climate nexus better.

Another aspect that helped to ease the process of signing the declaration was the release of the Canada Food Guide by the Government of Canada at the same time the EAT-Lancet was being issued (Toronto, 2021). The guide gives plant-based diet a higher priority by saying that half your place should be vegetables and to eat less meat and dairy products. Consequently, there was a massive pushback from the meat and dairy industry against the guide coming out. For that reason, the EAT-Lancet report came out first which got tremendous appreciation and took some pressure away for the Canada Food Guide and made it a lot easier with the meat industry fight (Toronto, 2021).

Nevertheless, after all the effort was put in and the foundation was created, the COVID pandemic happened and ruined any achievements made. The work on food and the food strategy teams are located inside Toronto's Public health department in the city, who are currently the lead organization in the pandemic response. Hence, the current staff are now only allowed to work on emergency food response, pushing the food consumption work in the background. On top of that, the new leader of public health does not value the food agenda nor the food system at all, putting a halt on all food-climate related work. To sum up, there is no leadership on food since they never filled the position of the former manager and other staff

members on the team that have been reduced from eight to two (Toronto, 2021). Moreover, there is no understanding, interest or resources to deliver on the Cool food Pledge nor the Declaration. Therefore, Toronto is currently not working on the Good Food Cities Declaration's commitments.

5.3 Lima, Peru

This subchapter describes Lima's engagement in the C40 network. The following information was derived based on the interviews with the head of the health promotion department in the Lima. Lima is capital and largest city in Peru with a population of 9,751,717 and a population density of 12,000 people per square kilometre (worldbank, n.d.). The GDP in the region of Lima was counted to be 82 billion USD by the C40 (C40, n.d.). The main economic sector are textiles, clothing and food industry and financial centre. The mayor of the city is Jorge Muñoz Wells, who reaffirms his commitment to work intensely on the city's climate agenda, through a Local Climate Change Plan.

Interview with the head of the health promotion department in the Lima Municipality, where they explained how Lima started the work on food related consumption-based targets. Lima has a rotation of government every four years and the last started in 2019 where they also started with the Good Food Cities Declaration (Lima, 2021). The C40 Network contacted Lima to sign the declaration, first in the forum then they also travelled to Stockholm, where they had a meeting to understand the declaration better. However, until that time they were not sure about the project. They were interested in climate change and the food related emissions since in 2019 they also started their own governmental campaign about heathy food, called "Lima eligir saludable" (Lima choose healthy) (Lima, 2021). In this campaign, Lima works with markets and schools to promote healthy foods and diet. Not only do they teach to eat healthy fruit but also how to dispose it properly and not wasting it, for example by juicing the fruits and using the shell of a fruit to use them in rinks and in dishes (Lima, 2021).

The main reason for signing the declaration, according to Lima (2021) was due to environmental reasons. Lima chose to participate in the declaration in order to respond to the problem, which is increasing, and as immediate action is needed.

In order to implement the goals of the declaration, the municipality is working with chosen parts of the city in a step-by-step process, where smaller groups of people in the city are targeted. Lima (2021) explains that if the entire population would be targeted and instructed to reduce their consumption of meat then a backlash from them is expected. Additionally, Lima works with Slow Food international, which is a grassroot organization who wants to "prevent the disappearance of local food cultures and traditions, counteract the rise of fast life and

combat people's dwindling interest in the food they eat" (Slowfood, n.d). Slow Food does not directly focus on the reduction of consumption-based emission of food but indirectly helps towards it. Furthermore, the C40 has been a major stimulator for Lima to sign the declaration. The C40 network helped with case studies of other cities by illustrating what other cities experienced and teaching how to transfer it to Lima (Lima, 2021).

Nonetheless, the declaration for Lima is a little difficult to implement. Firstly, a major hindrance comes from their 'Anaemia' problem. Anaemia is a condition where the body does not have enough healthy red blood cells to carry adequate oxygen to the body's tissues, resulting in fatigue, shortness of breath, light-headedness, dizziness or a fast heartbeat (Myoclinic.org). The most common type of anaemia is an iron deficiency problem which can be prevented and treated by eating iron rich foods. The best sources of iron rich food are red meat (beef and liver), poultry and fish (Mayoclinic, n.d.). Therefore, it is not advisable to the people with anaemia to tell them to reduce their consumption of meat and only eat vegetables and fruits. The municipality of Lima helps and teaches the residents with this problem to eat better and prevent and improve the condition. Furthermore, the economy makes it harder for Lima to accomplish the declaration because fruits and vegetables have a higher price than other foods. If the residents want to eat vegetables and fruits, in a good condition, then they have to pay more. The municipality knows that this does not satisfy the need of the people since one has to eat more food with less money. Moreover, according to Lima (2021) more case studies from the global south are needed that are more context specific to be of more guidance. They believe that different people have different practices and different knowledge that need to be incorporated when implementing policies. For example, in Lima, they have a traditional dish called Ceviche, which Peru's first dish but has fish. Thus, Lima (2021) explains that "We can't tell people that we can't eat Ceviche" because it is the first dish, and it is not a junk food nor is it an unhealthy food. And people can't be told as that no" (Lima, 2021). It is a full food with natural ingredients and the society will question the municipality. Therefore, it is important to consider the traditions and the practices in the cities and one needs to acknowledge these cultures and customs before implementing new policies. Additionally, the COVID19 pandemic has reallocated their resources to other targets related to the health of the residents (Lima, 2021). To conclude, these circumstances make it harder for the municipality of Lima to realize the targets of the declaration.

6 Analysis

Chapter 5 has given a broad description the 28 cities from the database and in-depth description of two cities, concluding with a table (table 3) representing all data found for those cities, corresponding to the enabling factors. This table will be the starting point for this chapter, which aims to describe the most important similarities and differences between the cities analysed. The results of the table will be validated with the arguments of two cases.

6.1 Patterns between cities and the CBTs set

This section highlights a few of the most important enabling factors that were striking through the database as well as from the interviews and these factors are: the importance of local champion, horizontal and vertical coordination, and network's benefits.

6.1.1 Importance of Local Champion

Results of the database imply that a local champion like the mayor is essential for effectively enabling climate action. Most cities analysed are mayor-led cities. However, those that did not join the declaration had more cities that did not have a mayor, whereas among the cities within the initiative, only Tokyo did not have a mayor (C40, n.d.).

The importance of a local champion was also mentioned by the former manager of Toronto, who got the political support by involving the former mayor who promotes the climate agenda to start the whole process of joining the declaration. However, the current mayor is not concerned about food and its climate implication which led to leadership problems within the municipality and led to the withdrawal from the declaration (Toronto, 2021). Hence, if a local champion cannot guide the city and advocate for climate change because of the resistance they face by the opposition or industry, then it becomes difficult for the mayor of the city to join initiatives.

6.1.2 Horizontal and Vertical Coordination

Horizontal and vertical coordination is crucial for cities. Horizontal coordination suggests synergies between and across the different departments, agencies and organizations at the city level, while vertical coordination links the local, regional, national and international actors (Bulkeley et al., 2013; Johnson et al., 2015; Van der Heijden, 2019). Successful cities that work with local and global stakeholders create a supportive context for climate action that is effective (Bulkeley et al., 2013). From the results in the database, it can be derived that the cities within an initiative are generally more connected to stakeholders from the value chain than those that are not.

Moreover, the interviews with the city officials confirms the data. Toronto has had many local and global collaborations to realize the declaration. It has gotten different departments within the municipality together, for example the environmental division and waste department who did not communicate with each other before. Additionally, Toronto collaborated within the WRI's Cool Food Pledge which provided Toronto with the necessary resources and funding to do calculations that stimulated the signing of the Good Food Cities Declaration. Similar to Toronto, Lima has local and global initiatives that the municipality is involved with. Locally, the city works with markets and schools to promote healthy food under the city-project called 'Lima choose Healthy' (Lima, 2021; C40, n.d.). Moreover, Lima works with Slow Food international to increase the consumption of natural food (Lima, 2021). To conclude, cities that are not connected with stakeholders in a sector are less likely to join an initiative for that sector since they have no one backing up their efforts.

6.1.3 Network's benefits

TMNs or city-networks provide a platform for cities to share information, learn and shape initiatives while gaining resources, whether that be financial, human or informational. TMNs help overcome regional and national barriers to climate governance and support the target setting process (Broto, 2017; Van der Heijden, 2019). The cities were differentiated according to their C40 membership type, where the cities within the declaration had more cities that were in the steering committee or are an innovator city (C40, n.d.). Both these membership types belong to cities that are more active within the C40 and in the climate change arena. In other words, they use the benefits of the city network more than megacities which is the regular type of membership within the C40. For that reason, database results suggests that cities belonging to the steering committee or innovator cities are more likely to be initiating CBTs in their cities.

The two case studies interviewed mentioned that the C40 were a necessary condition to participate within the declaration but both cities have megacities membership. The C40 assisted Lima with experiences of other cities and Toronto was very involved throughout the process with the C40 in "strategizing and interacting to influence the final wording" of the declaration (Lima, 2021). They also helped Toronto in getting political support (Toronto, 2021). Overall, the "C40 did all they could to seek to the other people inside the city organizations to get them to be open to this [declaration] and recognize this declaration as important as other declarations" (Toronto, 2021). Thus, the city network regardless of the membership type is an essential enabling condition for the adoption of CBTs and climate action.

7 Discussion

This chapter will reflect on the research question posed in this study and see how this question and the results fit into the previous research regarding consumption-based targets and Urban Climate Governance. To see what has been found in this research we first reflect back upon the research question as stated in the introductory chapter, then a brief discussion of the main findings and reflections are included, followed by the limitations.

7.1 Findings

First of all, the main research question of this study reads:

"What explains the varying degree of influences on the C40 cities for the adoption of Consumption-based Targets (CBTs) for food?

In this study, consumption-based targets (CBTs) and their differences in adoption by C40 cities was investigated. Understanding the reasons of what enabled these cities to set CBTs, can help more cities in the future to adopt CBTs. Thus, 14 cities that set CBTs through the Good Food Cities Declaration were compared in an excel database with cities within the C40 that did not join the declaration using secondary data. The gathered data on the enabling factors and the reasons behind the joining of the declaration can be interpreted to explain the varying degree of influences on these cities for adopting CBTs for food. The data collected was validated by two case study interviews of city officials from Toronto and Lima, through which more detailed conditions and context could be understood. The main findings of the database were that there are three essential factors that enable cities to execute climate action and set CBTs. Firstly, key individuals are important. These can be individual policy champions or political champions who either because of their personal belief and the importance of the agenda or because they can see that acting on climate change is essential, will allow other key agendas within the city to be addressed.

The theoretical framework on which the results were based on consisted of many more enabling factors that scholars have over the years discovered. However, a few of those factors that are crucial for enabling cities in literature do not apply for the C40 cities and the food sector. For example, autonomy of the cities is an important factor in literature for climate action but for the C40 cities it is not a significant condition. The C40 cities are megacities, and these bureaucracies are powerful structures that do not need national governments to give them permissions for decision making (C40, 2021). They already "are pretty much autonomous" as the network manager of the C40 stated (C40, 2021). Furthermore, in most C40 declarations,

the cities are committing to far more progressive targets than their own governments would have signed up for. These cities are leaders in specific sectors and agendas, which cannot be compared with what the national governments are doing (C40, 2021). Therefore, the degree of autonomy and national policies are secondary factors for these cities. Similarly, financial resources are not a big issue as these cities have huge economies. Nonetheless, it gives the cities more freedom to make decisions and convince others to take ideas seriously.

A key difference however that differentiates the C40 cities are their committed individuals, which are the city's residents. Compared to the results from the database that showed no conclusive difference between the cities that joined the declaration and those that did not, the interviewees, highlighted the importance of supporting and motivated residents as a key factor in the successful engagement and action to reduce the city's consumption-based emissions. Usually when residents strongly support sustainability and climate action, successful environmental policy implementation is seen (Salon et al. 2014). Likewise, the residents influence the mayor's decisions. For example, when people join protests and ask for certain policies, mayors can build a narrative around it and push them on to the political agendas (Toronto, 2021). This makes it easier for mayors to implement new policies and withstand any hindrances. However, the influence between the resident and mayor goes both ways. Residents can also be persuaded through the motivation of the leader when they are not asking for climate action which demands for the mayor to find a way to inspire them and promote it (Expert1, 2021). It is important for the mayor to do this because citizens in the population affect government officials to take action and leaders need recognition in democratic processes to stay relevant and be re-elected. Nevertheless, every city's residents are different depending on trends and cultures (Lima, 2021). This means that even very progressive cities might not set CBTs because society's values in culture go against what the leaders wants to promote which makes it difficult for a mayor to actively pursue certain topics (Expert1, 2021; Lima, 2021).

Lastly, this research wants to highlight that in the literature and through expert interviews it seems like 'Green Growth' is an important enabling factor however practitioners have not mentioned it in any conversation. Expert1 (2021) explains that many cities get involved in climate action for other reasons than for the benefits of the climate. These include funding, resources, recognition of important actors or just being part of network and connecting to actors, among others. The interviews with the city officials were with people that are interested in sustainability as they are within the environmental or health department of the municipality. This is to be expected since no city policymaker will admit to mainly being interested in economic prosperity, creating jobs and gaining votes by keeping citizens happy.

To conclude, as important as all these enabling factors are, a combination of all enabling factors is what influences a city to engage with the C40 and drives them to set and act for their food-related consumption-based emission. However, like in the case of Toronto committing to the declaration does not guarantee implementation (Toronto, 2021).

7.1.1 Comparison: Global North and South

In the following subsection, the differences and similarities of the Global North and Global South cities are highlighted. The data used for this subsection stems from the database collected and interviews with the city officials, C40 manager as well as the expert interviews. Though this study does not explicitly try to differentiate between the Global North and South, it is worth discussing since their structural conditions require different enabling factors to adopt CBTs.

The database results show the difference between the Global North and Global South clearly through the HDI level. The level of HDI corresponds with the residents' life expectancy, education and standard of living. Within the database, six Global South cities were analysed where three of them have signed the declaration and three have not. Nonetheless, all of them have a HDI lower than 0.8, separating them from the rest of the cities.

According to the C40 (2021), the Good Food Cities Declaration has not been successful so far in terms of incorporating Global South cities. "From a lot of Global South cities, we actually have only three Global South cities in our declaration" (C40, 2021). There is work that needs to be done for the global south cities from the declaration's side. However, due to the different circumstances in the Global South, the food-climate nexus is even more complex. There are different types of conditions in place, especially as a result of food insecurity. "Food insecurity may be average or severe, where the average one is when the person cannot secure themselves a protein rich meal at least one in a week" (C40, 2021). For example, cities like Johannesburg which have a falling food security rate and around 40-50% of the population lives in food insecurity, no mayor will consider talking about the food and climate nexus since people have other concerns and their own necessities to worry about first. Thus, politically it is not possible to commit to and implement such targets. Nevertheless, even after the political struggle there is a technical struggle in the Global South. When it comes to reshaping, transforming city food procurement into aligning it with the Planetary Health Diet, majority of the Global South cities do not procure food for public facilities. This may be a decision by the national governments or by any other authority at the different levels. In a situation like this the city has two options, either it procures food through external sources or reclaims back the political power. In many cases, international funders or development agencies that support the

cities in need and provide them food but in many circumstances the city claims back the specific facility by getting full autonomy over it to supply food on their terms. The C40 Network wants and pushes for these changes to happen. An example comes from Addis Ababa in Ethiopia that took over from a mixed governance of international donors and the government by reclaiming it through the municipality. However, in order to do so, the city has to secure funds from either the national government or other sources. Moreover, resources are crucial in the process of reclamation like training the staff and building the whole infrastructure as well as embedding it into the system. Additionally, there is no universal segregated collection of food waste in majority of the polluted cities in the Global South, which poses another problem of lack of resources that hinders them to sign and implement CBTs. To conclude, C40 (2021) considers "mainly the resources" to be a fair difference between the Global North and South cities (C40, 2021). Resources develop with the collaborations of stakeholders and a lot of "noise", but these also need funds and capacity (C40, 2021).

Lima (2021), as a Global South city, points out that political decision making of the mayor, stakeholders working together and the conditions within a city are important to enable the city to take action for their consumption-based emissions. The political decision making of the mayor is important because if the mayor works on the food-consumption or climate change target then all people will work on it, including the different governmental departments and society. Additionally, favourable conditions within the city are needed to initiate work on targets for climate change and food. Lima (2021) says that "We consider that Lima is a city that is getting better in social areas and in economic also it's getting better in life". Satisfying the basic necessities of the people and the city are crucial standards for starting other targets, particularly for climate change, because in the Global South and in Peru there are many cities that have poor people which have other necessities that needed to be met first, making it difficult to implement policies on climate change and food. "It is difficult to start to work this target because the people are going to ask us "But how? We don't have money, we need houses, we don't have water. We need other things and this is not important'".

Global South cities have many priorities and a lot of urgent issues to react to at the same time that does not let them put emphasis on climate action, especially for food-related consumption emissions which is not recognized as a priority in many places due to the lack of information (Expert1, 2021). Consequently, no available resources and staff is present to work on these matters. Mayors would oblige if the residents of the cities in the Global South are open to change their diet (Expert1, 2021).

The Global South cities already face issues concerning their limited resources and competing priorities for their exploitation (Expert1, 2021). It would be rather far-fetched to

expect major strides in developing sustainable food systems, in the face of much bigger challenges. However, it may also be noted that since these cities are currently in a state of developing other systems, they could adopt sustainable food systems at an early stage (Extert1, 2021). For instance, taking into account the general trend of increase in meat consumption with increase in income, and the fact that these cities are experiencing a general increase in income as they develop, they could implement methods to reduce meat consumption, before it becomes a much bigger concern (Expert1, 2021). Thus, really focusing on alleviating food poverty in a way that does not lead to overconsumption. The current activities of the Global South should be taken into consideration rather than reproducing the same model of the Global North. For example, in many areas there is urban farming taking place alongside informal housing as well as other everyday activities of food provision already happening in cities, where there is a danger in the modernization in which these food provisions are cleaned out with the idea of providing a more modern city. This process generated housing security but food poverty by separating food production from living spaces (Expert2, 2021).

To conclude, Global South cities are very different from Global North cities who do not have it as easy to implement new policies. Currently, they are lacking in adoption of such targets however, Expert2 (2021) questions the need of these cities to implement CBTs and whether one should treat the city as a whole in this context in the first place.

7.2 Reflections

In the theoretical framework, existing theories on enabling factors were gathered and reviewed. This framework became the foundation upon which the rest of this study was based. It was used as a guideline to structure the database and the interviews with city representatives and to analyse data afterwards. During the course of the data collection, additional variables were addressed by the interviewees that had not been included in the framework beforehand. First of all, according to C40 (2021), the difference between the cities that sign the declaration with those that do not, comes from the difference in recognition of the Food-Climate Nexus. When a city wants to sign a commitment, it is not just the mayor of the city that signs the international or consular commitment, but they also need to have the city council approval too. Thus, a good understanding of the Food-Climate Nexus by all the parties involved is a necessary precondition that should not be taken lightly (Toronto, 2021). The lack of knowledge about consumption-based accounting and policy implementation is an aspect that Expert1 (2021) has specified. "A lot of people I don't think they consider, you know, the carbon emissions that are embedded in food" (Expert1, 2021), hence they do not know the action to be taken and the targets to set on it to mitigate their emissions.

Moreover, C40 (2021) explains "there's a whole form of things that then of course is fully public and easily gets in some newspapers" (C40, 2021). When the announcement of the mayor appears on a local newspaper, declaring that the city is committing to do the initiative, only then does the whole debate around the issue gets started and the mayor has to stand up for what they signed for. However, not all mayors are ready to discuss the food-climate nexus because it is a very delicate topic in many cities, especially in places with high food insecurity rates. In these places, people cannot consider a choice of eating healthy sustainable food because they don't have means to procure food in the first place. Therefore, in those contexts, it is very complex and difficult for the mayor to stand up and tell the public to care about the food-climate nexus (C40, 2021).

Additionally, cities with a high average meat consumption per capita per year are hesitant to commit to the Planetary Health Diet target that requires the city to advocate for 16 kilos per year which the declaration is using as reference point for the cities (C40, 2021). "Toronto and Los Angeles kind of push it up, should be around 90 kilos per year" but cities that have 200 kilos per year meat consumption like Austin or Huston cannot imagine signing this declaration because they know that they will not be able to meet the target (C40, 2021). Even if the city might be super progressive and has the facilities, they will find it daunting to commit to a target like that. Another example comes from Texas with the whole state being different in culture, economic infrastructure and trends that no mayor will ever think about the declaration if it wants to ever be re-elected (C40, 2021). It will evidently not be possible and the mayors of the cities know that. Moreover, the whole food-climate nexus is a new identification that 10 years ago nobody challenged. Nobody questioned the amount of meat every single person was eating. However, now people have realized the weight that the food we consume has on emissions, and they are asking other people to change their habits. The nexus is complex and difficult to implement which mayors do not favour. It is a politically complex nexus as well where you might have a strong pushback from outside, like the meat and dairy industry or with any strong corporations based in the city that are dealing with meat or dairy or with processed food and junk food. "It's a challenging position to take." (C40, 2021).

Furthermore, a city may be reluctant to sign due to lack of resources (Toronto, 2021). These resources may come in form of human resources, infrastructure or capacity of the city. Moreover, resources to do calculations are necessarily a demand of the C40 Network for all its member cities joining an initiative or a declaration (C40, 2021). They require them to monitor their actions and if they believe that they are not able to monitor their own actions then they might be cautious in committing to the declaration. In the case of the Good Food Cities Declaration, which has a very loose target about the increase of healthy plant-based food consumption, many mayors do not have full control about what people buy and how people

spend their money. Thus, "they might think they are basically powerless in that specific area therefore they are very reluctant to sign up for something they don't fully control" (C40, 2021). Even if they believe they can do something about it, they still think there are too many variables that are "correlating between a city's action and the actual degree" which scares them (C40, 2021). Unlike other policy for climate change, the city-wide meat consumption is not straightforward because there are so many factors that can potentially lead to a correlation. In general, all interviewees have stressed the significance of resources as a key factor for enabling a city to set CBTs and enforces climate action (C40, 2021; Expert1, 2021; Expert2, 2021; Lima, 2021; Toronto, 2021).

7.2.1 Good Food Cities Declaration

Overall, "the declaration is useful to some extent, but it is extremely unrealistic for most cities in the world" (Toronto, 2021). The process of drafting the whole declaration was very positive as a lot of people gave their thoughts and ideas to it. When signing to the goals European cities are way ahead of most cities in North America in terms of commitment to climate action and awareness of food. However, for a city practitioner, one must be really practical about what is doable on the ground, which gives some problems. There was a huge amount of controversy in the network while developing the declaration because of the cities in the global south, particularly cities in Africa. The drafting team of the declaration wanted 'no meat consumption' as the more realistic goal for reaching the targets but there was a strong push against it thus, they ended up using 'reduction of meat consumption'. Although, a 'No meat consumption' is the better option but from a practitioner and cultural perspective, it is hugely controversial. For example, a conversation the manager had with the representative of Ethiopia, who said "How can I go back to my city and push to reduce meat consumption, when our goal is to get some food into our children's stomachs and if we can include meat in that it would be fantastic". Another thing about meat is that it is seen as culturally important in context, especially in most African cultural context. It is not only a sign of status, but it is a sign that you are doing well if you can serve meat.

They asked themselves how to position the declaration in a more inclusive way where in some contexts meat consumption must be reduced but in some other contexts, people need to eat more to be healthy. One should acknowledge that otherwise it becomes a very blunt instrument. Therefore, dietary diversity is more important in her opinion. For example, by pushing for school meal programmes to not just be starch based or single staple food but to include both meat and vegetables. For that reason, they specified that "the declaration is a great tool, but it is very limited when you take a global perspective from where I sit".

Unless cities are really well resourced and really well positioned around the declaration to have the capacity to really put in the work for the agenda then the declaration is a fabulous and useful tool to organize and to network with other cities (Toronto, 2021). However, for a city just getting started in this field or has less resources, the declaration is completely unrealistic and just a nice high-level sense of direction but not much more. Therefore, it is a great tool but only in certain contexts.

7.3 Limitations

This subchapter addresses some limitations that emerged throughout this study. One of these limitations is the small number of interviews that have been conducted. Although numerous people have been approached to engage in an interview, not all people responded to this invitation. In the end, a total of three (five with expert interviews) respondents have been interviewed. Nevertheless, the people that have been interviewed had the proper knowledge on the subject and the interviews were deliberately lengthy. Furthermore, all case studies have been supported by municipal strategy- and vision documents to back up and confirm the arguments stated by the interviewees.

This research has focused on an in-depth analysis of two case-studies. Since the aim of this study was to get a deepened understanding of cities' motivations and engagement strategies, the study used a qualitative case-study method. A limitation inherit to qualitative case-studies is the issue to generalise the outcomes. The findings of this study are specific to the two case-studies and have not been statistically proven. Nonetheless, the study has used an extensive framework to identify the influencing underlying structural conditions, motivations and enabling factors. A suggestion to improve this framework for further research is to include recognition of the Food-Climate Nexus and resources as factors that enable the engagement in TMN's.

Additionally, some problems were encountered during the compilation of the database. Firstly, finding data on some cities was more difficult than others, for example Guadalajara whose GDP was unknown and Chennai whose GHG emissions were difficult to find. This may have led to some inconsistencies in the analysis of the results but the overall pattern was not influenced.

8 Conclusion and Recommendations

This concluding chapter gives an overview of the initial problem, the research questions, the main findings and recommendations for future research.

Nearly half the population of the world lives in cities and this trend is set to continue in the years to come (Balha et al., 2020; van der Heijden, 2019). Urban areas are point-sources whose activities contribute to 60 to 80 percent of CO2 emissions. Though their activities are contributing to climate change, it is also stressed that the consequences are also most severely felt in cities (van der Heijden, 2019). At the same time, cities are widely considered to have the best potential to adapt and mitigate climate change (IPCC, 2018). By setting ambitious targets and taking impactful actions to reduce their local emission, cities are leading in tackling climate change. They join city networks or Transnational Municipal Networks (TMNs) to reduce emissions at local level and respond to climate change. There are two approaches to account for a cities' emissions: production-based and consumption-based. Production-based emissions account for activities occurring within a boundary, whereas consumption-based emissions account for total climate impact of a good or service accumulated around the world and allocates it to the place where an end-product is used or consumed (C40, 2019). Consumption-based gives a more complete overview of a city's climate impact as it includes the emissions that indirectly are produced through the consumption of goods and services in cities. One of the biggest sources of urban consumption-based emissions is the food sector (C40 et al., 2019). The C40 Good Food Cities Declaration is selected as an initiative for cities to mitigate these emissions through CBTs. The declaration is only signed by 14 of the 94 C40 cities to promote planetary health diet by 2030, which begs the question of the different influences that act on C40 cities.

To understand the reasons behind the influences, first the CBTs set by the cities were described. Secondly, the enabling factors or the underlying structural conditions that a city needs to set CBTs and carry out climate action was explored. For that, the 14 cities that signed the declaration were compared with cities within the C40 that did not join the declaration in an excel database through secondary data. Explaining the varying degree of influences of the cities can be interpreted through the enabling factors and the reasons behind them. Understanding the reasons behind what enabled these cities to join the declaration, is a huge contribution in enabling more cities to adopt CBTs in the future. Through a literature review 11 factors were found to be important to facilitate climate action and engagement within TMNs. A database was constructed with these factors plotting 28 cities. The data collected was validated by two case study interviews of city officials from Toronto and Lima, and two expert interviews as well as by the C40 Food Systems Manager.

The results of this study first gave a descriptive overview of the CBTs set by the cities within the Good Food Cities Declaration and second did an analysis of the factors that enabled cities to set CBTs. The CBTs set have a consistent theme that have an overarching focus on climate, waste and health that were targeted at schoolchildren, canteens and markets. In order to make the target setting process for consumption-based emissions for cities in the future more straightforward, one could try to identify the concerns that the different cities usually invest in and prioritise those issues to set CBTs. For example, many megacities struggle with waste as an issue. Thus, solutions to help cities deal with their waste problems by not only focusing on food waste but waste in general, to support a more effective waste management system that tries to not produce waste in the first place could indirectly introduce CBTs and expand on them later. Another way would be to use the current context of health and well-being as a conversation starter to think about physical health and diets. In general, using the important agendas that the cities are concerned with at the moment as key entry points to initiate conversation on food-related consumption emissions.

Now coming to the second part of the research that tries to identify the influences that the cities experience to adopt CBTs. Through the dataset and the interviews, three fundamental factors are highlighted that facilitate the adoption of CBTs, namely, a local champion in the form of a mayor, horizontal and vertical coordination through collaboration with stakeholders, and acquiring the city-network's benefits. Both experts' interviews have emphasized the importance of a senior policy or political government officials and how their leadership can motivate the municipality as well as the society. On the other hand, the engagement of the residents can drive and push the leaders or mayor to take action. Thus, the enabling factors that build up the theoretical framework have to some extent provided an understanding of the influences that impact the C40 cities to adopt CBTs. The interviewees highlighted two additional factors that in the theory were not underlined. Firstly, the resource capacity of the city and secondly, the recognition of the food-climate nexus (C40, 2021; Toronto, 2021; Lima, 2021; Expert1, 2021; Expert2, 2021). Usually, cities that are active in climate change are those that have extra available resources to work with and see the opportunity to benefit them in return (Expert1, 2021). Moreover, cities that understand and recognize the importance of consumption-based emissions are more advanced in setting targets and implementing policies.

In summary, the findings of this study therefore demonstrate that setting CBTs for food is very complex and many factors have to be taken into account before one can commit to a particular initiative since the backlash and hindrances are expected, especially for the food sector that have huge industries. Moreover, having the desirable conditions does not guarantee that the city will commit or stay committed to the cause, as seen in the case study

of Toronto (Toronto, 2021). According to Toronto (2021), you need support, resources, an understanding of the importance of signing and a senior management that cares about the problem, otherwise there is going to be no implementation for action related to food consumption. Whereas C40 (2021) believes, a way to enable more cities to join such declaration in the future, 'making noise' in the cities is essential. Cities need people that are coalescing and pushing for these agendas that get the mayors attention and make it easier for them to base their decision making on (C40, 2021). Examples of such activities include protests and organizational events like Friday's for Future, Extinction Rebellion and Greenpeace. As explained by Expert2 (2021), a place to start is with youth-based institutions because there is a lot of concern amongst young people around these issues of climate change as well with diets and animal welfare. Reaching it to public that are willing to engage with is beneficial to avoid political resistance. 'Noise' helps mayors with the corporate and conservative pushbacks as they can base their decision making on something the public wants and knowing that they are doing the 'right thing' (C40, 2021). In general, mayors need a push to bring forward the climate agenda around which they can build the whole narrative.

Furthermore, for future engagement in food-related consumption-based commitments, identifying the 'stage' a city is in is imperative (Expert1, 2021). Through recent literature by Berrueta and van der Heijden (2021), who investigate the different kind of programmes that city networks have and why cities participate in them, it has been suggested that there is a trade-off between the benefits that cities get from the city network's program and the requirements of the program (Expert1, 2021; Berrueta and van der Heijden, 2021). They noticed that different cities require different benefits from the programmes of the city network depending on the stage of implementation the city is on (Expert1, 2021; Berrueta and van der Heijden, 2021). The initial stage of why cities do not want to commit to a program is due to lack of knowledge. In the case of climate action, there are only a few sources of emissions that are very clear and that everybody understands, for example transportation is an obvious source of emission generation. However, there are a lot of emissions that are not and one of them is consumption-based. When considering food consumption, people do not consider the carbon emissions that are embedded in food or in the transportation of food. Hence, cities do not know how much they emit in terms of consumption-based emission. Therefore, the first step is to teach and inform them about these emissions: how much the city produces, how to calculate it, and what actions and targets can be taken to mitigate them (Expert1, 2021). Once the cities are familiarized with the concept, they need motivation and interest in the topic. Thus, the second step is to support cities with the implementation phase and advise them about the options and benefits they might receive. In this step, the city networks, like C40, play a vital role in providing resources, learning space and scientific advice (Expert2, 2021). Moreover,

motivation is also influenced by the residents as previously mentioned. Finally, to keep the cities motivated on this issue, recognition of the city is important. In other words, receiving appraisal for the actions the city has made in the form of certifications or achievement prize (Expert2, 2021). To conclude, knowledge and motivation are the most important factors for cities to make commitments to initiatives and set targets in the future.

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10 Appendix

10.1 Interview Structures

10.1.1 C40 Employee

1. Thank them for agreeing to the interview
2. Lay out the proposal
    1) Aim to investigate the Consumption-based targets (CBTs) for food set by the C40 cities and understand the different enabling factors of cities in adopting them in order to help more cities set CBTs in the future.
    2) Explain what CBTs are:
    3) Good Food Cities Declaration to reduce consumption-based emissions and set targets and actions
3. Practicalities
    1) Consent for recording
    2) Filling out consent form
    3) Check to see if they understand their rights – anonymity, storage of information only for research purposes, access to the final report
4. Actual questions
    1) How did the Good Food Cities Declaration come into being?
    2) 14 cities signed up. In your opinion, why did these cities in particular sign up?
    3) There are 94 cities within the C40 network and 54 cities in the Food System Network. What differentiates these cities from the others in the network?
    4) What are the reasons for joining according to you?
        i. What enables a city to participate? Internal and external factors?
        ii. To what extend does the C40 have an influence?
    5) What are the reasons for not joining according to you?
        i. Which enabling factors are lacking?
        ii. How can one enable them more to join? Which enabling factors are needed?
5. Are there general remarks you would like to share with me?
6. Thank them for their time and answers
7. Ask if they would be willing to answer any follow up questions through interview or email
8. Thank them and end the interview

10.1.2 City officials

1. Thank them for agreeing to the interview
2. Lay out the proposal
    1) Aim to investigate the Consumption-based targets (CBTs) for food set by the C40 cities and understand the different enabling factors of cities in adopting them in order to help more cities set CBTs in the future.
    2) Explain what CBTs are:

       3) Good Food Cities Declaration to reduce consumption-based emissions and set targets and actions

3. Practicalities
    1) Consent for recording
    2) Filling out consent form
    3) Check to see if they understand their rights – anonymity, storage of information only for research purposes, access to the final report
4. Actual questions
    1) How long has the city been part of the C40 Food System Network?
    2) Within the initiative
        i. Why did you decide to participate in the initiative?
        ii. How did it lead to the signing?
        iii. Were there any hindrances?
        iv. What were the enabling factors that led to the participation?
        v. For each enabling factor:
            1. Why were these the enabling factors?
            2. How were these important?
        vi. If they do no mention some of the factors from theory – ask more:
            1. What were some internal enabling factors for your case?
            2. What were some of the external conditions acting?
            3. There are environmental, economic and social reasons to join the initiative, which ones were most prominent for you?
    3) Outside the Initiative
        i. Why did you decide not to participate in the initiative?
        ii. What were the reasons for not participating in the initiative?
        iii. Why and how come these were the reasons?
        iv. Which enabling factors or conditions were missing?
        v. Why were they missing?
        vi. Why are these missing factors enabling for the city?
    4) To what extend was the C40 Network an enabling factor? How?
    5) In your opinion, which factors would make it easier for cities to adopt more initiatives for setting CBTs?
    6) Are there general remarks you would like to share with me?

5. Ask if they are participating in other initiatives that are working on reducing consumption-based food emissions and setting CBTs
6. Thank them for their time and answers
7. Ask if they would be willing to answer any follow up questions through interview or email
8. Thank them and end the interview

10.1.3 Experts

1. Thank them for agreeing to the interview
2. Lay out the proposal

1. Aim to investigate the Consumption-based targets (CBTs) for food set by the C40 cities and understand the different enabling factors of cities in adopting them in order to help more cities set CBTs in the future.
2. Explain what CBTs are:
3. Good Food Cities Declaration to reduce consumption-based emissions and set targets and actions

3. Practicalities
    1. Consent for recording
    2. Filling out consent form
    3. Check to see if they understand their rights – anonymity, storage of information only for research purposes, access to the final report

4. Actual questions
    1. Tell me a little about you and you experience with cities and city networks?
    2. **Generally,** what would you say are the underlying structural conditions for climate action in cities?
    3. What does a city need to be **more** active for climate action?
    4. In your opinion, How can we enable more cities to take action for its consumption-based emissions for any sector? What is needed? (different to just normal climate action)
    5. **Food** is a major contributor to consumption-based emissions. - a complex nexus. In general, How can a city take more action for its **food related** emissions? What factors/motives/conditions are needed in a city to achieve that?
        a. Environmental, social and economic factors/conditions?
        b. External factors/conditions (national and global)?
        c. To what extend does X play a role in generating more action for consumption-based in a city?
    6. What about - For a Global South city - Which factors would make it easier form to take action for their consumption-based emissions for food??
    Now some questions specific about city networks:
    7. To what extend is the C40 Network or any city-networks an enabling factor for cities within the network? How are they an enabling factor?
    8. You worked for a city network - Do networks like C40 ask the cities to be in any initiative/declaration within the network?
    9. The C40 has a 'Good Food Cities Declaration' which wants to dramatically reduce emissions through the 'Planetary Health Diet' via "supporting an overall increase of healthy plant-based food consumption in our cities by shifting away from unsustainable, unhealthy diets."
        a. What would be the reasons for participating or not participating in the initiative? Hindrances?
        b. Why and how come these would these be the reasons a city?

    10. Are there general remarks you would like to share with me?
5. Thank them for their time and answers
6. Ask if they would be willing to answer any follow up questions through interview or email
7. Thank them and end the interview

10.2 Transcripts

10.2.1 C40 Network Manager Interview

0:00

Then Yeah. So putting that up. First, of course, I will like to introduce myself. My name is Aashima. And I'm originally from India. But I grew up in Berlin, where I'm also currently at. I'm a second year master's students at the Utrecht University in the Netherlands, for the sustainable development program with specialization in Earth system governance. And so yeah, like I told you, I'm working with my on my thesis with the aim of investigating consumption based emissions targets in the food sector set by the C 40 cities. And I want to understand the differences that the C 40 cities have in enabling adoption of targets and planning urban climate action to be able to like, have more cities in the future also set and take action for for their consumption based emissions.

1:10

And well, consumption based emissions just to qualify is an approach that captures the life cycle, greenhouse gas emissions. Yeah, you probably know that. So we are especially interested in the imported goods of the cities. And the Good Food cities declaration by the C40 network is especially interesting for me because they are actually trying to reduce their consumption based emissions of the cities. And so yeah, this makes it perfect for me to analyze these differences. Do you still have any more questions about the proposal?

1:55

Is this all about? Us? Sorry? It's all about C 40.

2:02

Yeah, it's all about C 40. But Aashima, your a PhD student, correct?

2:09

A master student.

2:10

 A master student. Okay. So when is when is this dissertation due?

2:20

I'm planning on finishing it in July, August, probably will be finished.

2:26

Okay. All right. So, um, yeah, okay.

2:34

Okay, so then, going on with the questions that I've prepared for you. I just, first of all, just want to start with like, getting to know you, and like your role as the Network Manager of the food systems and like, what would you do with the c 40?

2:52

Yeah, so I'm Stefania Amato, I'm the senior manager and also Network Manager within c 40. before joining C40 I was working for the city of Milan, for the mayor Milan, developing the Milan policy and the Milan Food Policy Pact. So, in 2016, I joined a C40, we started kind of creating a work stream basically within C 40, a work stream around sustainable food. When we when we started these work, we basically, firstly, well began with a small number of cities. You know,c40 is a is a climate change organization, and with 97 members, mega cities all around the world. And they and we facilitate their peer to peer technical assistance in different topics, actually seen 17 topics. And in 2016, we opened the 17th which was at that time probably was the 16th which was around to me that we kind of create this space and then we asked cities whether they are interested in kind of working together on that specific topic. So when we open the food system network, we started with 14 cities that kind of joined this work stream railway. And now it is like making basically five years afterwards. It's my networks of the cities I work with are 60. So I'm not sure how much you know about C40. Should I go on a bit more on that?

4:57

Yeah, sure. So specifically Like, how do these networks form? And like, did do like the cities? by them say that you have to do it or you you actually plan all this? And then you ask the cities? And then how does that exactly work?

5:16

Yes it is a mix of the two things. So you know, sometimes I call myself a switchboard, because actually, like, the last part of my work is really like getting requests from cities around specific challenges defining. And asking me with that, whether I know somebody else that has gone through those challenges already. And he usually, that's the case. So I do put these people in

contact so that they can help each other. Then, outside of that, we also have our agenda, which on food resemble our good food cities declaration. And on that, we try to kind of surface good practices, happens all around, you know for the others kind of to get acquainted about, you know, the kind of work, the successes, the challenges, and all of that, and probably start thinking about potentially replicating that in their own city. So that's the kind of work we do now on on food, as it is we sell our vision is basically one stated in our declaration, we have four slash five workstream. So we work on procurement, we work on general broader food environment, we work on food waste, and we work on governance, ==then upon requests from cities which often happen, we also create somehow urban and Peri urban agriculture, which, of course, this is a as we standing basically, we using consumption lens rather than a production lens. That that is, that is a, it's a tough engagement for us. But we know that many food teams around around the world in our cities have urban peri urban agriculture as one of their tasks. So we still kind of let them use our platform to to discuss that as well.== So that's a bit, you know, the, the how C40 works? Um, I'm not sure. was I exhaustive, just like, there's so many questions. if I need to be mroe specific on things?

6:32

Of course, of course. So within these networks within the food system network, there are these initiatives, right. And these initiatives, how do they form?

8:10

The workstreams?

8:12

 Yeah, for example, the Good Food cities declaration,

8:15

okay. Okay, so the declaration itself. is been basically, something few cities really wanted to have. So if declarations are one, I would say, additional tool, c 40 uses to kind of bring forward the climate agenda. And kind of challenging also, cities to take leadership's on on different topics. Not sure how many declarations we have right now. It shouldn't be something around six or seven on different topics. And food is one of them. So we kind of work. We worked throughout 2019 to get to the text and the commitments, and the Declaration was then approved by 14 mayor's during the C 40 summit At Copenhagen in October of 2019. Yeah, he was he was basically very small working with made out of all cities. It was I cannot remember now it's two years after that. I think it was okay with Milan, Copenhagen, Toronto. oslo. Yeah, I think they're the ones but that's what that was the core group, and then we broaden discussion

to the whole group of cities working on food. And we kind of finalize the text that was approved by 14 mayor's. But it is <mark>still open for other majors potentially</mark>. Yeah.

10:16

Okay. Okay. So basically, the cities themselves decided that they want to have this declaration, or did you specifically ask the ones that are in the food systems to be part of this declaration?

10:32

Both. So the <mark>leading city of the Food Network is Milan</mark>. And they really wanted to have a new commitment, very ambitious commitment, after they've been hosting, feeling. And, you know, really like, being at the center of, I would say, the first Cities commitment on food, which was in Milan Food Pact. So after that, Milan, said, Okay, now we need to, you know, kind of bring it up a level. And they, they want us to have a declaration within, you know, with C40's supports. So, yeah, they were, they were pushing for this to happen. We were very happy to, to support and, you know, help shaping that. And so, that's basically how it was generated.

11:36

Okay, that's very interesting. So then, you were saying that some of the things you actually kind of engage them to like to participate? Or like, ask them to what, what is the basis of this? Or do you just send out like, an email to everyone in that network? And then they just reply, yeah, we're interested or how does that work?

12:00

Yeah, exactly. Like you said, you know, you can <mark>write any email</mark> saying, you know, there's we've got this idea. Milan is really eager to get, you know, a new commitment. very ambitious on the food and planet Nexus. Would you be interested? Would you see the interested in help shaping that thatis the kind of the way it works

12:30

 Okay. That's nice. What do you think makes the cities that have signed up so far, Different from the cities that haven't yet

12:43

I guess it the <mark>recognition of the food climate Nexus</mark>. That's, yeah, that's the real thing. And by recognition, you know, basically, for many cities to sign international or consular commitment,

they need to have the city council approval, it's not just the mayor signing, you know, there's a whole form of thing that then of course, it's fully public, and easily gets in some newspapers. And signing one C40 commitments means to get on a newspaper, local newspaper, saying, you know, our mayor and our city is committing to do this. So from there, you know, the whole public debate around that issue usually generates, and now if you, you know, you really need to stand for what you sign. So, and not a lot of mayors are ready to kind of discuss the food climate Nexus, so openly because it's, you know, as you can imagine, it's a very delicate topic, mostly in, in places where maybe, you know, food insecurity rate is still it's still a big thing. And, you know, people basically, it considered not to have a choice to get healthy sustainable food. They need to get first whatever food, so in those contexts, they they're very complex to kind of have mayor's standing up and saying, and now we're going to care about the food Nexus.

14:39

Very interesting, okay. Um, then, just generally, what, what other factors within the cities, in your opinion enables them to join, you said that it is the context specific because probably the residents may not be a supporting, but what are other factors enables them?

15:12

Well, I guess we, we do require a data. So, and we, we kind of we, we monitor the declaration. So, for this reason, whenever they see this believe they're not able to kind of monitor their own actions, then they might be reluctant to commit. Or, as in the case of the food declaration, when we have a, we have a very loose kind of target, which is the second one on the general consumption. And we don't have and Mayors don't have full control of, of course, what people buy, and how people spend their money. They, they might think they are basically powerless to in that specific area, therefore, they are very reluctant to sign up for something they don't fully control, or even, even if they believe they can do something on around about that. They still think there are so many variables, kind of playing on the same field that that the correlation between a city action and the actual degree, for example, in the city-wide meat consumption cannot be built. And it's not straightforward, because there are so many things that can lead to beings into into that potential ideal correlation. Have I made myself clear.

17:27

Yeah, definitely makes sense. Does it also have to maybe do with maybe the national policies that are in place? Maybe that also makes it easier for the cities to actually declare such a thing? Or? or financial resources? Maybe they don't have any initiatives going on? Or what what else? Is there?

17:51

No, I don't think any of these is? Well, I don't think any of this is really relevant for for cities, we're talking **mega cities**. We're just talking, you know, little towns, these, these bureaucracy, these structures are powerful structures. They don't need, you know, like national government to say yes or no. They go, they are pretty much autonomous. So there might be troubles. We've got one city where the mayor, really caught in a big, like political war, because of the signing of our declaration, because it's being used by the opposition to kind of attack, but it's still you know, but that's the thing they might fear. Let me think about something.. in in a lot of our C40 declaration what basically what cities are committed to, are usually things by by far more progressive, then, you know, the things their own government have signed up for. Right. So it's really like cities are really leading on on specific sectors. Yeah, no, no comparison with what national governments are doing. They'll be in majority of the entrepreneurs we work with. It's the City that is leading on those agendas. Its is national governments. Yeah. Very static by far

19:47

Yeah, that's very nice. The thing that I was just questioning then is why didn't more cities declared that what what made I mean, you said that they are autonomous, they are mega cities, but then what the 14 that signed up make them so different than the ones that didn't basically

20:18

it's a recognition of the food and climate Nexus, okay, and the other cities, that cannot, they can't, let me give you a very easy example. Um, so I actually shouldn't, should have this data. But let's say in average, uh, I would say this, the series that have signed the Declaration has a heavy average meat consumption per capita per year, all around, I guess, around toronto and LA kind of push it up should be around 90 kilos per year. And what the planetary health diet, which is really like, the reference site we're using, is advocating for is 16. Now, imagine a city like Austin, or Huston trying to sign this declaration, where their average person consumption of meat is around 200 point heels. And we asked equals 16. So that's, you know, it's a different world. And it's very, very, very complex. Even though, you know, like, the city might be super progressive, but it's just that its so big. And then in the case of of Texas, you know, like we said, so much in trends with culture and the economic infrastructure, or the whole state that, you know, it's a it's a bomb, no mayor, will will, will ever be reelected. loose direction in there. So something probably, you know, like, the it will be probably the last to kind of join our commitment, maybe just because, you know, like, it's, it's a matter of facts. It's a, it's very hard.

22:28

Yeah, thank you for clearing that. Then. So apart from the food, are there any other factors ike, because of environmental reasons, or because the city that the residents in the cities really want them to take up this initiative? or financial reason, because of signing this up? Maybe collaborations between stakeholders arise? Do they have that or anything else that would be important?

23:08

It's not a matter of only food, it is the Nexus, it's the food and climate Nexus that is the problem is not I mean, till 10 years ago, nobody would have questioned the amount of meat every every single question was eating, then when when we when we basically Finally we realized the weight that that was having on emissions. Without saying that, you know, we should have used a 3d like the food and climate Nexus, it's not the food thing. It's just food and climate thing. That's the complex parts. And, of course, they could they should be, well, when I'm saying like, it's politically complex, it means that you might have very strong pushback from outside the meat industry or whatever kind of corporates Corporation based in your city that is dealing with, you know, like with meat and dairy, or with processed food and junk food and all of that. It's, yeah. It's a complex. It's a challenging position to be taken.

24:31

Of course, of course. So for these cities, what do you think would be a way to make them join this or what what factors are needed within these cities to to be able to join like, in the future?

24:53

noise, they need people that are coalescing and pushing for these agendas. if a mayor know that, for example, a whole bunch of young says from Friday's for future or whatever, you know, it's it's really pushing for these, he'll know that he will still get the corporate pushback, conservative pushback, but he will have a, you know, his base a base on which to round the decision saying, you know, like, I'm doing these for, because it's the right thing, because a lot of kids are asking for these, because we need to come in, but then they can build the whole narrative, if they knew how to do that, you know, like, they really need a push.

25:54

That's very interesting. And then what what about the differences between the global north and the south that you see a difference there? I mean, they're all big cities, but still being in in a in a underdeveloped maybe in a sense, global South area has a huge, like a, obviously a difference than the cities that are in the global north now. So what

26:20

Yes, for us, the our declaration is a ==convergence targets.== So some cities are overconsuming, and well not some cities, ==some people are over consuming and some people are underconsuming.== So we really want everybody to get to the ==same diets==, because that is the diet, which is, you know, up roll ==good for health, and the planet==. So if you're not, if he if he, if access to that diet isnt aligned, because of poverty and other constraints, we want that to be, you know, lifted, those barriers be lifted. At the same time, if you are over consuming, and causing big troubles to your body and the planet, ==we want you to change that.== Because, you know, we need to be in a very, very delicate balance for people or for the planets. Right. So it looks it's hard to answer that answer your question. We ==haven't been successful so far, into kind of getting endorsements. From a lot of global South cities, we actually have two only two global south cities in our declaration, which are Quenzon City in the Philippines. And in Lima. Well, and Guadalajara in Mexico==. its never sure where Mexico strands, is very complex. But I have to say, um, I guess, again, it is you know, like, the work that's probably needs to be done for global south cities. And we have cities like Johannesburg/Jogurd where we have, you know, like, a ==falling security rate==, this spans around 40 and 50% of your population. So we have, you know, cities like that, that way, you know, ==no Mayor will say, oh, and now we're going to talk about the food and climate problem. And people will say, Well, I am not eating==, you know, things, let's say Monday, so what's what, what's wrong with you? So that's the problem, you know, isn't that that's not not the case, of course. But you know, the ==food insecurity==, which we're looking at it, maybe average and severe, where the average one is basically whenever you cannot secure yourself, a protein rich meals in a week, at least one in one week, so that we've got different kind of criteria to kind of define that. So that there is very good and so and that's, that's the problem.

26:59

Of course, of course. Okay. So just on another note, maybe, what do you have cities that don't in or are in no initiative or declaration at all, like what happens then or do do not really care that much. If they're not doing anything? I mean, there are part of the C 40. But then they haven't taken part of any initiative, sign up any declaration or what happened.

29:57

So you can We got some participation standards that I think are public, you can check on that. So yeah, but cities are required to be very proactive and if they're not, then they might be put on hold as a member of C 40.

30:23

That's interesting.

30:26

Okay.

30:28

So going back to the global south, so global South cities probably have like, I mean, apart from the nexus between the food and the climte that they don't even have they have poverty and stuff like that. Would would, then more financial resources help them? Or because the citizens aren't helping that much? What else needs to be there to balance that out? Maybe then.

30:56

So let's take for example. Yeah, clearly, so you know, like the second, the second struggle, after the political kind of problem, then there's a technical problem in global south, like to give you very, two very easy examples, like when it comes to kind of reshaping, transforming city food procurement, into making it aligned with the planetary health diet. Now, the majority of global South cities do not procure food, for public facilities, sometimes, sometimes not to be served. Some of the time, it's, it may be the national governments who said that, even if the school is in Mumbai, or is in, you know, Cape Town, and Well, maybe not even in the nation, or exclusively, literally, it could be a different level, at the initiate level, could be regional or national. But then sometimes they're also international kind of funders, or developing agencies who are providing that food. So the status, then the city is not, well first of all, may not may not be allowed to sit in. A second, if it has the political power to kind of reclaim and claim back the specific facility, let's say schools, as Addis has done last year, taking it over from a mixed governance of international donors and the government and saying, okay, that's so good, now, it's our business. So we're really pushing for these change, and these claim back to happen to get back control, but that means that, you know, like, they have to have to secure, they still have to secure funds from the national government to do that. And then they have to train staff, and then they have to build the whole infrastructure. And kind of embedded. So it's a, it becomes a resource kind of problem is again, you know, their and, there's, there's the relation manager management piece, which is also relevant with the other stakeholders. And that's it, for example, on procurement. If we take food waste, for example, there is no universal segregated collection of food waste in polluted majority cities. So that's the problem of, of course, with resources.

33:53

That's very interesting. Thank you. So So, in a sense, one could say that in the global south, more external factors outside the cities or outside the city are needed, then in the global north.

34:14

More and more resources, do you mean

34:15

yeah more resources like, that maybe the government or like additional stakeholders and other conditions are needed, basically outside the city to make the city be more like, do something more for their food. Yeah. Okay, that's the ==mainly the resources==. Oh, yeah, like that. And then of course, resources usually comes with a lot of strings ==and a lot of partners== and you know, ==a lot of noise==, but they need resources. ==They need resources, with with funds and capacity==. You know, they will do that. That's really interesting. Are there any general remarks that you'd like to share about just enabling factors of cities?

35:13

No, I think, no, I think it's all. I don't know. I don't know if it's all actually, but it's a lot already. So but if you have a question, just, you know, like dropping an email, and I can do that.

35:27

Yeah. Thank you so much for your time.

35:30

Good luck, I need to send you to this thing. Hold on.

35:55

Give me a second and I'll send real time, otherwise, I will forget. anyone ever with very bad in doing this? Okay, this is say, yes. Think you should have it.

36:46

Perfect. And do you maybe also have some? I mean, you're in contact with the cities that are working in, cities that are in the Food Network? Do you have some contacts that I could also interview maybe, to ask them about some more questions

37:07

I cant share contact, unfortunately. Okay. So, um, so you said, You are you based in Berlin right now, right. But yeah, University is a Dutch one? Utrect University.

37:32

Yes. Oh. So you know, what I can do I can you want, I can send you a, I can send you the contact of the former food Policy Manager from the City of Toronto. Okay. She's now a senior advisor within C 40. But she was the Policy Manager at the time toronto signed the declaration. So I think if it's, if that's fine for you, I would go with her. Yeah. Very nice. So we've talked to her and tell her that you've stuck with me and, you know, you want to have a sec perspective on. Okay. Yeah. Thank you very much. Thank you. So thank you for this. Yeah. Oh, well, no, if everything was fine, I'll do that. Thank you so much.

Transcribed by https://otter.ai

10.2.2 Toronto Interview

0:00

Also, I like to just check out with the consent form that I sent you through the email, maybe after this meeting, you can just sign it and send it back to me. And just to make you understand that, what your rights are your enormity that the storage of the information here for research purposes only, and you have also the access for the final report, if you want to check it. Yeah. Yes, yeah. So yeah, after these practicalities is I want to introduce myself. So my name is Aashima Singh. And I'm originally from India. But I grew up in Berlin, where I'm also currently at and I'm a second year student at the Budapest University in the Netherlands, where I'm doing the program sustainable development with a specialization in earth system governance. And yeah, I'm writing this thesis, but also in interning at the science based target network with Professor Howard Berkeley. Okay. Yeah. So it's been going great. And, yeah, so I can also introduce my my thesis proposal that I have, so that you have a more idea, like I said, in the email already, it's about investigating consumption based emission targets, in the food sector by set by the C 40 cities. And I want to basically understand the differences that they have, that the cities have enabling, enabling factors, the conditions or the motives that these cities have, when adopting targets or when they're planning action of climate action to basically help more cities set these types of targets. Yeah, so this food, good food cities declaration is therefore really interesting for me, because they C 40 actually wants to reduce the consumption based emissions. By doing by by by that initiative t or declaration, sorry. So yeah, that's why I chose it. And Any questions about that? Or no? Okay. Yeah, then I can move on to the questions I have for you.

2:29

Okay, I have one question, have you met with people at WRI the World Resources Institute about the cool food pledge?

2:39

Um, I haven't talked to them. But I mean, the science based target network network is connected with WRI as well. And but I'm more investigating the cities actually.

2:52

Yeah, even in that context, we'll get into that. Yeah, they were very important in our process for the ICLEI and our ability to make any progress on the C 40. work. So that's why I've said question, I think it might be very revealing to you to connect with them.

3:18

Okay, thank you. Thank you for that. Yeah. That's nice. Um, so yeah, then First of all, I want to get to know you, but you like your role within the city, and also like the coordination you have with the C 40.

3:35

Well, I am now officially retired. So but I was before a time, manager for the Toronto food strategies. So we pushed for multiple interventions and policy initiatives to promote healthy sustainable food system. So basically, you know, we worked, top down, bottom up, so we always try to change policy, but work at the grassroots level. And as our work evolved, it became clearer and clearer to us that linking and integrating with climate work and climates interventions was is very, very important. If we're going to make some progress because of the obvious links between concept with consumption based solutions and the food component of that. So we started to figure out, so I've been involved with a C40 network from the beginning and have Been very active in that. And currently, I suppose, being an advisor toC40, and, you know, just pro bono consulting, working with them to support their work. And obviously, you know, this piece of work is really important to C40. So for us, we, you know, I will be very honest about this process, because, you know, Toronto thinks it's really far ahead on this kind of work, but it actually isn't. And the food relate to parts of any climate change, environmental strategy was not appreciated. And, you know, it was a huge struggle. And frankly, it's still is, and sadly, at this moment in time, we lost the fight, to be honest, to get any focus attention on food, and emissions and using food as a way to realize a lot of these goals. But we also, So, David Miller is the former mayor of Toronto, and he is a very senior person in C 40. And he's the person pushing other mayors across the world to take climate action really seriously. And

I know David well from working at the City of Toronto for many, many years. So we brought him into this kind of work to push C40 a little further. And for him to use his connections to push the city of Toronto. And if, it was only so far, you know, ==I don't think even he is focusing enough on food.== And because it's so much more ==complex, the food portfolio and interventions== around it, then changing your bus fleet to electric, or, you know, those kinds of very concrete, high profile, high impact interventions, and much easier. So, yeah, basically. So, you know, that was the backdrop, but then the ==City of Toronto is overall throught these environments departments very involved with C 40.== And so they were doing a lot of work with C 40, on the waste reduction file on the best on all the other components of besides food.

8:36

And so we decided, as a team to ==really make a push, push the colleagues in the city== to recognize through the seeing one piece of this ==and to try to get some political profile for for including food.== And it turns out that the ==mayor of the time he's still the mayor was getting more interested in in this world and being seen to be taking action on climate initiative==, even though he's a pretty ==conservative mayor.== So you know, I'm not sure how deep his commitment is, you know, it leaves its name. And it turns out that at the ==Copenhagen meeting for C40== the the mayor of Toronto was going with a big delegation, to make some commitments on climate change, action and he decided that given that we are so actively involved with C 40. And the ==mayor's office is already going and met with three different counselors going== in may see it was ==ridiculous how many people chose to go to that meeting. none of whom, you know involved in food.== And so I push very hard to we had a, ==I was able to secure a separate source of funding to go== and combine it with other work. ==global food systems work through the FAO in Rome.== And it also was at the ==same time as the Milan Pact gathering for cities in Monterio== . So I was able to ==get the resources to engage with all three of those==, beucase I was very involved. Because I have ==separate funding, I could push harder== to say over the huge agenda has to be part of the mayor's agenda, and cannot vote. And so the declaration as a whole.

11:39

You know, I think it's useful to some extent. I think ==it's extremely unrealistic for most cities in the world==. I was very involved in the process of drafting this. And that was very positive, a lot of different people gave thought to it. But ==as a city practitioner==, I was really feeling like, we have to be really, ==really practical about what's doable on the ground==. And even on signing these lofty goals, I think ==European cities are way ahead of most cities in North America in terms of commitment to climate action and awareness of food.== We had a ==huge amount of controversy in the network and developing this. Because cities in the global south, and particularly cities in Africa==, there was a very strong push to have a no meat consumption or or way reduce, we ended up with reducing consumption, but the powers that ==we wanted No meat consumption as the more realistic goal for reaching the targets.== But ==from a practitioner perspective and a cultural perspective==, well, you know, what, what I have a ==huge amount of problems== with still

with the declaration, if it's great if we try to get added as a big tent, and an inclusive process. So cities in the north and the south. You know, I guess one one conversation I had with somebody from, I believe it was Ethiopia, where that person just said, How can I go back to my city and push for reduce meat consumption, when our goal is to get some food into our children's stomachs in school. And if we can include meat in that it would be fantastic was the one thing and the other thing is, is that meat is so important culturally in context and in most African cultural contexts. And, you know, it's not only a sign of status, but it's a sign of You're doing well if you can serve meat and so they were big fights. Ill be honest about how do we position this in a more inclusive way to say in some contexts reduce meat consumption, which is what the free planet health report says. The EAT Lancet report is the guiding document, right? And they will right up front, say, in some context, people need to eat more needs to be healthy. And, you know, becomes a very blunt instrument, when you don't acknowledge that in an explicit way. And so for me, what's more important is dietary diversity. And having, you know, pushing for those School Meal Program to not just be starch based or one single staple food, but to include both meat and vegetables, but and the quantity would be so total right? So you know, I, I am, you know, I'm I, the declaration is great, but it's very limited when you take a global perspective from where I sit. So and C 40 knows my views on those. So, you know, I was very outspoken.

16:27

Yeah, coming back to Toronto, though, we decided it was a useful strategy to gain political support, and to build some bridges inside the city government, who, particularly with our environment's division, who we're doing a lot of consumption based submissions work, and doing fabulous work, but not considering food. And so we, we really actively reached out to them and told them to look at the declarations, see what their criticism was, whether they could support us proceeding with this. And we did the same thing with solid waste, waste reduction people. And so we made real headway with that, except that they were, wanted to just pushed all the work back on us. And with time, the time ik took, and we didn't have the data and science to do that calculation. So this is where the WRI thing comes in. Because I heard about the Cool Food Pledge. And they, so we connected. And they were at a very, very early stage of the cool food pledge, and they haven't yet connected with cities. And they're very interested to have some high level cities. And at that point in time, and honestly, I think this is hugely important piece for cities to engage in the speculation work, they WRI had managed to secure some funding to provide technical support to a few places, and Toronto was one of them, to help us with the consumption based analysis and calculations. And because we we've said that this is something we can bring to the table. It opened up the door for collaboration with the environment folks, because it would bring more capacity to this work. And so what we decided to do politically, when when the mayor finally agreed to say, frankly, I could be part of the city delegation in Copenhagen, invited him to come to the press conference for the signing and to say, let's be one of the first signatory cities to demonstrate your leadership, Mr. Mayor, you know, which is always how it works. And there were a couple of other counselors there who

were more accessible. And I worked very hard with to explain the key piece of the consumption emissions. And to explain how we should sign the WRI Cool food pledge at the same time as the declaration, so that we could leverage capacity and the resources. And so that's what ended up happening is that, nobody, I'll be really honest, nobody on our council understood either the declaration or the Cool food Pledge. They had no idea what they were, what they were agreeing to. But what I was able to say, with some conviction to the counselors, who are the champions is that this is going to leverage capacity for us to do the calculations to have some concrete deliverables for our consumption based emissions targets.

21:17

To Integrate food into that, that the declaration is a high level commitment for us to continue this work on sustainable food systems and blah, blah, blah. So the City Council and the mayor told everybody, this is a good thing that sign it, and they signed it. But you know, as I said to you, in my email, you know, fast forward, and then there's a pandemic. And we also have our food work, our food strategy teams located inside Toronto Public Health in the city, and they, of course, have a lead organization in pandemic response. And unfortunately, also, on top of that the new leader of public health doesn't value the food agenda, or the food systems work at all. It's incredibly sad. So after, you know, she reluctantly congratulated us for getting the mayor to sign this direction, but she herself as a leader of our organization, didn't have any interest in it. So depressing

23:01

Interesting. Did you still continue with the WRI?are you still with them? Or did you also ?

23:13

Well, I don't know. I think so. We were eight staff on our team. And we now have two staff. They never replaced me. So frankly, there's no leadership on food, which is very sad, because I had before I left them so much work to say it's really important to replace me. We also have the Toronto Food Policy Council, which is the longest serving food policy council anywhere in the world is celebrating our 50th year this year. But they refused to the leader of that council left for another position to replace her so the two leaders of food work have not been replaced. And the current staff are now only allowed to work on emergency food response, they trying, you know, they'll say they'll give glimps of, oh, we've signed the cool food pledge and we've signed the Declaration. So just deliver on that, you know, and there's no understanding or interest or resources to do that. So, they're trying to say to our environmental vision, we're going to take this on and without a strong team to support this they are not interested in doing this. Because it's not their core business, they dont think. their core business To be the electric busses and voice. So I think it's pretty clear. I mean, what I have said informally to my collegues at the C40 when I left is that they are going crazy trying to keep this alive and I just said, you

need support, you need resources, you need an understanding of the importance of signing and the senior managment they really doesnt care, its going to be too hard to implement. So they haven't 100% let it to go. they're trying to collect the Procurement Data from the city of toronto. And if WRI is still able to make calculations, they might still will proceed, but we've been so slow, and the pandemic changed everything. So I'm not sure that even if WRI arestill able to do this work, because they had a finit amount of resources. And, frankly, if I were them, I would jump on other organizations who are ready to do it, you know, but I am too far away from it now, so I don't really know where its at

26:43

but the main point here, but I came to, to be important is, unless cities are really well resourced and really well positioned around the declaration, to have the capacity to really make it need for -- really put the work for the agenda is the declaration is a fabulous tool to organize and to network with other cities really useful. But for a city just getting started in this or less resources, the declaration is completely unrealistic and just a nice high level sense of direction, but not much more. So you know, but you know, quickly, great, I'm sure you've talked to Stephanie, and we could get an update on where the othercities that signed are at that maybe other cities have made a lot more progress than Toronto has. And I really hope that's the case. So I am a little bit critical of it, I think it's a great tool but its only a great tool in certain contexts

28:19

Also, like the food climate Nexus is just very complicated as well. So make sense that cities are reluctant to be part of this and to actually make some impact or actions. Just a question about what about the residents? How much did they get involved with this when signing? Or when, when this happened with the pandemic? or What is your opinion? How was that?

28:52

The residents of the city of Toronto. Where we really work we did that was really fantastic from that point of view. It is, we when the food planet health report came out, we had people from the EAT Foundation, come to Toronto to work with us on a series of public engagements and information events. And we had that was that was the precursor to us being able to sign the declaration because what we did is we did some events with the senior decision makers who we got together to understand this food climate Nexus basically. And that was really helpful. And then we brought stuff from different divisions. So public health staff who work on nutrition and health promotion had never talked to environmment staff who are doing for, you know, climate change action. Vice versa the climate change who never thought of talking to health people. So that was really helpful because we had this reports and evidence and action orientation and really good seekers to bring that together, and many had a very big public events, where we invited anyone from the public to come and hear the presentation on this.

And in fact, David Miller was one of the speakers there, strategically, so we would get him to understand better the Food Climate Nexus. And so that laid the groundwork, that's why this is so sad. Because we built such fabulous relationships with community across the different city divisions. We talked to some of the senior decision makers, there was a great deal of passion commitment to make this sectoral action agenda. it needs leadership to drive, it needs, you know, a lead senior manager who is not undermining it, who supports it sadly, but that hasn't happened. So we had a great foundation and its just gone now.

32:05

Yeah, well, that was really interesting. Yeah.

32:11

Yeah.

32:14

Then,

32:16

I mean, you've covered most of my question that I wanted, you wanted to ask, so that that is great, too. One question about the C 40. So to what extent did they help you? Or did they connect with you at any point or?

32:33

oh yea we worked very closely. I was very involved in. So, you know, we were constantly strategizing and interactions, try to influence the final wording of the declaration, you know, the final wording, put it this way , ended up much more powerful than the initial wording. So we were very involved with that process, and in getting the political support, they did all they could to, you know, seek to the other people inside the city organizations to get them to be open to this, to recognize that this declaration is as important as other declarations, you know, so they were very helpful, we wouldn't have been able to do it without them.

33:40

Good to know, and what about the country, Canada itself? Did they have anything to say in what Toronto is doing ,any national support or policies something?

33:53

Well, it wouldn't be around the declaration. But one thing that was incredibly interesting, because, for me, the declaration is very much associated with this EAT lancet report. And that was the basis for C40 to move forward on the declaration. And while the EAT lancet report was being written and researched, the Government of Canada was actively involved in an engaging process and to update on food guidelines so Canada Food Guide, that could be quite useful for you to look at, because it was years and years of advocacy. To broaden that, and to include some environmental sustainability principles see to the Canada food Guide and They kept on with so many releases of the guide. And the guide also moved in, it doesn't say, don't eat meat. but It's the guide is saying eat more vegetables essentially, half your plate should be vegetables and eat less meat and dairy. But it's mostly plant-based given a higher priority. And it was massive, massive pushback from the meat and dairy industry against the Canada food guide coming out of that. So what happened was the eat lancet report came out. And they were quite happy seeing people in Canada who were developing the guidelines. And when the public release of the report happened, two days later, Canada released the new updated guidelines so that the EAT lancet folks could, you know, they could site the evidence, they could They could take some of that pressure away. So that was a massive win for the whole country actually. And also around during my own organization public health, makes it out , she is themselves plant based rather than pointing the fingers and you should be focusing vegetables in a much more palatable in my opinion, the way she talked about health and eating right. So. So yeah, that's where they are now I don't know that it was hugely significant set boeard for the government of Canada, makes it a lot easier with the meat industry fight

37:28

There's always the issue with the industry, its very big and powerful, actually, more than you think. Okay. Any other general remarks that you would like to share? I don't have any more questions from my side. This was really interesting. Yeah. Thank you so much for your time and your answers. Thank you. Thank you

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10.2.3 Lima Interview

Gabriela - Lima

0:00

I'm also send out this consent form via email. So if you could also sign that be nice like later and then send it to me back. Yeah. Okay. And so just that you understand what we're doing is like anonymous, and the the storage of the information that you're going to say is for research purposes only. And if you like, you can also have the access to the Bible report, like my thesis,

if you want to maybe see. So yeah. So after the clearing of all these practicalities, I would like to introduce myself. So my name is Aashima Singh, and originally from India, but I grew up in Berlin, where I'm also currently at. And I'm a second year student, master's student at the University in the Netherlands. I'm doing the program called sustainable development. And like I already told you in the email, my thesis is about investigate investigating consumption based and emission targets in the food sector. And I say, oh, by the C 40. network. And I want to understand the differences that enables cities to set targets to do urban planning, action, climate action. And then basically, the Good Food cities declaration shows that initiative, because it's good, like it's interesting, like reducing consumption based on emissions in the food sector. And it makes it a really good to like to differentiate those different cities, experiences when adopting the declaration. Do you have any questions about this? Or should I move on to question after you?

2:11

Okay, that's clear for me that I told you, I speak English, it medium level, I understand you but sometimes it's a little difficult for me to speak in English. By and I remember about the declaration because of the dclaration was in 2019. And I remember a little about that, I am a I am going to review the informationfrom that to give you the information, the correct information.

2:55

No worries, it's more just the experience of Lima how, how they decided or like what made them decide to sign the declaration. And like what were like the conditions in Lima, like that made you you like sign the whole thing you know, so that's mainly what I'm looking for. So just in simple terms about anything you have would be perfect.

3:25

Yeah, that's nice. Well, my name is Gabriella Leon. I work in here in the Lima Muncipality. I am the head of ==the health promotion department==. Well, I will like to help you in this project

3:48

I thank you and so question about Lima How long has Lima been part of the C 40 network? Do you know that?

4:00

Okay, we have a here in Lima we have the government for four years and we ==start the government in 2019== and I know that that by that year we start with ==the C 40 project==

4:26

Okay, Okay, perfect. And so what what How did you decide to sign the declaration? Did the C40 contact you or how did you find out about that there is this declaration?

4:43

Yeah, C40 contact us. Sign the project that the municipality has about that. Climate change climate, climate change. It's a it's a complete project and it includes different areas of the municipality, not only us, because we see we see healthy or health life targets because it in the municipality we have area that they see all all the all items about Environmental, we have different areas in the municipality and we see only that Target is about food because we we see it is about a health. Um, I remember that C40 contacted us, first in for a forum and then we traveled to Stockholm. Yeah, I would have a meeting in Stockholm. and we talk about the about the the declaration. Yeah, yeah. Yeah. But until that we have we we I don't know. Um, we have that that interest Yeah. About about that about that change climate with the food because we and start to work in that line since 2019 when we started the government we has a project and this project, the name of this project is in Spanish is "Lima eligir saludable" Lima choose healthy like something like that. In this Project we start to work with the markets and with the schools to lead to so promote this healthy food and diet right okay. Yeah, not only to eat healthy fruit. We did teach them to juice correct juice, correct the food, for example, they don't waste the food but can juice for example, the shell shell of the fruits we can use the shell of the fruit and we teach them to use this in drinks or in some dishes. And we talk about that also we have a here in Lima a problem related with that anemia. And with start in 2019 work about that to teach that to the to that people to eat better, and for to for this problem, in this in this in this people with anemia.

9:51

Yeah, make sense. Okay, very nice. And while doing this project or Also, while You know, signing the declaration. Did you have any problems? Like, did anyone say? Why are you Why is Lima doing this? Because like consumption for food, like, you know, that they shouldn't eat that much meat, and then they should focus on more like plant based vegetarian food and stuff like that, did they have did did I don't know businesses Did anyone government or someone say, like, were there any problems, just generally.

10:36

Yeah, it's a little difficult for us to, to do the declaration, because we think about that problems. And for example to in this declaration we'll talk about to eat vegetables and fruits, more than meat. We talk about that with our group, because for example, that I say, we have the problem

that the anemia here in there is a public problem, and, and we can't say to the people, to the children, eat only vegetables or fruits, when we have a big problem about anemia. And we have, and we know that <mark>anemia of people with anemia needs to eat more meat or eat more grains, and not only vegetables and fruits</mark>. And that was a problem that we see about the declaration and also <mark>for the economy.</mark> Because here Lima, the <mark>fruits and vegetables have more price than other food</mark>. Because if you if you want to eat good and good vegetables, in a good condition, you need to pay more. And <mark>we know that vegetables and fruits not satisfy to the people they need to, to, to eat more food than that with less money</mark>. And it's also a problem because the here in Peru for example, in this condition for the COVID, we can see that less <mark>than 50% of the people have a deficiency</mark>. And we we know that based on what lima needs, condition about the the to about <mark>the temperature</mark> Yeah. And it's also a problem here. in the declaration and we don't talk about this line, we would prefer to to select the option that a <mark>work in a in less sausage</mark>. Okay. We can we can work about that in the in the declaration. Not Not a lot about rise that consume of vegetables or fruit we can work in to reduce the consume of sausages.

14:24

Yeah, yeah, that's that's good. Okay. And so what do you think? Did Lima as a city have that the made that made you sign the declaration or have these projects? Because was it was it something that I don't know the Peru government wanted you to have? Was it because of the residents that they were asking for something like this Or did did the Lima think it was like good for the environment or like it like factors like social factors or like environmental factor or like financial factors maybe that made it happen like, like conditions that made it happen that you signed the Declaration? What What were these? Do you know something that was unique? What what, how? What made it easy for Lima to do it basically.

15:32

I think for <mark>the environment problem</mark>, I think <mark>it was a reason that we probably signed to choose to participate in this declaration.</mark> Because we have, we know <mark>that we need to respond about this problem, because it is increasing and we need to work about that.</mark>

16:05

So How were the residents of Lima? Were they happy that you were doing this thing? Or did they support you? Or did like, you know, like you were telling the the residents basically you have to do this? So like, how did they react?

16:31

We're working with this declaration in not not with all the city, because <mark>we work with parts of the city. But I think we are working with step by step</mark>. Because we know <mark>if we say to the people, we need to reduce that consume of meat or with another kind of food like meat for example, I think that people is going to react to this</mark>. Notice, that is a reason that <mark>we are working with these people with with groups of people in the city not with all the City</mark> or implementing in big campaigns or big details with with with our all the City <mark>and also we have problems to implement these because the on the pandemic COVID19 because we're working in another line another target for another problem that</mark> we have. It's <mark>It's a line that we are working a with little groups nowadays, it is not and the first target that we have</mark>, it's not is <mark>then another problem that we have here in Lima of Hathy healthy problem here in Lima.</mark>

18:30

Okay, okay. Right, um, then maybe, like not within Lima itself, but were they like, supporting or like, you know, like, conditions that helped you sign this declaration from outside of Lima. Like other stakeholders collaboration, or I don't know the the government of Lima did do they have anything like that? Or did they help you with anything about no country or your country is like Peru did Peru up you are or like other stakeholders in Peru, or also globally, other stakeholders maybe.

19:34

Okay, we're here in Peru. No. We are the only city that is working about this problem. We are working with C40 group, and it's a in this group participate people of another countries and they speak about their experience and we are in Learning about that experience that they have. But here in Peru, no, we don't have another stakeholders or another people that are working about that. Okay.

20:14

Okay, okay.

20:16

Yeah, <mark>we work with slow food</mark>, but they don't work about to less the consumption of meat or milk, <mark>they are working about the natural food</mark>. But maybe we are relating with them, but not with the same target. Not <mark>Not with that Reduce that consumption of, for meat or for milk</mark>

20:46

No, but that's good. Yeah. Um, so just generally, is, since you're like, kind of like a city in the global south, right? What do you think, would make other cities also in the global south? Sign up for this declaration? Like, what? What do they need? What do you think? Do they need to also sign this? Because, I mean, you signed this declaration, because of these some of the factors that you said, but what about other cities? What should they need? Or what do you think? Because you're also global South City. So I'm, I mean, you know, no more What is happening, right? Yeah. So what do you think?

21:32

I think it's important that political decision for the mayor because we are working with the mayor, with that target,of the mayor and the mayor have has done that, that target have to work about that climate change. And all of the people are working about that. I like to think it's, it's important. And also it's important that condition of the of the city and we consider that Lima it's a city that it's getting better in social areas and in economic also it's it's getting better in that life. And we we consider that that are important to start to work in another target because we know that we have to work first in that basic necessities of the people and then we can work in another necessities but it is like a, need to satisfy that basic necessities and then we can satisfying another necessities. Yeah, I think that is that is important. And for example, here in Peru we have cities that have up poor people or they have another necessities and it's difficult to start to work this target because people is going to tell us. But how? we don't have money, we need house, we don't have water. We need another things and this is not important. Thing.

24:05

Of course of course. Yeah. Yeah. So to what extent is the C 40 helping you with this declaration to actually achieve it? Or like what did they even before the declaration? Did they help you in some way? Did they like were they effect they a reason for you to join this? Or did you think we want to do this anyways, then you joined the declaration.

24:49

I think they are. They help us with experience of another city or With they teach us in this way. But I think they have to know that it's different that eachcity is different. And I think we need to learn more about that. Because there are targets that I that are general but we need to work in the in the priority in the in the city, not is the same to work in South America or in Europe or in another in another country or in another city. Because the people have different practices and have different knowledge. And I think we we need to work about the knowledge. For example, here in Lima, we have a dish that is our first dish of our country. And it is the 'Ceviche'. The name of the dish is 'Ceviche'. And the 'Ceviche' has fish for example. We can't tell people that we can't eat Ceviche, because it's the first dish here in Peru and either is not junk food, is a full food because it is a fish with an natural fish with natural ingredient and it is not right. Nor

==is a junk food noe is that can nor is unhealthy food. And people can't say can't be told as that no==, it is not junk food and it is healthy and why I can't eat this this dish. And we consider that it's important, that traditional and tradition in in the cities or the practices because he when he considered that

27:40

yeah, that's that's very good thing. I think this is very helpful. Thank you so much for your time. And are you willing to answer any follow up question through email if I have someone late some later Yeah. And yeah, thank you so much. For this.

28:02

Yeah. sorry for the English.

28:06

That was perfect. And just a reminder to also sign the consent form. Yes.

28:14

Okay, now, I am going to send you that. That goes. Okay. Perfect. Thank you so much. This was very nice. Thank you. Okay, bye

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