

**CATS** Centre for Applied  
Turkey Studies  
**NETWORK**

**OVERCOMING GLOBAL PROBLEMS  
THROUGH LOCAL COOPERATION:  
THE CASE OF THE ISTANBUL  
METROPOLITAN MUNICIPALITY**

RESEARCH PAPER III

URBAN COALITIONS AND MECHANISMS OF  
COOPERATION:  
THE CASE OF ISTANBUL AND BERLIN

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**İPM | IPC**

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## **About Istanbul Policy Center**

Istanbul Policy Center (IPC) is a global policy research institution that specializes in key social and political issues ranging from democratization to climate change, transatlantic relations to conflict resolution and mediation. IPC organizes and conducts its research under six main clusters:

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## I. INTRODUCTION

The report titled “Urban Coalitions and Mechanisms of Cooperation: The Case of Istanbul and Berlin” is the third and final report to emerge from the project “Overcoming Global Problems through Local Cooperation: The Case of the Istanbul Metropolitan Municipality,” convened by Istanbul Policy Center (IPC), the Economic Development Foundation (IKV), and the Economic Policy Research Foundation of Turkey (TEPAV). The project aims to explore the possibilities and limits of urban cooperation between the Istanbul Metropolitan Municipality (İstanbul Büyükşehir Belediyesi (IBB)) and the Berlin Municipality by focusing on climate change and vulnerable groups, including refugees, women, and those who live below the poverty line.

The first report, “The Effects of Climate Change on Vulnerable Groups: The Case of the Istanbul Metropolitan Municipality (IBB)” was published in July 2022.<sup>2</sup> It closely examined the policies, actions, and ongoing strategies that the IBB has implemented to adapt to climate change. It addressed issues with governance surrounding the implementation of climate change legislation as well as the protection of the city’s most vulnerable populations in the face of climate change.<sup>3</sup> The second report, “Climate Change Adaptation and Its Impact on Vulnerable Groups: Berlin Municipality Case Study,” covered an extensive inventory of the Berlin Municipality’s current policies to adapt to climate change as well as the best practices the municipality has employed in this regard and the necessary actions for the future.<sup>4</sup>

The third and final report aims to explore the possibilities and challenges of urban cooperation between Istanbul and Berlin and deliver policy advice on these globally challenging issues. Moreover, it demonstrates the potential impact of such cooperation on reviving

the relationship between Germany and Turkey. In this framework, the research team focused on the findings in the first two reports to compare these two cities in terms of their adaption to climate change. Secondly, three in-depth interviews were made with representatives of the IBB in the field of urban cooperation and a senior scholar on climate change from Sabancı University on specific areas open to urban coalitions and cooperation between Istanbul and Berlin. A brief survey of the literature on urban cooperation was also conducted.

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1 The Centre for Applied Turkey Studies (CATS) at Stiftung Wissenschaft und Politik (SWP) in Berlin is funded by Stiftung Mercator and the Federal Foreign Office. CATS is the curator of CATS Network, an international network of think tanks and research institutions working in Turkey. “Overcoming Global Problems through Local Cooperation: The Case of the Istanbul Metropolitan Municipality” is a project of CATS Network.

2 Overcoming Global Problems through Local Cooperation: The Case of the Istanbul Metropolitan Municipality, July 2022. <https://ipc.sabanciuniv.edu/Content/Images/CKeditorImages/20220707-12073815.pdf>

3 “The Case of the Istanbul Metropolitan Municipality,” p. 4.

4 “Climate Change Adaptation and Its Impact on Vulnerable Groups: Berlin Municipality Case Study,” September, 2002. <https://ipc.sabanciuniv.edu/Content/Images/CKeditorImages/20220707-12073815.pdf>

## 2. URBAN COOPERATION IN THE CASE OF THE ISTANBUL METROPOLITAN MUNICIPALITY (IBB)

In general, the cooperation between cities is an essential part of city diplomacy. It is defined as the institutions and procedures through which cities interact with political players on a global scale with the intention of advocating for one another and their shared interests.<sup>5</sup> However, in today's world, while the potentials and mediums for cooperation multiply, the challenges also increase. Nowadays, city diplomacy goes beyond building symbolic connections or exchanging cultural ideas as cities are increasingly acknowledged for their capacity to influence international relations and global agendas.<sup>6</sup> The vitality of global problems such as migration, the COVID-19 pandemic, and climate change have entailed the development of a broader framework to find solutions at the local level.<sup>7</sup> As a result, symbolic connections at the local level have shifted toward more concrete avenues of cooperation. Through collaboration, experience sharing, and the creation of public-private partnerships in the fields of infrastructure, security, governance, and health, cities are able to improve their capacities.<sup>8</sup> The twinning or sistering of cities based on bilateral city diplomacy trends in the 20<sup>th</sup> century have shaped and improved today's city networks more than any other program of cooperation. However, as the role of cities in the political and social sphere has increased, urban cooperations and coalitions have multiplied and institutionalized. For this reason, the concept of urban cooperation through coalitions to enhance the capacity of cities against the challenges of climate change, rapid urbanization, and migration has spread all over the world through both bilateral initiatives and institutional frameworks. These kinds of urban cooperations also increase the leverage of cities in both the national and international arena and allow cities to be open to cooperation in various fields—from exchanging best practices in waste

management practices to exchanging financial and technical support for transport, water management strategies, innovation of urban spaces and social inclusion policies for migrants, improving air quality, etc. There are currently more than 200 multi-party urban networks operating throughout the world that deal with different policy issues.<sup>9</sup> While bilateral cooperations are based on more specific issues where the characters of the cities are similar, regional platforms deal with the common regional challenges, and global platforms examine solutions to worldwide problems. Currently, the largest platform for city diplomacy is within the framework of the United Nations' (UN) Sustainable Development Goals (SDG). Additionally, the field of environmental city diplomacy plays a crucial role in combatting the challenge of climate change.

The relationship between cities and climate change is reciprocal due to the increasing interactions between urban areas and the climate system. For instance, issues such as the urban heat island effect,<sup>10</sup> a phenomenon unique to cities, increase human-induced warming locally. Additionally, the frequency and the severity of extreme climate events like heatwaves will affect cities and urban areas more.<sup>11</sup> The scale of the impacts of climate change on urban areas related to human health, livelihoods, and basic infrastructure is relatively more catastrophic<sup>12</sup> and not equally distributed within a city—or among cities—due to the specific local characteristics of cities such as their climatic conditions, socio-spatial distribution of people, and urban expansion.<sup>13</sup> Therefore, it is no surprise that cities have become prominent on the climate agenda and that local governments and city diplomacy have gained

5 Rogier van der Pluim, Jan Melissen., "City Diplomacy: The Expanding Role of Cities in International Politics," Netherlands Institute of International Relations, Clingendael, April, 2007, p. 11. [https://www.uclg.org/sites/default/files/20070400\\_cdsp\\_paper\\_pluijm.pdf](https://www.uclg.org/sites/default/files/20070400_cdsp_paper_pluijm.pdf)

6 Michele Acuto et al., "Toward city diplomacy: Assessing in select global cities," Chicago Council on Global Affairs, (2018): 3. [https://www.thechicagocouncil.org/sites/default/files/2022-05/toward\\_city\\_diplomacy\\_report\\_180207.pdf](https://www.thechicagocouncil.org/sites/default/files/2022-05/toward_city_diplomacy_report_180207.pdf)

7 Şuay Nilhan Açıkalm., "Şehir Diplomasisi ve Küreyerelleşme," Türkiye Sağlık Kentler Birliği, Kentli Dergisi 45, (June 2022): 52-55. <https://www.skb.gov.tr/wp-content/uploads/2022/07/Kentli45.-Sayi.pdf>

8 Michele Acuto., "Give Cities a Seat at the Top Table," Nature 537, no. 7622 (September 2016): 611-13. <https://doi.org/10.1038/537611a>.

9 Anna Kosovac et al., "City Leaders Go Abroad: A Survey of City Diplomacy in 47 Cities," Urban Policy and Research 39, (2021): 142. doi:10.1080/0811146.2021.1886071

10 "More than natural landscapes like trees and water bodies, structures like buildings, roads, and other infrastructure reflect and absorb solar heat. Urban regions, where these constructions are heavily concentrated and there is little foliage, experience "islands" of hotter weather than rural areas. "Heat islands" are the name for these hotspots." See "Learn About Heat Islands," <https://www.epa.gov/heatislands/learn-about-heat-islands>.

11 IPCC, 2021.

12 IPCC, Summary for Policymakers [H.-O. Pörtner, D.C. Roberts, E.S. Poloczanska, K. Mintenbeck, M. Tignor, A. Alegria, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem (eds.)]. Cambridge University Press, 2022.

13 Kerstin Krellenberg & Ethemcan Turhan, "How to Respond to Climate Change at the Local Level: A Guideline for Turkish Cities", Leipzig: UFZ-Berich

more importance in tackling climate-related vulnerabilities and employing adaptive responses. Cities are the main source of climate change and are also the most vulnerable to the effects of climate change such as extreme temperatures, floods, and storms.<sup>14</sup> Climate city networks emerged in the 1980s and since then have been a vital part of urban policy and governance. These networks can be broadly clustered into two categories: 1) networks that are established by cities themselves and are characterized by a horizontal and decentralized governance structure, 2) networks established by non-city organizations such as the World Health Organization (WHO), which tend to be more centralized. Hence, the influence and importance of international actors building climate networks should not be neglected.<sup>15</sup> Some notable climate networks include, for example, the ICLEI – Local Governments for Sustainability.<sup>16</sup> Another important network is the C40, a network of over 100 mayors from world's leading cities that are working together to fight the climate crisis. It was founded by the former mayor of London, Kev Livingstone, in the year 2005. The network aims to keep the rise in global temperatures under 1.5 degrees Celsius, in line with the ambitions of the Paris Agreement, and find a path to a zero-carbon future.<sup>17</sup> Additionally, the EU Covenant for the Mayors is an important example for regional networking platforms. Through the areas of regional and global city diplomacy, bilateral cooperations are also facilitated, enhanced, and boosted.

The general framework for the development of city-level plans for a greener future has been outlined in the UN's Sustainable Development Goals, EU Green Deal, and IPCC Reports as well as in the UN's Climate Change Conferences (COP). For the European Union, the challenge and battle of climate change has been a top priority for decades. Therefore, there are many projects that bring together cities around the EU to combat climate change. One of the more recent projects is the "International City Partnerships: Acting for Green and Inclusive Recovery (ICP-AGIR)," which is managed by the Directorate-General for Regional and Urban Policy (DG REGIO) of the European Commis-

sion and runs from October 2021 to March 2023.<sup>18</sup> Another program funded by the European Union is the "International Urban Cooperation (IUC)," which was established in 2016 as a three-year program that supports city-to-city cooperation on sustainable urban development. A similar program aiming at European exchange and learning to promote sustainable urban development is the URBACT program. For over 15 years, URBACT has supported cities working together and creating solutions to urban challenges and sharing best practices and policies. The program, which is jointly financed by the European Union (European Regional Development Fund) and member states, involves over 550 cities in 30 different countries with over 7,000 active local stakeholders.<sup>19</sup>

To learn more about Istanbul's approach and the capacity to undertake urban cooperation, two interviews were conducted with representatives of the IBB. Before sharing our findings, the general framework of urban cooperation in Istanbul is summarized below.

Istanbul Metropolitan Municipality has participated in many forms of international urban cooperation that were conceived in the 20<sup>th</sup> century. The concept of "sister cities," which emerged in the 1950s, bound dozens of cities all around the world. Istanbul signed its first Sister-City Protocol with Rio de Janeiro in 1965. To start this process, a sister city request is made through diplomatic channels. Municipalities are informed either through mutual contacts between municipalities or by the Ministry of Foreign Affairs. In Turkey, the City Council must vote in favor of this cooperation, and the Ministry of Environment, Urbanization, and Climate Change must approve any sister city relationship with a foreign city. Thus, it necessitates the approval of the City Council and the central government. Today, the IBB has 41 sister cities from all over the world. Berlin and Istanbul have been sister cities since 1989.<sup>20</sup> However, according to our research, it is possible to argue that sister-city projects do not often exhibit solid projects or collaboration, especially for cities as large as Istanbul.

The second avenue of bilateral city diplomacy is Cooperation Protocols signed between two cities. There are many potential areas of cooperation, and the details are sorted out through negotiations between the parties.

14 Lorenzo Kihlgren Grandi, *City Diplomacy Cities and Global Politics of the Environment* (S.l.: Springer Nature, 2020).

15 Cortes, S., J. van der Heijden, I. Boas, and S. Bush, "Unpacking the Heterogeneity of Climate City Network," *Cities* 121 (February 2022): 103512. <https://doi.org/10.1016/j.cities.2021.103512>

16 "ICLEI – Local Governments for Sustainability," ICLEI, accessed September 26, 2022, <https://iclei.org/>.

17 "A Global Network of Mayors Taking Urgent Climate Action." C40 Cities, August 19, 2022. <https://www.c40.org/>.

18 "International City Cooperation," International City Cooperation, accessed September 26, 2022, <https://c.ramboll.com/international-city-cooperation>.

19 "URBACT," URBACT, September 26, 2022, <https://urbact.eu/>

20 "Belediye / Kardeş Şehirler," Belediye, accessed September 17, 2022, <https://www.ibb.istanbul/icerik/kardes-sehirler>.

This protocol does not require cities to be equal partners. In Turkey, the consent of the City Council and ratification by the Ministry of Environment, Urbanization, and Climate Change are required. The IBB has signed 20 Cooperation Protocols with European cities such as Florence, Strasbourg, Stockholm, Prague, Athens, Paris, and Vienna, since the 1980s. The third avenue of urban cooperation according to the legal context and precedent in Turkey is through the Goodwill Protocols. This protocol is a declaration of intent and the first step in building relationships with other cities. This cooperation is formulated according to mayors' visions. The city council's approval is not necessary. Istanbul had signed 28 Goodwill Protocols with different cities from various countries. Istanbul and Berlin signed a Memorandum of Understanding in 2005.<sup>21</sup> In terms of international cooperation networks, Istanbul is also a member of the organization of United Cities and Local Governments (UCLG)<sup>22</sup> and C40 (Cities Network on Climate Change).<sup>23</sup>

During the local elections held in Turkey in 2019, the mayor of Istanbul was elected from the opposition party, the Republican People's Party (Cumhuriyet Halk Partisi (CHP)). Before the CHP's victory, the same political group as Justice and Development Party (Adalet ve Kalkınma Partisi (AKP)) had held office since 1994. However, during the election, the mayor's political party, the CHP, could not gain a majority in the City Council. Therefore, the presidency of the IBB has faced added challenges in terms of forming urban coalitions. As will be discussed below, the municipality has had to develop new solutions to these problems.

In the case of Istanbul, the urban coalition and cooperations with other cities are intertwined with the current political polarization in Turkey, including the conflict and competition between the central government and the opposition parties as well as the local governments from the opposition parties. The first report of this project unravelled the conflict of authority between the local and central governments in Istanbul, which must develop problem-solving mechanisms for global issues by forming urban cooperations. For the last twenty years—in other words, during the AKP period—urbanization and economic growth via urban transformation, the construction sector, and boosting service sectors such as shopping malls were one of the government's main economic policies. Istanbul was at

the center of this policy for decades. For this reason, the conflict between the local government and the center accelerated while the contested areas of this conflict expanded from green spaces to new investments or social aid. These issues are also very much related with the subjects of this project such as climate change and vulnerable groups. The two interviews we conducted with the IBB mainly focused on these problems as well as developing strategies to surpass or challenge the authority of the City Council.

The first of our interviews was with a representative of the the Foreign Relations Department in the IBB. The second interview was held with a scholar who contributed to a recently published report *Istanbul Vision 2050* launched by the Istanbul Planning Agency.<sup>24</sup> According to the interviews, city diplomacy became a priority for the IBB within the scope of the *Istanbul Vision Plan 2050*. The report puts forth an integrated road map and action plan comparing the city's new strategy on city diplomacy with previous ones. The report was prepared according to a participatory model based on transparency, accountability, and active participation. The main topics focused on global issues such as the transformation of cities and metropol, climate change, urban poverty, social inequalities, and security. In the meantime, the Istanbul Planning Agency, who led the preparation process of the report, held meetings with Barcelona and New York City to listen to their experiences. *Istanbul Vision 2050* aims to tackle five essential topics (1) Governance and Democracy, (2) Economy and Development, (3) Ecology and Environment, (4) Urban Built Environments, Transportation, and Infrastructure, (5) Social Welfare and Justice.<sup>25</sup> As underlined by the scholar who participated in this strategic plan, urban cooperation was identified as an institutional principle and defining goal in the chapter "Governance and Democracy." Although urban coalitions are a relatively new concept in the field of municipal governance, it is a much newer concept for Istanbul. In this sense, it is very important to include this principle in plans that are thought to guide the future of the city. As the interviewee pointed out, the report also indicates a change in the perspective that directs policy making.

21 "Belediye / Kardeş Şehirler .," Belediye, accessed September 17, 2022, <https://www.ibb.istanbul/icerik/kardes-sehirler>.

22 Üyelerimiz, Accessed September 26, 2022, <http://uclg-mewa.org/uyelerimiz/>.

23 C40 Cities. "Our Cities - C40 Cities." <https://www.c40.org/cities/>

24 "Istanbul 2050 Vision," İstanbul Planning Agency, <https://vizyon2050.istanbul/en>.

25 According to this framework, the Vision 2050 adopts seven targets to challenge these five topics. These targets are The Climate Adaptive City that Protects the Environment; Transformative and Resilient Economy; Accessible and Fair Urban Amenities for All; Vibrant and Sensible Spaces Assuring Good Living for All; Effective and Inclusive Mobility; Integrated and Smart Infrastructure Systems; Equal and Free Society. "Istanbul 2050 Vision," İstanbul Planning Agency, <https://vizyon2050.istanbul/en>.

The interviewee from IBB stated that although Istanbul had taken part in the urban cooperation projects in the past, now these projects hold growing importance and are a priority for the IBB. The new mayor of Istanbul, elected in 2019, attributes special importance to cities as rising actors in solving global problems. Although this new role of cities does not challenge national governments, it gives cities a bigger role as a first responder to global challenges such as pandemics, climate change, migration, etc. As we witnessed in the COVID-19 pandemic, municipalities are the closest institutions to people in solving everyday problems. This does not mean that municipalities should challenge national governments but rather that municipalities are public institutions that can often address people's daily needs more quickly. For this reason, municipalities are referred to as "first responders." IBB's approach is in parallel with this view, and for this reason it is eager to establish new bonds with different cities.

It is difficult to establish new bonds in the current political context due to bureaucratic and political procedures. To undertake new urban coalition models, the City Council and the central government must first approve them. Over the last few years, the IBB has made room for new cooperation and strengthened its position in international networks. IBB has initiated a new project in the Balkans to facilitate regional city diplomacy. The first idea for such intercity cooperation came up in 2020. On November 29–30, 2021, IBB hosted the inaugural gathering of the B40 Balkan Cities Network, which included mayors and municipal representatives. The B40 Network is a group of cities aiming to strengthen collaboration and cooperation between Balkan cities. The main issues are climate action, smart cities, digital transformation, urban democracy and migration, and economic cooperation.<sup>26</sup> Before the summit in Istanbul, Local Climate Action and Local Democracy and Migration working groups had come together on September 13–17, 2022 in Istanbul. The Climate Action workshop hosted by IBB Environmental Protection and Control Department focused on issues such as climate action plans, preparing an inventory for the prevention of emissions, awareness raising, and education on transport-related air pollution. The representatives from different Balkan cities also shared best practices. They shared ideas on organizing joint activities in open green areas and city parks, installing solar panels and charging stations in parks, closing some pre-determined areas

to traffic simultaneously, and organizing exhibitions. Waste management processes were also a critical topic of the workshop.<sup>27</sup> IBB gives particular importance to this project. Istanbul is the current president of B-40, and in January 2023, Athens will hold the presidency. However, IBB established these relationships through mutual goodwill protocols that have no legal bounds, which limits the effectiveness of such a network. While it is possible that an elected mayor and his body of governance might take the necessary steps according to his policies and vision without the approval of political bodies, the City Council's approval is necessary for some areas of cooperation to take hold, such as donations. On the one hand, these efforts indicate that climate policy governance in Turkey has started to bring about institutional changes, one requirement for climate policy units to reach international climate finance opportunities. On the other, the necessary changes in city diplomacy are still lacking in Turkey as populist authoritarian governments have pushed for further centralization, especially in city governance.

Istanbul also aims to strengthen its ties with the C40 Cities Climate Leadership Group. The main focus of its relations with C40 is attending its meetings and the exchange of know-how. For example, the C40 also supplied technical assistance to the IBB for its climate action plan launched in 2021.<sup>28</sup> Although the desired progress in cooperation with world cities has not been achieved due to the COVID-19 pandemic, some progress has been made since 2021.

There are also other international organizations that Istanbul takes part in as a member. Through the initiation of the Mayor of Florence, Mr. Dario Nardella, the Florence Mediterranean Mayors' Summit was held in February 2022. The Mayor of Istanbul joined the forum held on February 25–27, 2022. Istanbul also aims to develop its relations with the Euro-Cities network, which encompasses 200 cities from 38 countries. IBB already participates in the annual meeting of this organization.

These various models and examples of urban coalitions tell us little about joint efforts to combat climate change. The research team tried to raise this question during the interviews. As the interviewees stated, reaching the city's targets on climate change is a multi-

26 "Who We Are - B40 Balkan Cities Network," B40 Balkan Cities Network - Better cooperation, better future., November 24, 2021, <https://b40network.org/who-we-are/>.

27 "B40 Balkan Cities Network Istanbul Workshops," B40 Balkan Cities Network. <https://b40network.org/wp-content/uploads/2022/10/B40-Network-Istanbul-Workshop-Bulletin.pdf>

28 C40 Cities, "C40 Cities - A Global Network of Mayors Taking Urgent Climate Action.," "İstanbul İklim Değişikliği Eylem Planı," İstanbul Büyükşehir Belediyesi, [https://cevre.ibb.istanbul/wp-content/uploads/2022/01/ist\\_iklim\\_degisikligi\\_eylem\\_plani.pdf](https://cevre.ibb.istanbul/wp-content/uploads/2022/01/ist_iklim_degisikligi_eylem_plani.pdf)



layered issue. The city is open to cooperation on both know-how and financial issues. Regarding know-how, the water management issue is now one of the top issues of the IBB. ISKI (İstanbul Su ve Kanalizasyon Şirketi) is a subsidiary company of IBB, which has nearly 7 million subscribers.<sup>29</sup> Its main areas are water management, waste water management, and laboratory services. The IBB is willing to increase its capacity for water management and all its sub-branches. As indicated in the second research report of the project, water management is one of the main priorities of the Berlin's climate action plan.<sup>30</sup> A set of talks to be initiated between ISKI and the related departments of the Berlin municipality, for example, would be beneficial for the IBB.

If Istanbul is to reach its goal on net-zero emissions in 2050, then it needs extra funds and subsidies, especially given the scale of the city. According to IBB, this kind of investment is beyond the financial capacity of the municipality. It needs national and international support. Despite these hurdles the IBB has designed its investment plans considering the fight against climate change. This includes financing important investments such as the launch of Europe's largest center for transforming solid waste into energy as well as other investments in the field of waste management. IBB has also been working on improving intracity rail transport. It has prioritized the completion of light-rail transport lines inside the city. In this manner, IBB is looking for funds to carry out a new line that would connect the city's two airports by rail transport. Developing sea transport to use new ships powered by electricity is also another important target of the IBB. The IBB has launched seven new sealines in 2022.<sup>31</sup> In sum, water management, waste management, transportation, and energy efficiency are the top areas in which the IBB is looking to address the mitigation of climate change.

This report aims to underscore specific, vital topics related to climate change and vulnerability that are under the authority of the IBB in order to find and facilitate avenues of cooperation between the two cities. One common issue is the threat of urban heat islands. Our interview with a senior scholar on climate

change from Sabancı University underlined the importance of urban heat islands and heatwaves, from which Europe has been suffering for some time. According to this scholar, the frequency of heat waves affects a broad space and leads to increased deaths and health problems primarily for the elderly, the urban poor, and people who have chronic diseases. However, neither people nor officials are interested in these issues. There are several reasons that heat waves do not catch the eye of the media; it is usually hard to know the story of the people who have died during heat waves or how to judge what is considered 'hot weather' among different people in the summer. The scholar warned that raising this as a question in the public sphere creates extra responsibility for both central and local authorities. However, in Europe in 2003, 70,000 people died in heat waves across the continent. In 2020, 54,000 died. Moreover, the research team also emphasized the vulnerability of Berlin to heat waves and urban heat islands. Solving this essential issue is relatively easy. Informing people about the risks of heat waves, putting water dispensers in crowded places, more shelters to protect people from the sun in green areas, and informing healthcare workers are only some examples of these measures.<sup>32</sup> Heat waves and urban heat islands are critical threats to Berlin and Istanbul, and the cities should exchange ideas on different measures to protect their citizens.

The interviewees stated that areas such as tourism are common topics that bind cities across the globe. However, although cities such as Barcelona, London, Paris, and Vienna are able to carry out successful cooperation projects primarily on issues such as tourism, this issue falls under the jurisdiction of the central government in Turkey, namely the Ministry of Culture and Tourism. The interviewees underlined the importance of cooperative projects in this area. When developing such projects, any points that the central government objects to should be explained to the public, and public support should be obtained. It was emphasized that it is extremely important to provide social support for and commitment to new forms of cooperation in the tourism sector.

The interviews also revealed that IBB's specific policies on urban solidarity are critical to establishing cooperation between cities. These projects aim to provide anonymous financial support to families and women. As mentioned in the first report, the most significant achievement of the IBB during the COVID-19 period

29 "ABOUT ISKI," ISKI. <https://www.iski.istanbul/web/en-US/kurumsal/iski-hakkinda>

30 "Climate Change Adaptation and Its Impact on Vulnerable Groups: Berlin Municipality Case Study," Overcoming Gblal Problems Through Local Cooperation: The Case of the Istanbul Metropolitan Municipality, IPC-İKV-TEPAV and CATS. <https://ipc.sabanciuniv.edu/Content/Images/CKeditorImages/20221102-11113228.pdf>

31 Diken - Yaramazlara biraz batır! "İstanbul'da Yedi Yeni Deniz Yolu Hattı Açılacak - Diken," September 21, 2022. <https://www.diken.com.tr/istanbulda-yedi-yeni-deniz-yolu-hatti-acilacak/>

32 See also Ümit Şahin, *Göçden Kaçan En Ölümcül İklim Felaketi Sıcak Dalgaları*. İstanbul Kenet Araştırmaları ve Düşünce Dergisi, 2022 / 005, p. 119

was the ‘Askıda Fatura’ (‘Pending Bills’) campaign. It allowed users to upload outstanding bills and wait for benefactors to pay them directly through the municipality. The website does not reveal the identities of those seeking assistance or those providing donations. The platform’s anonymity is critical to protecting recipients’ dignity and preventing them from becoming enslaved to an organization or political party. As of November 2022, the total amount of bills paid is 61,068,788 Turkish lira (TL).<sup>33</sup> These kinds of anonymous and dynamic applications to combat urban poverty and strengthen solidarity between people living in the same city might be an excellent model to be implemented in various other cities.

The scholar that we interviewed underscored the need for more collected and processed data related to climate change in Istanbul. To this end, Istanbul Vision 2050 aims to lead works on spatialization. Through the spatialization projects, IBB can see which groups of people reside in which districts. It will pave the way for tailor-made projects regarding climate change, refugees, women, the urban poor, or the risks of heat waves in the city. First, however, the city needs to retrieve transparent and orderly data. For this reason, cooperation on data collecting and processing and turning this into meaningful projects is an essential facet of the urban coalition between Istanbul and Berlin.

Last but not least, as emphasized by the interviewees and mentioned at the beginning of the first report, bureaucracy and politics are the two biggest obstacles to forming urban coalitions. While our interviewees believe that bureaucracy can be overcome in time, politics and polarization are much more difficult to overcome.

<sup>33</sup> “Askıda Fatura,” İstanbul Büyükşehir Belediyesi. <https://askidafatura.ibb.gov.tr/>

### 3. AN ANALYSIS: COMPARING BERLIN AND ISTANBUL

According to data from several documents from the IBB, namely the Istanbul Metropolitan Municipality Strategic Plan (2020–2024), the Istanbul Climate Change Action Plan (2021), Annual Report (2021), and Performance Program (2022), the below table compares Istanbul and Berlin with respect to the relevant parameters:

- Governance-related parameters
- Demography-related parameters
- Climate change-related parameters
- Socioeconomic-related parameters

Table 1: The relevant parameters comparing Istanbul and Berlin

Parameters	Istanbul	Berlin
<b>Governance related parameters</b>		
Is it a unitary or federal government?	Unitary	Federal
Elected governing party of cities (opposition or ruling)	Opposition	Ruling
Number of Local government units	19+1	12
Local government index	98 <sup>th</sup> (Final report p.8)	
<b>Demography related parameters</b>		
Total Area	5343 km <sup>2</sup>	891.8 km <sup>2</sup>
Total population (or population density) in 2021	15.840.900 ( <a href="https://www.tuik.gov.tr/duyuru/favori_raporlar">https://www.tuik.gov.tr/duyuru/favori_raporlar</a> )	3.769.495 ( <a href="https://www.businesslocationcenter.de/en/business-location/berlin-at-a-glance/demographic-data">https://www.businesslocationcenter.de/en/business-location/berlin-at-a-glance/demographic-data</a> )
migrant and refugee population	1,624,676 (final report p.16)	more than 1,000,000 ( <a href="https://www.businesslocationcenter.de/en/business-location/berlin-at-a-glance/demographic-data">https://www.businesslocationcenter.de/en/business-location/berlin-at-a-glance/demographic-data</a> )
is it a coastal town?	yes	yes
number of people below poverty line	1.6 million people (iklim deęiřiklięi eylem planı sf.22)	435.000
is child population proportion above/ under EU average rate?	above ( <a href="https://data.tuik.gov.tr/Bulten/Index?p=Dunya-Nufus-Gunu-2022-45552#:~:text=Bu%20C3%BC%C3%A7%20%C3%BCIke%20d%C3%BCnya%20toplamlam,1%2C1ini%20olu%C5%9Fturdu.&amp;text=Y%C4%B1%20ortas%C4%B1%20n%C3%BCfuslard%C4%B1r.">https://data.tuik.gov.tr/Bulten/Index?p=Dunya-Nufus-Gunu-2022-45552#:~:text=Bu%20C3%BC%C3%A7%20%C3%BCIke%20d%C3%BCnya%20toplamlam,1%2C1ini%20olu%C5%9Fturdu.&amp;text=Y%C4%B1%20ortas%C4%B1%20n%C3%BCfuslard%C4%B1r.</a> )	under
proportion of children in the population	22.1-28% <a href="https://data.tuik.gov.tr/Bulten/Index?p=Istatistiklerle-Cocuk-2021-45633">https://data.tuik.gov.tr/Bulten/Index?p=Istatistiklerle-Cocuk-2021-45633</a>	14%
proportion of elderly people in the population	5-7.90% <a href="https://data.tuik.gov.tr/Bulten/Index?p=Istatistiklerle-Yasliilar-2021-45636">https://data.tuik.gov.tr/Bulten/Index?p=Istatistiklerle-Yasliilar-2021-45636</a>	19%
is elderly people proportion above/ under EU average rate?	under <a href="https://data.tuik.gov.tr/Bulten/Index?p=Dunya-Nufus-Gunu-2022-45552#:~:text=Bu%20C3%BC%C3%A7%20%C3%BCIke%20d%C3%BCnya%20toplamlam,1%2C1ini%20olu%C5%9Fturdu.&amp;text=Y%C4%B1%20ortas%C4%B1%20n%C3%BCfuslard%C4%B1r.">https://data.tuik.gov.tr/Bulten/Index?p=Dunya-Nufus-Gunu-2022-45552#:~:text=Bu%20C3%BC%C3%A7%20%C3%BCIke%20d%C3%BCnya%20toplamlam,1%2C1ini%20olu%C5%9Fturdu.&amp;text=Y%C4%B1%20ortas%C4%B1%20n%C3%BCfuslard%C4%B1r.</a> )	above
urbanization rate		

Table 1: The relevant parameters comparing Istanbul and Berlin (cont.)

Parameters	Istanbul	Berlin
<b>Climate change related parameters</b>		
Produced Greenhouse gas emissions in 2019	50.9 MtCO <sub>2e</sub> (iklim değışikliđi eylem planı sf.22)	17.2 Mt CO <sub>2e</sub> ( <a href="https://www.berlin.de/sen/uvk/en/climate-action/climate-neutral-berlin-2045/">https://www.berlin.de/sen/uvk/en/climate-action/climate-neutral-berlin-2045/</a> )
Net zero target year	2050 (climate change action plan p.12)	2045 ( <a href="https://www.berlin.de/sen/uvk/en/climate-action/climate-neutral-berlin-2045/">https://www.berlin.de/sen/uvk/en/climate-action/climate-neutral-berlin-2045/</a> )
Does it have local plans and programs against climate change?	yes, 4 plans and programs (final report p.19)	yes, 6 plans
Amount of Active Green Areas Per Capita	7.73 m <sup>2</sup> (faaliyet raporu sf.320)	37.84 m <sup>2</sup>
Proportion of rail transport in public transport in 2021	20% (faaliyet raporu sf.317)	18.51% ( <a href="https://citytransit.uitp.org/berlin/length-of-public-transport-routes">https://citytransit.uitp.org/berlin/length-of-public-transport-routes</a> )
Proportion of waste processed in metropolitan municipality recycling facilities	14% (faaliyet raporu sf.319)	%70.8 ( <a href="https://www.berlin.de/sen/uvk/umwelt/kreislaufwirtschaft/abfallbehoerde/abfallbilanzen/">https://www.berlin.de/sen/uvk/umwelt/kreislaufwirtschaft/abfallbehoerde/abfallbilanzen/</a> )
Number of intelligent transportation systems	5979 ( <a href="https://data.ibb.gov.tr/dataset/mevcut-akilli-ulasim-sistemleri-sayisi">https://data.ibb.gov.tr/dataset/mevcut-akilli-ulasim-sistemleri-sayisi</a> )	314
amount of electricity generated from waste per year in 2021	843,747,566 kWh/year (faaliyet raporu sf.319)	262,000,000 kWh
institutional waste recycling rate in 2021	15%	
Number of smart transportation systems put into service in 2021	115 (faaliyet raporu sf.318)	
planned length of cycle route in 2022	100 km (performans programı sf.46)	
number of planted trees in 2021	55,888 (faaliyet raporu sf.320)	430.000(total number of trees) ( <a href="https://www.sustaineurope.com/green-berlin-20190422.html#:~:text=Berlin%20is%20an%20exceptionally%20green,is%20green%20spaces%20and%20woodland.">https://www.sustaineurope.com/green-berlin-20190422.html#:~:text=Berlin%20is%20an%20exceptionally%20green,is%20green%20spaces%20and%20woodland.</a> )
The amount of green field built during the year in 2021	4,081,932 m <sup>2</sup> (faaliyet raporu sf.320)	30% of the total city area(891.000.000 m <sup>2</sup> ) 267.540.000 m <sup>2</sup> ( <a href="https://www.berlin.de/sen/uvk/natur-und-gruen/stadtgruen/daten-und-fakten/gruenflaechen-gruenanlagen/">https://www.berlin.de/sen/uvk/natur-und-gruen/stadtgruen/daten-und-fakten/gruenflaechen-gruenanlagen/</a> )
current cycle route in İstanbul in 2021	374.1 km (faaliyet raporu sf.168)	150 km mandatory, 620 km total(off-road,bike lanes on the roads, shared bus lanes ,combined pedestrian/bike paths,marked bike lanes on the sidewalks) ( <a href="https://en.wikipedia.org/wiki/Cycling_in_Berlin">https://en.wikipedia.org/wiki/Cycling_in_Berlin</a> )
renewable energy installed capacity	85,499 Kwp (faaliyet raporu p.319)	370 million kWh(2019 Power generation from renewable energies (million kWh) ) ( <a href="https://www.foederal-erneuerbar.de/landesinfo/bundesland/B/kategorie/strom/%23goto_289//auswahl/175-stromerzeugung_aus_e/#goto_175">https://www.foederal-erneuerbar.de/landesinfo/bundesland/B/kategorie/strom/%23goto_289//auswahl/175-stromerzeugung_aus_e/#goto_175</a> )
proportion of renewable energy in generation of electricity		6% (2020) ( <a href="https://www.foederal-erneuerbar.de/landesinfo/bundesland/B/kategorie/top+10/auswahl/289-anteil_erneuerbarer_%252523goto_289/">https://www.foederal-erneuerbar.de/landesinfo/bundesland/B/kategorie/top+10/auswahl/289-anteil_erneuerbarer_%252523goto_289/</a> )
primary source of greenhouse gas and its proportion	Firm energy (building, manufacturing, construction) %63 (iklim degisikliđi eylem plan sf.32)	Industry

Table 1: The relevant parameters comparing Istanbul and Berlin (cont.)

Parameters	Istanbul	Berlin
Socioeconomics related parameters		
employment rate of women	30.5% (final report p.16)	74.1% ( <a href="https://www.destatis.de/DE/Themen/Arbeit/Arbeitsmarkt/Erwerbstaetigkeit/Tabellen/erwerbstaetigenquoten-gebietsstand-geschlecht-altergruppe-mikrozensus.html">https://www.destatis.de/DE/Themen/Arbeit/Arbeitsmarkt/Erwerbstaetigkeit/Tabellen/erwerbstaetigenquoten-gebietsstand-geschlecht-altergruppe-mikrozensus.html</a> )
number of industrial zone	8 <a href="http://portal.sanayigazetesi.com.tr/osbler/%C4%B0stanbul-ilindeki-osbler.htm">http://portal.sanayigazetesi.com.tr/osbler/%C4%B0stanbul-ilindeki-osbler.htm</a>	5 (Marzahn-Hellersdorf, Lichtenberg,Adlershof,Tegel,Wuhlheide)
tourist number per year	12.6 million (final report p.14)	13.5 million ( <a href="https://www.berlin.de/sen/wirtschaft/en/economics-and-technology/branches/tourism/">https://www.berlin.de/sen/wirtschaft/en/economics-and-technology/branches/tourism/</a> )
unemployment rate	14.7% (Climate Change Action Plan p.22)	8.7% ( <a href="https://www.berlin.de/en/news/7478082-5559700-umemployment-rate-falls-8-percent-en.html">https://www.berlin.de/en/news/7478082-5559700-umemployment-rate-falls-8-percent-en.html</a> )
number of factories		36 ( <a href="https://bolddata.nl/en/companies/germany/manufacturing-companies-germany/">https://bolddata.nl/en/companies/germany/manufacturing-companies-germany/</a> )
proportion of low-skilled jobs in the workforce		
rank of Istanbul in terms of potential economic damages of extreme weather events in 15 European coastal cities	First (Climate Change Action Plan p.3)	<a href="https://germanwatch.org/sites/default/files/Global%20Climate%20Risk%20Index%202021_1.pdf">https://germanwatch.org/sites/default/files/Global%20Climate%20Risk%20Index%202021_1.pdf</a>
International networks		
Is it a part of C40 cities?	Istanbul is member since 2006	Berlin is member since 2006

The Republic of Turkey is a unitary state. In other words, the central government controls the division of the administration on the subnational level, which strengthens the centralized framework and restricts the functioning of local government units. According to the World Bank's Local Government Index, Turkey ranks 98<sup>th</sup> among 163 countries, indicating local governments' lack of autonomy in Turkey. In the case of Istanbul, the centralization of the local government has increased since the opposition party has taken power. Hence, the IBB has become somewhat less powerful in decision-making and implementing policies in various fields.

Istanbul is strategically located, linking Asia and Europe. Because of its unique geographical location, Istanbul is a vital economic and cultural center. The city hosts around 16 million people from different cultures and nationalities, which makes Istanbul the most populated city in Europe as of 2021.<sup>34</sup> Approxi-

mately 22.1–28% of the population are children,<sup>35</sup> and 5–7.90% of the population are elderly.<sup>36</sup> Additionally, Istanbul hosts around 1.2 million registered refugees and migrants as of 2021.<sup>37</sup> Nearly 1.6 million people live in poverty.<sup>38</sup> On top of this, the unemployment rate was 14.7% in 2020,<sup>39</sup> which is considerably high compared to 7.2% unemployment in the EU in 2020.<sup>40</sup> These demographic and socioeconomic parameters reveal that a significant proportion of the population belongs to vulnerable groups, which will be most affected by

34 TURKSTAT. (2022). "Adrese Dayalı Nüfus Kayıt Sistemi Sonuçları", 2021 <https://data.tuik.gov.tr/Bulten/Index?p=45500#:~:text=%C4%B0stanbul'un%20n%C3%BCfusu%2015%20milyon,840%20bin%20900%20ki%C5%9Fi%20oldu.>

35 TURKSTAT. (2022). "İstatistiklerle Çocuk, 2021", <https://data.tuik.gov.tr/Bulten/Index?p=İstatistiklerle-Cocuk-2021-45633>

36 TURKSTAT. (2022). "İstatistiklerle Yaşlılar, 2021", <https://data.tuik.gov.tr/Bulten/Index?p=İstatistiklerle-Yaslılar-2021-45636>

37 Ministry of Internal Affairs. (November 2021). "İstanbul İlinde 2,5 Milyon Yabancımların Yaşadığı Yönündeki İddialar Hakkında", <https://www.goc.gov.tr/istanbul-ilinde-25-milyon-yabancinin-yasadigi-yonundeki-iddialar-hakkinda2>

38 Istanbul Metropolitan Municipality, (2021a) "İstanbul İklim Değişikliği Eylem Planı",

39 Istanbul Metropolitan Municipality, "İstanbul İklim Değişikliği Eylem Planı", (2021a)

40 EUROSTAT. (2022). Unemployment statistics and beyond, [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Unemployment\\_statistics\\_and\\_beyond#:~:text=Highlights&text=In%202021%2C%20the%20EU%20unemployment,rate%20of%206.8%20%25%20in%202019.](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Unemployment_statistics_and_beyond#:~:text=Highlights&text=In%202021%2C%20the%20EU%20unemployment,rate%20of%206.8%20%25%20in%202019.)

the adverse impacts of climate change. According to research measuring the potential economic damage from extreme weather events in 15 European coastal towns, Istanbul is the most vulnerable city to climate change in Europe.<sup>41</sup>

With a significant number of industrial zones and factories, Istanbul generated approximately 50.9 MtCO<sub>2</sub>e greenhouse gas emissions (GHGs) in 2019, corresponding to around 10% of Turkey's emissions in that year.<sup>42</sup> Energy, transportation, and waste sectors, with a ratio of 63%, 28%, and 9%, respectively, were the largest contributors of GHGs in the city. IBB aims to gradually reduce GHGs to zero by 2050. There are currently four local plans and programs focused on this goal. Under one of these plans, IBB has been trying to increase green areas in the city, estimated at 7.73 m<sup>2</sup> per capita, by planting new trees. IBB planted 55,888 trees across the city in 2021, while building 4,081,932 m<sup>2</sup> of green fields in the same year.<sup>43</sup>

IBB has also been focusing on intracity transportation to reduce GHGs emissions. Recently, citizens started to use trains more often than before as a means of public transportation in Istanbul. Statistics reveal that one out of five residents prefers trains, which cause fewer GHG emissions compared to other means of public transportation.<sup>44</sup> IBB has been expanding city cycling routes and using smart transportation systems. Istanbul currently has 374.1 kilometers of bicycle paths and plans to expand this by 100 km by the end of 2022.<sup>45</sup>

Additionally, IBB has been increasing the amount of electricity produced from waste not only to decrease GHGs emissions but also to boost the city's circular economic approach. The quantity of electricity generated from waste was anticipated to be 500,000,000 Kwh/year<sup>46</sup> in 2021, but this amount reached 843,747,566 Kwh/year in 2021 due to the IBB's efforts.

Concerning the current population of vulnerable groups, as mentioned above, Istanbul may need to take more precautions and actions to fight the impacts of

climate change. As a member of numerous global institutions and organizations focusing on climate change and sustainable cities, IBB continues to be decisive and exert efforts to reduce GHGs. However, to be more effective in combating climate change, cooperation with similar cities needs to be established.

On the one hand, cities are home to the majority of the world's population; on the other hand, they symbolize consumption together with the depletion of natural resources, requiring local, regional, national, and global strategies and actions for climate policy. The involvement of different actors from the various levels, such as policy, practice, science, and civil society, in developing urban climate action plans is critical to strengthen continuous, horizontal dialogue between these actors.<sup>47</sup> Apart from environmental vulnerabilities, both internal migration within the country (from rural to urban) and external migration from neighboring countries will exacerbate economic, social, and demographic vulnerabilities, particularly in cities like Istanbul. Local governments need to focus on the root causes of these problems to fix or neutralize the present vulnerabilities. At this stage, employing other local governments' experiences in a different country context may support establishing medium- to long-term policies to mitigate climate change and remedy the vulnerabilities of Turkey's cities.

Since city governance is critical in the implementation of sustainable policies at the local level, especially in urban areas, this creates a problem in unitary and centralized countries such as Turkey. As an essential part of Turkey's economy and hosting nearly one-fifth of its population, Istanbul has the potential to turn into a sustainable city by lowering GHGs and easing the situation of vulnerable groups. However, first, IBB has to face challenges at different levels because of the centralized governance structure of Turkey.

Berlin, the capital and largest city of Germany, has been analyzed and compared to Istanbul in this research for a variety of reasons, including the fact that it is the most populated city in Germany, hosts a large number of refugees like Istanbul, and has a highly detailed climate action plan.

Berlin Municipality has a particularly multi-level administrative system that controls how various governmental levels interact and how funds are allocated. In the German federal system, the city of Berlin

41 Luis M. Abadie et al, "Climate Risk Assessment under Uncertainty: An Application to Main European Coastal Cities." *Frontiers in Marine Science*, 3, (December 16, 2016), <https://doi.org/10.3389/fmars.2016.00265>.

42 TÜİK Kurumsal. "Sera Gazı Emisyon İstatistikleri, 1990-2020." Accessed September 26, 2022.

43 Istanbul Metropolitan Municipality, "Annual Report", (2021b)<https://ibb.istanbul/BBImages/Slider/Image/2021-faaliyet-raporu.pdf>

44 Istanbul Metropolitan Municipality, "Annual Report", (2021b)<https://ibb.istanbul/BBImages/Slider/Image/2021-faaliyet-raporu.pdf>

45 Istanbul Metropolitan Municipality, "Annual Report", (2021b)<https://ibb.istanbul/BBImages/Slider/Image/2021-faaliyet-raporu.pdf>

46 This amount of energy enables 93,749,729 classical light bulbs to lighten the surrounding area 5 hours a day for a month.

47 Krellenberg, K. & Turhan, E. (2017). "How to Respond to Climate Change at the Local Level: A Guideline for Turkish Cities", Leipzig: UFZ Bericht, No. 03/2017, Helmholtz-Zentrum für Umweltforschung (UFZ).

performs the duties of both the municipal and the state governments. The city is organized into districts (*Bezirke*), some of which are in charge of environmental and land use planning.

Berlin is currently expanding by roughly 40,000 people annually, partially as a result of international migration processes. Some part of the migration to Berlin is due to climate change and extreme weather conditions such as drought and floods in the countries from which people are migrating. Those people, defined as climate refugees, are included among the most vulnerable groups in Berlin. The vulnerable groups due to climate change include many different segments of the population but mainly include climate refugees, people who have suffered property damage as a result of climate disasters in urban areas, people who lost their jobs in the agricultural sector as a result of climate changes, and women and children who have fallen into poverty as a consequence.

Since the individuals who belong to vulnerable groups have a low income level, they are still in a position to be affected by extreme climatic events due to the possible low quality of infrastructure in the places where they migrate or move. Therefore, municipalities should develop comprehensive plans to combat climate change and a road map to assure the inclusion of vulnerable groups in society, all while enhancing their resistance to climate-related catastrophes.

Berlin has contributed significantly to the country's efforts to combat climate change. The municipal administration ordered two studies to be carried out in 2014 and 2015, *Climate-Neutral Berlin 2050* and *New Energy for Berlin*. In 2016, the *Berliner Energiewendegesetz* (Berlin Energy Revolution Act) became effective, which defines climate neutrality as a binding objective. The city intends to achieve climate neutrality by 2050, and CO<sub>2</sub> emissions must be at least 85% lower than they were in 1990. The goal is to reach 60% by 2030. Considering that the percentage is currently hovering around 40%, it is an ambitious target.

Within its borders, about 40% of Berlin's total land area is composed of green (parks, forests, etc.) and blue (rivers, channels, lakes, ponds, etc.) areas. The city seeks to build a "green belt" around the city to serve as a limit to urban growth and as protection against urban sprawl.

While there are many pilot projects in Berlin focusing on different aspects of urban development, two projects stand out due to their size and scope. Berlin's

Schumacher Quarter has taken important measures against extreme climatic events with their project "Sponge City Berlin." Residential buildings and open spaces on the grounds of the decommissioned Tegel Airport are being planned within the scope of this project. A "sponge city" retains rainwater within a residential estate. Surplus water seeps slowly into the groundwater instead of being drained off through the sewage system. The Quarter is becoming Berlin's reference for urban development that adapts to climate change and is sensitive to the city's water needs.

Although the impact of climate change on vulnerable group is not so apparent in municipalities' plans to combat climate change, the term "climate migrant" will leave its mark on the city in the coming years and should be incorporated into the city's plans.

#### 4. POLICY RECOMMENDATIONS

Climate policy requires local initiatives in addition to global, national, and regional ones as cities are home to the majority of the world's population and have become the focal point of resource consumption and depletion. Local governments must address the causes of these issues and identify workable solutions to these vulnerabilities. Establishing solid and long-term policies, learning from other nations' experiences in combating climate change, and recognizing the vulnerabilities of Turkey's cities and seeking quick fixes are essential. After conducting fieldwork and a literature review on the two cities, we argue that increased cooperation between Istanbul and Berlin should be carried out to address common problems such as climate change and vulnerable groups. Such an urban coalition based on the transfer of know-how, experience sharing, developing common projects, or financial support would enhance the capacity of both cities and increase their leverage at the international level. Both Istanbul and Berlin are centers of attraction for new populations, where innovation, culture, and creativity flourish and provide hope for newcomers. As it is one of the largest capitals of the EU—where these topics have been discussed and turned into determinant policies for decades—Berlin is very experienced and open to collaboration in climate change. Istanbul is also very motivated to work on adapting to climate change. Since the local elections held in 2019, the new mayor and administrative staff have given priority to finding solutions to these challenges. The city's action plans focusing on climate change and inequality as well as the city's general vision plans have drawn road maps according to international standards. However, the rising conflict between the central government and the local government since the latest local elections in 2019 has become apparent in many aspects of urban life. During the COVID-19 crisis, local governments tried to implement social policies for city dwellers. Before these policies were fully implemented, the central government intervened in the policies of local governments led by opposition parties all over Turkey, including Istanbul. However, through legal justifications and means, these interventions have covered more than just the cities' pandemic responses and include a widespread field involving actions that should be taken toward combating climate change and promoting sustainability. Examples include the use of green spaces, urban transformation, and investments to increase energy efficiency and decrease greenhouse gasses. Under these circumstances, IBB has been

successful in solving some problems related to energy use despite this pressure from the central government.

In light of our research, we have developed the following policy recommendations for the IBB and its EU-based urban coalition partner, Berlin. As our studies have shown, the two cities' shared experiences and participation in urban coalitions present several avenues for strengthening cooperation, which are mentioned below. However, first, the cities must establish greater institutional communication and cooperation at different levels. Second, specific topics of capacity and cooperation should be chosen and placed on both cities' agendas. It would be more efficient if these topics were placed directly under the authority of municipalities and mayors. In the case of Istanbul, the issue of green spaces, for example, is under both the municipality's and central government's authority, which complicates work on this issue. For this reason, placing more issues under the municipal authority would lead to quicker progress in enhancing cooperation. Regular meetings between specific teams to determine which topics to work on would facilitate more efficient cooperation. The stakeholders or partners at the urban, national, or international levels might contribute to these meetings in future steps. The main aim of urban coalition is to enhance the cities' capacities and increase their international leverage. While cooperation on specific issues might appear as only a small step toward this aim, it is undoubtedly a solid step.

- First and foremost, Istanbul and Berlin face similar problems as both are the largest cities in their home countries. Therefore, they may exchange their experiences in the field of local governance. In terms of the IBB, the new local government is well aware of the challenges of the city and prepares its action plans according to these challenges and international guidelines such as the SDGs. Within this scope, it is possible to argue that the two cities' approaches to climate change and vulnerable groups are compatible with each other and the global guidelines set by the UN. However, we should also keep in mind that these two cities are governed very differently in terms of political and administrative systems. Berlin has a much more decentralized administration compared to Istanbul. This situation is the most significant difference between the two cities, although not a permanent obstacle to cooperating on considerable challenges.



These two cities might prefer to enhance their cooperation on issues under the authority of the local governments' direct involvement in, for example, waste management and recycling, water management, urban heat waves, urban and social solidarity projects.

- As recycling is a core part of implementing a circular economy, embedding recycling into the waste management strategy of a municipality is important. Berlin Municipality approved its Berlin Waste Management (Abfallwirtschaftskonzept) 2010–2020<sup>48</sup> in 2011, which was the backbone of development strategies concerning the transition from a linear economy to a circular economy and action plans regarding combating climate change. Berliner Stadtreinigungsbetriebe (BSR) collects 59% of paper and packaging waste with an estimated recycling rate of 54%. While BSR recycled organic waste, it converted some of them to biogas in a fermentation facility to be utilized as fuel in the BSR's fleet of vehicles.<sup>49</sup>

IBB provided a section for waste management in its latest Climate Change Action Plan. Accordingly, IBB aims to increase its recycling from 14% to 41% by 2050.<sup>50</sup> IBB established a Waste-to-Energy Production Facility, which has been the largest facility in Europe, financed by the Asian Infrastructure Investment Bank,<sup>51</sup> to generate electricity as well as eliminate 1 million tons of waste annually. IBB also submitted a case study on the “Circular Design Approach for Processing Waste,”<sup>52</sup> revealing their actions and circular approach to waste in this field. IBB established a waste management site to process waste, while the facility encompasses a waste-

to-energy plant to generate electricity and an organic waste processing area to produce compost for greenhouses.

The coordination between the two municipalities affects Turkey-EU relations. The EU's waste policy ensures a framework to ameliorate waste management and stimulate improvement in separate waste collection and recycling, limit the use of landfills, and produce impulses to change consumer behavior. It also aims to reduce the substantial volume of waste generated and the dangerous substances contained in waste. The EU Waste Framework Directive has two crucial objectives to help and reduce the negative impacts caused by the generation and operation of waste and to ameliorate resource effectiveness. The Directive defines a scale to be applied in waste management. Waste forestallment and re-use are the most favored options, followed by recycling (including composting) and energy recovery, while waste disposal through tips should be the last resort. The EU waste legislation also sets specific targets to increase the recycling of specific waste aqueducts, similar to electronic outfits, cars, batteries, construction, obliteration, external and packaging waste, as well as to reduce the use of landfills for bio-degradable waste.<sup>53</sup> Considering all these purposes, collaborations can be formed between the two municipalities for the development of waste management.

Clearly, both municipalities focus thoroughly on waste management, specifically solid waste management, with a circular economic approach. Therefore, they may cooperate in this area by developing projects together, sharing their experiences and best practices, and integrating relevant actors into their networks to enhance their approaches to waste management. Whatever the motivating factors for local cooperation, like sister cities, this relation may foster knowledge transfer and capacity building.<sup>54</sup> Possible cooperation between IBB and Berlin Municipality on waste management will also encourage knowledge transfer, which will

48 Abfallwirtschaftskonzept für das Land Berlin – Planungszeitraum 2010 bis 2020. (2011). [https://www.berlin.de/sen/uvk/\\_assets/umwelt/kreislaufwirtschaft/strategien/abfallwirtschaftskonzepte/awkberlin2010-2020.pdf](https://www.berlin.de/sen/uvk/_assets/umwelt/kreislaufwirtschaft/strategien/abfallwirtschaftskonzepte/awkberlin2010-2020.pdf)

49 Berlin Energy and Climate Protection Programme 2030. (2017). [https://www.berlin.de/sen/uvk/\\_assets/klimaschutz/publikationen/bek2030\\_broschuere\\_en.pdf](https://www.berlin.de/sen/uvk/_assets/klimaschutz/publikationen/bek2030_broschuere_en.pdf)

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be reciprocal. For instance, Berlin Municipality may convey its policy approach to waste management, establishing a medium-term waste management plan, a roadmap for determining short-term actions and strategies. On the other hand, IBB may share its experience on the practical level, such as building a waste-to-energy production facility. Hence, this reciprocal interaction and effective dialogue between local government institutions will facilitate knowledge transfer and capacity building, which is fundamental to initiate actions against the impacts of climate change.<sup>55</sup>

- According to our research, urban heat islands and heatwaves are common problems in both Berlin and Istanbul. Both cities suffer from increasing temperatures and their deadly consequences. Urban heat islands will be seen more frequently as climate change progresses. The elderly, the chronically ill, and children will be most affected by them. Berlin and Istanbul might cooperate on this issue in terms of informing both people and healthcare workers.
- The Berlin Municipality's "Sponge City Berlin" project could be taken as a good example of a project designed to fight against extreme climatic events. Such projects will allow IBB to increase the climate change resilience of the city in problematic areas.
- A detailed mapping of the city in terms of sensitivity to the effects of climate change should be conducted and updated annually. This mapping should include an assessment based on the following conditions:
  - conditions related to climate-induced disasters such as extreme weather conditions, storms and flooding, and the vulnerability of the different municipalities and districts under the IBB;
  - conditions that may act as multipliers to climate-related vulnerabilities, e.g., earthquakes;
  - socio-economic conditions in the different municipalities and neighborhoods within the jurisdiction of the IBB that may induce obstacles regarding mitigation and adaptation to the effects of climate change;
- an assessment of refugees, their income levels, occupational status, abilities and educational levels, and their population in different municipalities and neighborhoods of Istanbul; such a study may act as a guide to prepare the city and local communities to better allocate their material and human resources in the adaptation and mitigation efforts toward climate change;
- an assessment of the building stock in the city, plans for renovation and refurbishment in accordance with the aims of climate change resilience and suitability for green energy transition.
- The IBB, which needs to develop its preventive approach to climate change, should announce a deadline to ban the use of coal in the city, such as the 2030 deadline set by the Berlin Municipality. In the joint statement published by IKV, IPC, and TEPAV, it was also stated that Turkey should gradually phase out coal in electricity generation by 2035, at the latest, in order to achieve the 2053 climate targets. Due to the increasing price of natural gas, there is a tendency to shift to even more polluting energy sources such as coal and timber. The IBB should work out a plan to support a clean energy transition in partnership with financial institutions to shift to solar power in new buildings and renovate older buildings for energy saving purposes. In low-income neighborhoods, IBB can reduce the demand for coal due to its low price by making investments in solar energy and combined heat and power Combined Heat and Power (CHP) in these neighborhoods. The potential—approximately 1,353 kWh/kWp—for the municipality's investments in Istanbul, which has approximately 300 kWh/kWp more solar potential than in Berlin (1067 kWh/kWp), will provide significant energy savings.
- Fighting against climate change necessitates a fundamental transformation of policies and priorities as well as citizens' daily practices. Hence, it requires attitudinal changes that will also impact society's relations with nature and the planet. IBB should plan and implement courses for young people in order to create awareness about climate change with the aim of triggering attitudinal change. Such programs may be conducted during summer in order to make use of the summer break. They may also be conducted

55 Krellenberg, K. & Turhan, E. (2017). Ibid

in working environments such as organized industrial zones in order to benefit young workers and provide them with basic information about how they can intermingle climate-related priorities with their daily tasks.

- Climate change requires coherent and integrated strategies that influence not only environmental policies but also IBB's other policies and strategies. IBB should regularly update and revise its municipal strategies in order to make room for climate priorities. As the European Green Deal also points out, cities' climate strategies should be a mainstream policy priority that should be reflected in all the policies, strategies, plans, and tasks of the IBB, such as building permits, transport, waste management, and urban planning. This should also include a target for the reduction of greenhouse gas emissions.
- IBB should improve and support vulnerable group members' access to health services and education. Vulnerable groups usually reside in disadvantaged neighborhoods where it is difficult to access quality healthcare and education services. This situation also negatively influences these populations' climate resilience. Providing free, clean public transport to students and women, supporting the establishment of workplaces for disadvantaged groups such as women and the disabled in the neighborhoods in which they live, and motivating these groups to work in green economic sectors may be some of the ways the IBB can help alleviate this situation.
- IBB should provide employment to those who are allowed to work in Turkey according to a certain quota in order to reduce the difficulties experienced by vulnerable groups. Refugees may be in a particularly difficult situation due to their precarious position in the city, difficulties in finding decent jobs, and problems in accessing quality education and housing facilities. Their integration into the labor market with decent wages and social protection is one of the best ways that they can be a part of the social fabric and contribute to the community. Therefore, the IBB's efforts in the area of providing or facilitating employment opportunities for migrant groups with legal authorization to work and reside in the city is encouraged.
- Establishing recycling areas should be a priority area for IBB, which lags behind Berlin Municipality in the measures taken against climate

change. As can be seen in Table 1, the recycling rate in Berlin is 70%, while this rate is only 15% in Istanbul, necessitating a review of waste collection management and operation methods. The correct separation and reuse of waste reduces greenhouse gas emissions and constitutes one of the most important methods in combating climate change. In the current situation, reusable waste, which is not separated in Istanbul, is collected by individual workers, mostly migrants and refugees. IBB could increase the recycling rate by improving waste management and could also regulate recycling workers' rights by giving them a certificate or a legal permission.

- In terms of the relationship between the IBB and the EU, there is no tangible project in place to help strengthen relations. While the IBB prioritizes financial support in its investments in line with the mitigation and adaptation targets of the Climate Change Action Plan, the IBB suffers from restrictions on financial resources for these investments, which have been cut by national banks and institutions. The EU might support IBB financially in order to help accelerate its investments in combating climate change. The IBB is also open to mutual cooperation with the EU and its institutions on transportation, waste management, and energy efficiency.

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