

An evaluation of municipal efforts for climate change mitigation and adaptation: two cases from Turkey

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Climate change mitigation and adaptation is a multi-level challenge, i.e. it requires simultaneous action at international, national and local levels. Since climate change is a global problem, political responses have been primarily developed at international platforms where nation-states participated. United Nations Framework Convention on Climate Change and Kyoto Protocol are significant attempts in this regard. Meanwhile, the “local” has been also widely recognized as an appropriate level to tackle the climate change problem. Accommodating roughly half of world’s population, more than 70% of greenhouse gas emissions are generated in cities. Ironically, cities are also the places which are vulnerable to climate change effects (Rosenzweig et al. 2010, Hunt and Watkiss 2011). The most severe potential effects of climate change on cities are heat waves, periods of extreme winter cold, increased frequency of air and water pollution episodes, rising sea levels and increased risk of storm surge, changes in the frequency and severity of flooding associated with more intense precipitation (Wilby 2007).

The growing concerns for climate change have led to urban responses by municipalities across the world particularly since the 1990s. Municipalities with their authorities over land-use planning, water and waste management, energy consumption and transportation can play significant roles in reducing greenhouse gas emissions. Moreover, they can go beyond their already defined responsibilities, and develop bottom-up initiatives to reduce greenhouse gas emissions (Betsill and Bulkeley 2005). It should be noted that the growing interest and involvement of municipalities in climate change mitigation and adaptation has also led to establishment of climate-related international and regional partnerships and networks for the last two decades. Cities work together in these networks to share experiences

and develop common goals. Some pioneering examples are ICLEI, Climate Alliance, Energy Cities, C40 Cities Climate Leadership, and Covenant of Mayors.

To sum up, the instruments of municipalities for climate change mitigation and adaptation include a wide variety ranging from climate-related policy-making (in many urban sectors such as built environment, transportation, water and waste management, energy use, green system, and so on), institutional capacity building (engaging in international and national climate alliances and networks, launching new departments in the municipality, etc.) to spatial planning (climate-sensitive urban planning and design).

So as to address the climate change phenomenon, municipalities develop policies and actions across all world regions in the above-mentioned fields; nevertheless, the levels of action-taking greatly vary among them. In other words, the level of involvement and progress in cities differ from each other in various countries, and even within the boundaries of the same country. There can be various factors behind municipalities' varying level of involvement (Betsill and Bulkeley 2007, Heinrichs et al. 2013): local competencies and capacity in climate-related policy sectors, availability of financial resources, framing of local issues and priorities, presence of scientific information about local climatic conditions, willingness, enrolling in climate-related networks and alliances can be listed among these factors.

In the face of the growing concerns for climate change, Turkish municipalities, too, started taking action. Likewise the examples in other countries across the world, some municipalities in Turkey try to develop innovative policies and actions to respond to the problem, whereas some others follow a more conventional approach. This study focuses on the climate change mitigation and adaptation approaches of two municipalities from Turkey, which seem to belong to the former category. These municipalities are quite different from each other in terms of size, socio-economic and geographical context. The first of these is the Nilüfer Municipality, which is a district municipality under the Bursa Metropolitan Municipality, whereas the second is the Gaziantep Metropolitan Municipality. Both municipalities have had various climate-related initiatives in terms of planning, project development and services. Gaziantep Metropolitan Municipality is the first municipality in Turkey that prepared a Climate

Action Plan. They have memberships in national and international networks. Both are members of Energy Cities (The European Association of Local Authorities in Energy Transition), while Nilüfer Municipality is also a member of Covenant of Mayors and Union of Healthy Cities of Turkey. This research aims at elaborating the policy and action fields of these municipalities for climate change mitigation and adaptation, evaluating their achievements, and identifying commonalities and differences between their policies and actions. The study concludes with a discussion on policy lessons to be derived from these cases.

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