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CONDITIONS OF ENVIRONMENTAL POLICY INTEGRATION FOR SUSTAINABILITY: THE POLITICS of MULTIPLE DIVIDENDS at LOCAL GOVERNMENT LEVEL in TURKEY[1] [2]

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ABSTRACT

The interdependent nature of environmental problems entails a number of challenges for policy-makers. Although sustainability has been a major policy goal endorsed all around the world, environmental problems have "sustained" and have not sufficiently been resolved. Problems behind this partial failure partly stem from policy implementation in a multilevel and interdependent policy environment. Prevalence of institutionalised ideas and discourses on environment and development contribute to a pattern of path dependence, which contributes to problems in the integration of environmental concerns into other policy areas. This paper aims to focus on environmental policy integration (EPI), a widely recommended but rarely implemented policy principle and aims to identify conditions of EPI at local level climate governance in Turkey. Departing from successful EPI experiences of certain Turkish municipalities', this paper describes the conditions of local level EPI in a single country case. The existence of multiple dividends, availability of technological fixes and involvement of international players contribute to attainment of EPI despite prevalence of institutionalised barriers.

Keywords: *Environmental policy integration, sustainability, climate change, local governments.*

SÜRDÜRÜLEBİLİRLİK İÇİN ÇEVRE POLİTİKASI ENTEGRASYONUNUN KOŞULLARI: TÜRKİYE YEREL YÖNETİMLERİNDE ÇOKLU GETİRİLER SİYASETİ

ÖZET

Çevre sorunlarının karşılıklı bağımlılık içeren niteliği politika belirleyiciler için önemli sorunlar içerir. Çevre sorunlarının çözümü için sürdürülebilirlik tüm dünyada kabul gören bir amaç olsa da sürdürülebilirlikle ilgili sorunlar sürmüş ve pek çok çevre sorunu yeterince çözüme kavuşturulamamıştır. Bu kısmi başarısızlığın ardında çok seviyeli ve karşılıklı bağımlılık ilişkilerinin

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güçlü olduğu bağlamlardan kaynaklanan uygulama sorunları yatmaktadır. Çevre ve kalkınma hakkındaki kurumsallaşmış fikirler ve söylemlerin neden olduğu patika bağımlılığı çevre kaygılarının diğer politika alanlarına entegre edilmesine engel olmaktadır. Bu çalışma gerekliliği üzerinde bir uzlaşma olan, sıklıkla önerilen ama nadiren uygulanan çevre politikası entegrasyonu (ÇPE) ilkesine odaklanmakta ve Türkiye'deki yerel seviye iklim yönetişiminde gözlemlenen başarılı ÇPE örneklerinin koşullarını belirlemeyi amaçlamaktadır. Bu makale bazı belediyelerin başarılı yerel seviye ÇPE deneyimlerinden hareketle, yerel seviye ÇPE koşullarını tek ülke örnek olayı üzerinden betimlemeyi amaçlamaktadır. Çoklu getirilerin ve teknolojik çözümlerin mevcudiyeti yanında uluslararası oyuncuların dahli, kurumsal bariyerlere rağmen çevre politikası entegrasyonunu mümkün kılmaktadır.

Anahtar Sözcükler: *Çevre politikası entegrasyonu, sürdürülebilirlik, iklim değişikliği, yerel yönetimler*

1. INTRODUCTION

Environmental problems are major problems for human societies. Cross-border nature of environmental problems and interdependence of almost all players in an ever-globalised world entail a number of challenges for policy-makers. Environmental problems require a holistic approach and integration of environmental concerns into other policy domains and trans-disciplinary research. In fact, pioneering scholars such as Alexander von Humboldt recognised the environmental problems' holistic character well in advance. Von Humboldt's studies underlined the holistic character, harmony and balance of all existing elements on planet earth and highlighted the importance of trans-disciplinary research well in advance (Franzle, 2001).

In the second half of the 20th century, upon the recognition of international dimension of environmental problems, governments and international organisations developed international environmental regimes in dealing environmental problems that goes beyond their national borders and sovereignty. Simultaneously, governments introduced environmental policies and environmental bureaucracies to tackle environmental problems both at the domestic and global levels.

From 1980s onwards, sustainability and sustainable development discourses dominated the environmental policy agenda. The most widely known definition of sustainable development is Brundtland's definition where sustainable development is defined as "development which ensures that it meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987: 8). In the same report it is also stated that "In essence, sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet needs and aspirations" (WCED, 1987: 46).

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In the meantime, the Millennium Development Goals (MDG's) introduced eight goals, by the beginning of new millennium (2000) which range from eradicating extreme poverty and hunger to providing universal primary education, for the target year 2015. Later, Sustainable Development Goals (SDG's) introduced 17 goals with 168 targets for the year 2030. Although specific targets have changed in the meantime from MDG's to SDG's, problems concerning sustainability "sustained" and many of the most severe environmental problems have not sufficiently been addressed and resolved (UN Environment, 2019: 4). Textbooks are full of policy instruments that, if introduced, would solve those problems effectively and possibly in an efficient and just way. Problems behind this partial failure are not only about lack of certain techniques or policy instruments, but policy implementation in a multilevel and interdependent policy environment and problems associated with *integration* of wide-ranging environmental concerns, from the quality of life to equity, into public policy agenda.

Environmental policy integration (EPI) has been a widely recommended environmental policy principle. Given the interdependent character of environmental problems, EPI is not an option but a necessity in dealing with complex environmental problems. Although there is a consensus on the necessity of EPI, there are problems in its implementation. Because, in most parts of the world, prevalence of institutionalised ideas and discourses on environment and development, which prioritise developmental concerns over environmental problems, contribute to a pattern of path dependence. This continuity contributes to problems in EPI. Yet again, the whole story is not only about failures in EPI. There are certain but limited success stories for EPI and policy analysis is not only about identifying failures. There is a clear need for determining conditions of successful policy-making and implementation that integrate environmental concerns into other areas of public policy. Although, international co-operation around international environmental regimes is a pre-requisite, countries' reactions and policies at the national level deserves attention. Developing countries face additional problems, like financial problems and capacity problems, in dealing with dilemmas of the environment and development. Thus, environmental policy integration poses a larger challenge for developing countries with serious problems stemming from their insufficient economic resources and limited environmental policy capacity.

This article aims to concentrate on conditions of EPI at the local level climate change adaptation and mitigation policies in Turkey. The reason behind the analysis of climate change policies lies in its interdependent relations with other public policy domains. In doing so, the article will start with a brief description of sustainable development and the place of EPI in achieving sustainability objectives. The overlapping targets of the MDG's and the SDG's demonstrate the inevitability of EPI and developing a holistic perspective to attain sustainability objectives. Then, problems of EPI in Turkish environmental

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policy will be discussed with reference to former studies on the conditions of environmental policy integration in Turkey, conducted in late 1990s and official reports of international organisations. After briefly summarising the findings of previous studies and official reports on EPI, the analysis will focus on climate change policies in Turkey and the role of cities and local governments at climate governance will be analysed. Finally, successful cases of EPI at the local and municipal level climate change adaptation and mitigation policies will be described to demonstrate conditions of EPI.

In terms of methodology, the article follows a single country case study. Turkey represents developing countries with a low capacity for EPI and reluctant to commit themselves to take measures for climate change adaptation and mitigation. Although, there is such a reluctant attitude at the central government level, there are a number of local and municipal endeavours in Turkey that successfully integrates climate change mitigation and adaptation to other areas of public policy. Studies documenting on policy failures are common in literature but this article aims to identify conditions of success in a single country case to pave the way for similar efforts at the municipal level. In this sense, this study has a descriptive character and aims to identify certain conditions of successful EPI.

The article concludes that the existence of multiple dividends, technological fixes and involvement of international players activate the potential for EPI and likely to bring certain improvements in integration of environmental concerns to other public policy decisions at the local level, despite prevalence of barriers and foot dragging from the central government actors.

2. ENVIRONMENTAL POLICY INTEGRATION FOR SUSTAINABLE DEVELOPMENT

The rise of environmental problems and development of environmental movements contributed to formation of environmental policies in a global scale. In this context, a number of policy principles and a variety of policy instruments developed by governments and international organizations. At the beginning, "environmental policies of the 1970's and approaches to environmental management largely focused upon after-the-fact repair of damage, like reforestation, reclaiming desert lands, rebuilding urban environments, restoring natural habitats and rehabilitating wild lands" (WCED, 1987: 39). Administrative regulations were the dominant policy instrument and end of pipe technologies were seen as adequate and the effects, not the sources, of environmental problems were the focus of the authorities. Furthermore, the relation between environmental protection and economic growth and industrialisation were assumed to be negative sum in nature and strict environmental policies were seen as a burden on the economy and believed to have a negative effect on economic growth (Weale, 1992: 75).

However, environmental policies of the 1970's were unable to solve pressing environmental problems. Furthermore, "zero growth" calls of the early 1970s alienated both developed and developing

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countries. From 1980s onwards, sustainability and sustainable development have been major environmental policy discourses and they shaped environmental policies both at the national and international domains. Sustainability transition and attainment of sustainable development goals required a number of institutional changes in sectoral and environmental policies. The Brundtland Commission's Our Common Future (WCED, 1987) Report and Agenda 21 (UN, 1992) entail a wide range of recommendations for institutional change.

Sustainable development discourse builds its arguments on the unsustainable nature of current institutional arrangements, requires a substantial institutional change for the achievement of its objectives, including reorganisation of the state bureaucracy around the priorities of environmental protection (WCED, 1987: 65). 1980s and 1990s orthodoxy concerning environmental policy and sustainable development, as embodied in the Brundtland Report, required a centralised decision-making which co-ordinates the activities of several parties in the decision-making complemented by participatory decision-making process with the involvement of local people in the process (Orhan, 2003: 48-49).

Environmental policy integration (EPI) is a widely recommended environmental policy principle and an essential element of sustainable development discourse. According to the Brundtland Report the most important and fundamental challenge to the sustainable development project comes from the systemic nature of environmental problems and the need for an integrated policy approach to solve environmental problems. Economic activities directly or indirectly influence the environmental quality (and has environmental consequences). Thus, the institutional change for the implementation sustainable development policies require the co-ordination of environmental policy making and integration of environmental concerns into other areas of public policy. The integrated nature of global environment and development challenges pose problems for institutions, national and international, that were established based on narrow preoccupation and compartmentalised concerns (WCED, 1987: 9, 310). These institutions tend to be independent, fragmented and working to relatively narrow mandates with closed decision processes. Those responsible for managing natural resources and protecting the environment are institutionally separate from those responsible for managing the economy (WCED, 1987: 9, 310). Separate policies and institutions can no longer cope effectively with these interlocked issues, and there is a clear need for the integration of environmental concerns into economic decision-making (WCED, 1987: 310).

The Brundtland Report suggested that environmental protection and sustainable development must be an integral part of the mandates of all agencies of governments, of international organisations, and of major private-sector institutions. These must be made responsible and accountable for ensuring

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their policies, programmes, and budgets to encourage and support activities that are economically and ecologically sustainable both in the short and longer terms. They must be given a mandate to pursue their traditional goals in such a way that those goals are reinforced by a steady enhancement of the environmental resource base of their own national community and that of the world (WCED, 1987: 312). Because the integrated and interdependent nature of the new challenges and issues contrasts sharply with the nature of the institutions that exists today, this new awareness requires major shifts in the way governments and individuals approach the issues of environment, development, and international co-operation. Challenges are both interdependent and integrated, requiring comprehensive approaches and popular participation (WCED, 1987: 9, 310). At the end, institutions are at the very centre of the problem of implementation of sustainable development, both something to be transformed and something that will work for this transformation (Orhan, 2003: 53).

In the meantime, "EPI has received widespread political backing at the international level, but especially in the European Union (EU), where it enjoys a relatively prominent legal status." (Jordan and Lenschow,2010: 147). These calls for EPI renewed in 2000s. For instance, in 2003, the European Environment Agency (EEA) concluded that 'the implementation of more integrated approaches to policy making needs to be accelerated if Europe is . . . to meet its aspirations' (EEA, 2003: 7, cited in Jordan and Lenschow, 2010: 147).

The MDG's and later SDG's have elaborated on achieving sustainability objectives. Given the interdependent character of MDGs and SDGs, EPI is not an option but a necessity in dealing with complex environmental problems and both sets of goals prioritise policy integration. MDG 8 is about developing a global partnership for development; MDG 7 is about ensuring environmental sustainability and the Target 7A is about integrating the principles of sustainable development into country policies and programmes to reverse the loss of environmental resources.

Similarly, the 17 SDGs integrated to each other in a number of ways and action to attain one goal will affect outcomes in other goals. Furthermore, SDG 17 is about revitalizing the global partnership for sustainable development and partnership for the goals. The SDGs can only be achieved with strong global partnerships and cooperation. The United Nations Development Programme (UNDP) plays an active role in promoting integrated solutions for sustainable development, supports countries in tackling complex development challenges and achieve SDGs through integration.

UNDP developed a number of initiatives to contribute countries' efforts towards achieving SDG's. For instance, MAPS (Mainstreaming, Acceleration and Policy Support) initiative established to support member states in integrated data analyses, forecasting, capacity building, advocacy and awareness raising and planning and programming priorities in implementing the SDGs. MAPS initiative

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served to 51 countries since 2016 all around the world. Other initiatives like Country Support Platforms, Climate Promise and Small Island States Offer are also falls into integrated policy and programming initiatives (UNDP, 2021).

Although the UN system prioritise policy integration and there is a consensus on the necessity of integrated solutions, there are problems in their implementation due to threatened political and economic interests. Prevalence of institutionalised ideas and discourses on environment and development contribute to a pattern of path dependence, which culminates in environmental policy failures. The existing assessments report similar problems in a wide range of contexts and environmental policy making is still characterised by "specialized environmental administrations, power struggles between environmental and sectoral departments and by environmental regulations imposed on conventional development activities" (Hertin & Berkhout, 2003: 40).

If the problem lies in providing alternatives to overcome this deadlock, the documentation of successful policy integration cases and providing information on the conditions of success would be a way forward. Because **t**here is a possible local level solution to problems of EPI in developing countries. Ecological modernisation alternatives, existence of multiple dividends and win-win solutions have the potential of activating the conditions for EPI and likely to bring certain improvements in environmental management. The successful experiences of certain Turkish municipalities also demonstrated that involvement of international players contribute to attainment of EPI goals despite prevalence of barriers. In the following section, the role of cities and local governments will be discussed with reference to sub-national climate action.

3. EPI IN TURKISH ENVIRONMENTAL POLICY

Turkey has experienced a number of serious problems in achieving EPI objectives, along with other countries. In fact, Turkey's story does not deviate much from other examples. Despite existing legal and institutional framework, there are problems in environmental policy implementation and integration. Furthermore, prevalence of economic development over environmental and sustainability concerns and contradicting policy goals have detrimental effects on environmental quality. We could also add, successive governments' foot dragging behaviour on critical issues like climate change.

Despite the efforts since the early 1980's to address pollution and degradation of environmental resources, UNDP Reports also underline various contradictions of Turkish environmental policy. The environmental management in Turkey has long been suffering from a number of deficiencies including integration of social and environmental factors in planning and sectoral policy-making and implementation practices. These include over-reliance on regulatory mechanisms, limited public

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participation and awareness, lack of environmental information, deficiency of budgetary resources allocated to environmental protection and rehabilitation and lack of capacity of institutional structures particularly at local level (UNDP, undated: 4)

In those respects, EPI had been a difficult task and Turkish governments were criticised for their poor environmental policy performance. The limited policy integration is one of the problem areas, criticised in a number of occasions by a number of actors involved in the process. The sectoral ministries were also criticised in keeping their business as usual. This is also highlighted in a project that aims to increase Turkey's capacity for EPI, to reach sustainable development objectives. As it was stated in the project documents of the Integration of Sustainable Development into Sectoral Policies Project;

> "Integration of environmental factors in sectoral policy-making, planning and implementation is rather weak in Turkey. Main problems include over-reliance on regulatory mechanisms, limited public participation and awareness, lack of environmental information, deficiency of budgetary resources allocated to environmental protection and rehabilitation, and lack of capacity of institutional structures at local level. Effective methodologies for harmonisation of economic, social and environmental policies are not employed. Policies and practices that do not fully take into consideration the social and environmental consequences of economic growth on the other hand are undermining sustainable development. Although a number of initiatives on sustainable development exist, these remain as fragmented and there is a further need to identify a holistic strategy and for demonstrating to the public that a decoupling between economic growth and environmental protection, and enhancement of social objectives is feasible. (UNDP, 2006)"

Although Turkey's experience sounds like a failure, there are certain examples of EPI in Turkey. In earlier studies, conditions of EPI were analysed with reference to two major environmental success stories identified in the 1990s (Orhan, 2003; Orhan 2004). The success of Ankara province in solving air pollution problem and Kocaeli Province in developing an integrated plan for combatting air and water pollution deserved attention in the 1990s. Although Turkish environmental policy has a number of problems concerning implementation and policy integration, Ankara and Kocaeli cases illustrated the possibility of certain degree of policy integration and success in the centralised and fragmented political and administrative system of Turkey. In this sense, centralised regulation and development of a legal and institutional framework is a necessary condition, but not sufficient for policy integration. In the case of Ankara, policy integration was assured with the involvement key actors and, most important of all, mobilisation of resources and creating opportunities with the co-operation of the actors and institutions at local level. In the case of Kocaeli, policy integration was assured with the bottom-up involvement of people, participative decision-making and implementation, initiatives of key actors and mobilisation of resources and creating opportunities with the co-operation of the actors and institutions at local level.

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For some, these achievements may look like the success of the central government alone. It looks that if powerful players in the Turkish political system and elites want to introduce and implement policies for sustainability, there are actually few institutional barriers to doing so in this centralised system. That is partly true and the efforts of political elite worked well in these cases. However, what we should keep in mind that even in a case where centralisation might seem to provide necessary conditions for long-term development, some participation seems important, and may be desired by important actors whose institutional position gives them freedom of manoeuvre. Yet again pressures from below on local elite played a distinctive role in these cases and local actors played a significant role in mobilising the central government institutions towards this intervention. What we could argue that policy integration, co-ordination of efforts for sustainability and co-operation between the actors are easier at the local level and the co-operation of actors at the local level made the difference.

These problems also apply to climate change mitigation and adaptation policies in Turkey. Turkish governments' official attitude on climate change has been rather defensive though we could speak of mixed responses from various departments in the public bureaucracy and sectors in private sector. Cities have a substantial impact on climate change and municipalities have serious opportunities for mitigation and adaptation. However, given the predominance of central government in Turkish politics and policy process, and developmentalist attitudes almost at all levels of government, climate change has been a rather sidelined issue in Turkey. This picture has started to change by the 2000s. Droughts of the second half of 2000s, rising impact of climate movement and the active role played by international organizations in agenda setting have raised the consciousness on climate change (Şahin, 2015).

Yet again, "special circumstances discourse" is very influential and consecutive Turkish governments prioritised economic development over environmental concerns like climate change. Besides, further centralisation of authorities from 2010's onwards left limited area of discretion for local governments that made EPI for climate change a difficult task at the local level. In response to climate change, some Turkish municipalities took the initiative and bypassed central government in climate change adaptation and mitigation commitments. In the following section, those initiatives will be summarised.

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4. TURKISH LOCAL GOVERNMENTS AND CITIES' CLIMATE POLICIES: FROM CENTRAL GOVERNMENT INVOLVEMENT TO INTERNATIONAL-LOCAL INTERFACE

Cities and local governments have a crucial role in climate change mitigation and adaptation. As it was stated in SDG 11, more than half of world population live in cities and sustainable development cannot be achieved without significantly transforming the way we build and manage our urban spaces. The rapid growth of cities—a result of rising populations and increasing migration—has led to a boom in mega-cities, especially in the developing world, and slums are becoming a more significant feature of urban life. Making cities sustainable means creating career and business opportunities, safe and affordable housing, and building resilient societies and economies. It involves investment in public transport, creating green public spaces, and improving urban planning and management in participatory and inclusive ways (UN, 2021).

Cities have seriously contributed to climate change through their intensive overall consumption levels, including high-energy consumption. More than half of the global population now live in cities and urban areas account for more than half of global primary energy use and energy-related CO_2 emissions. Taking account of direct and indirect emissions urban areas account for 67–76% of global energy use and 71–76% of global energy-related CO_2 emissions (IPCC, 2014). By 2050 7 billion people are expected to live in cities. (80 % of the world population). Besides, urban centres are more vulnerable to global climate risks especially in low and middle-income countries and informal settlements with poor infrastructure (IPCC, 2014a: 3). Cities and local governments also have a potential for adaptation and resilience that could be very effective in responding climate crisis as a part of a co-operative multi-level governance mechanism (IPCC, 2014a: 3-4). Policy integration for climate adaptation and resilience by local governments and cities could also foster capacities for disaster risk management and contribute to policy success at all levels and scales (IPCC, 2014a: 4).

In Turkey, local governments are responsible of providing urban and rural environmental services in their vicinities. Local governments' mandates concerning environmental policy cover wastewater treatment, solid waste management, air pollution, urban and rural planning and management of parks and recreational areas. They also have a number of mandates on matters directly or indirectly related to environmental quality, like the coordination of transport services, zoning and urban and regional planning.

Climate change is a rather new addition to Turkish local governments' mandates. Activities of Turkish local governments on climate change were documented earlier in a number of descriptive

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studies (Orhan, 2013; Orhan, 2014). Despite central government institutions' defensive attitude towards climate change policies, local governments in Turkish cities played relatively progressive roles in climate change mitigation and adaptation through their activities either as a part of global networks of local governments or alone in parallel to their local mandates on environmental matters. This is a particularly interesting topic for EPI because sub-national players bypass the national level, which is not so keen on having climate change as a priority area, and translated and brought international impulses, into sub-national and local policy development processes and integrated environmental concerns to other public policy areas. In this context, local governments, cities and their international networks emerge as significant players in their own right and there is an image of shifting authority in climate change governance towards local and subnational players. However, this image is partial because, the success of local governments and cities rests on the continual support of international actors other than transnational agencies (Orhan, 2019).

In 2009, Regional Environment Centre (REC) and ICLEI organised a campaign for Climate Friendly Cities in collaboration and the technical support of ICLEI and financial support of Dutch Ministry of Planning and Environment (VROM) to increase awareness on sustainable cities and decarbonisation processes with participation of fourteen local authorities from Turkey. In 2010, the then İstanbul Metropolitan Mayor Kadir Topbaş became the President of Union of United Cities and Local Governments (UCLG) and Turkish municipalities' activities at the international level has accelerated. İstanbul Metropolitan Municipality became a signatory to the Global Cities Covenant on Climate, which is also known "the Mexico City Pact" (Orhan, 2019).

Currently, thirty-one municipalities, with 21 168 815 inhabitants, are signatory to Covenant of Mayors for Climate and Energy in Turkey. Some of them have already submitted their Action Plan and committed to reductions in carbon emissions stemming from municipal services. Furthermore, there are 15 ICLEI member municipalities and 6 municipalities joined to Energy Cities initiative. Some other municipalities are involved in a number of activities for climate change mitigation and adaptation, on their own, ranging from energy efficient public transport projects, to renewable energy projects.

In general, local government initiatives concerning EPI are ecological modernisation solutions with double dividends. For instance, SDG 11 is about making cities inclusive, safe, resilient and sustainable and related to a number of other goals. Introduction of electric buses in urban transport, with solar powered batteries, contributes more than one SDG. Reductions in air pollution, savings in transport costs and far less ecological footprint. Introduction of smart traffic applications results in less energy consumption, reductions in air pollution and minimise time wasted in clogged traffic. Introduction of metro and tram lines for public transport and replacement of existing ferries with energy efficient

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varieties also contribute to goals other than mobility and reduce ecological footprint of transport activities. Overall, Turkish municipalities integrate environmental concerns into other areas of public policy, ranging from transport to energy and traffic management to recreation and waste management.

In the next section, some Turkish municipalities and their climate related campaigns, projects and membership status for local government networks will be listed. This list is not an exhaustive list and certain high-profile initiatives are covered in this study.

5. A SELECTION OF TURKISH LOCAL GOVERNMENTS AND CITIES' CLIMATE POLICIES

Although the central government has a reluctant attitude towards climate change policies, certain local governments played active roles in climate change mitigation and adaptation.

Gaziantep Metropolitan Municipality played a pioneering role concerning climate change mitigation in Turkey and prepared a Climate Action Plan with the financial support of French Development Agency (AFD) and committed itself to reductions in greenhouse gas emissions. Gaziantep Metropolitan Municipality had a %15 reduction target in its per capita carbon footprint and energy consumption by the year 2023. For that purpose, they switched to rail system in public transport, built a new tramway line and purchased 50 CNG buses with the European Bank for Reconstruction and Development (EBRD) loans and a bicycle road is planned for the city centre. Furthermore, the Municipality purchased 50 electric cars for municipal services. Gaziantep Metropolitan Municipality has developed comprehensive projects to reduce its carbon emissions ranging from recycling to energy efficiency, designing new dwelling areas based on ecological principles to utilization of methane emissions for electricity generation. Gaziantep Metropolitan Municipality is a member of ICLEI since 2012 and Energy Cities network and the first member in action from Turkey with its Climate Change Action Plan. Gaziantep Metropolitan Municipality signed the Covenant of Mayors in 2017 and submitted a new action plan in 2019 with a 40 % reduction target in its CO2 emissions for the year 2030.

İzmir Metropolitan Municipality is a member of ICLEI since 2019 and signed Covenant of Mayors and committed to minimum 20 % reductions in greenhouse gas emissions by 2020. In this process İzmir Metropolitan Municipality prepared its Sustainable Energy Action Plan which was ratified in 2016. İzmir Metropolitan Municipality purchased new passenger ferries and built new tramway lines as a part of AFD's climate initiative, which aimed to increase the share of mass transport in transportation. Furthermore, İzmir Metropolitan Municipality purchased new electric buses and charged their batteries with rooftop solar panels to reduce dependence of fossil fuels. Municipality offered a

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range of local and longer distance, low carbon, mobility options, diversified and improvied the transport infrastructure within the City.

Along with efforts towards climate mitigation, there are a number of adaptation and resilience projects in İzmir. İzmir Metropolitan Municipality carried out a Grant Program titled "the Capacity Building in the Field of Climate Change in Turkey". The aim of the program was to use, increase and support the green infrastructure potential in İzmir within the scope of combating climate change. The specific objectives of the project range from developing a framework that makes the city more resilient to the effects of climate change, increasing the technical capacity to develop the capacities of target groups and stakeholders against climate change, and raising public awareness on climate change by disseminating knowledge and experience.

In this direction, it is planned to create climate models for İzmir for the years 2050 and 2100 within the scope of the Project. For this purpose, there are plans to map the urban green infrastructure system for the district of Balçova, which was chosen as the pilot district. Balçova was chosen to create a model for land use changes. The project aimed to calculate and map the urban ecosystem services, and to create suggestions for climate change adaptation in İzmir province. In addition, there are plans to visit cities with best practices in EU countries, to share experiences, to publish a guidebook containing all the information obtained and created during the project process, and to organize training and seminars for other municipalities, non-governmental organizations, academics, students and other relevant institutions (İzmir BŞB, 2017).

The Urban GreenUp Project, developed by Spain-based Cartif Research Center, aims to make progress in sustainable urban development and design, since 54 percent of the world's population lives in cities and this rate is on the rise. The project aims to reshape cities in accordance with their natural characteristics and develop methods to contribute capacity building of local authorities and stakeholders to implement nature-based solutions more effectively to eliminate the effects of climate change. In this context, the preparation of " Urban Plans for Re-Naturalization " aims to integrate the re-naturalization of cities into strategic urban planning and envisages carrying out comprehensive implementation actions in three cities, including Izmir. The project also aims to create a model by effectively monitoring the data to be obtained from these applications and to make this model widespread by using it outside of Europe (İzmir BŞB, 2018).

Furthermore, RURITAGE A Systematic Approach Project for Heritage-Oriented Rural Renewal and the CITyFIED Future Reproducible, Efficient and Innovative Regions and Cities Projects developed in this context expected to make significant contributions to İzmir in the fields of adaptation and reduction, respectively.

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Konya Metropolitan Municipality

Konya Metropolitan Municipality became a member of World Mayors Council on Climate Change-WMCCC in 2007 and ICLEI in 2012 and has developed a number of projects concerning air pollution and climate change. For instance, they developed an electric generation plant project by using methane emanating from waste disposal areas. Recycling of wastes and collection of used cooking oil and batteries were also developed as a part of meeting emission reduction targets. Solar panels were installed in lightening of green areas in the city and a bicycle project was devised to reduce carbon emissions. Konya Metropolitan Municipality also targeted air pollution and developed a Clean Air Action Plan as a part of its climate change initiatives. As a part of this initiative 50 air pollution monitoring stations and 20 ozone monitoring devices were installed with the support from Dutch Government and the Ministry of Environment and Urbanisation.

Bursa Metropolitan Municipality is a member of ICLEI since 1995. A recent pilot project was implemented in Bursa which aimed to assist metropolitan municipalities in developing their climate change adaptation plans, which was funded by the UK Foreign and Commonwealth Office's Prosperity Fund. As part of the project Ricardo-AEA and its partner Bluecern consultants provided capacity building training to Bursa Metropolitan Municipality to help develop its climate change adaptation plan for Bursa. As a consequence of this pilot Project, the Turkish Ministry of Environment and Urbanization has published a new Cities Adaptation Support Package which aimed at Turkish municipalities and provides a guide to climate change adaptation, which seeks to reduce the risks posed by climate change, such as flooding and drought.

Bursa Metropolitan Municipality is a party to the Covenant of Mayors since 2016. Bursa Sustainable Energy and Climate Action Plan was submitted in 2017 with a target of more than 40% reduction in its per capita CO_2 emissions by the year 2030. Reductions in traffic intensity and development of green corridors to achieve connectedness are their key actions to achieve their goals.

Muğla Metropolitan Municipality is a signatory to the Covenant of Mayors since April 2021. However, Muğla prepared its Climate Change and Sustainable Energy Action Plan well ahead in 2015. Muğla Metropolitan Municipality has developed a number of projects for this purpose like methane extraction and energy production from waste and modernization of waste disposal facilities. They modernised their vehicle fleet and used biofuels in transportation. New renewable energy investments in Municipal buildings and use of renewable resources in heating also contributed to reductions in greenhouse gas and other emissions. Later a project titled "Climate Change Mitigation in Muğla" by the EU Delegation in Turkey, Muğla Metropolitan Municipality and the Ministry of Urban Affairs and Environment provided a good snapshot of sources of emissions and avenues for mitigation in Muğla.

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Bursa Nilüfer Municipality became a signatory to Covenant of Mayors by July 2, 2014, but has submitted its Sustainable Energy Action Plan in 2016 and it was approved in 2018. Nilüfer Municipality has already developed a number of other measures towards utilisation of solar energy and rain water harvesting for gardening purposes. Nilüfer Municipality is also a member of Energy Cities initiative.

İstanbul Kadıköy Municipality is a signatory to Covenant of Mayors. Their first initiative was to impose a ban on plastic shopping bags with expected 3331-tons reduction in carbon emissions. Then, the Municipality developed a project to calculate carbon footprint of its own operations in collaboration with REC. Municipality's 2010 carbon equivalent of emission were calculated as 12.817 tons and a number of projects were developed to reduce their carbon footprint with the support from REC. Kadıköy Municipality submitted its Sustainable Energy Action Plan by January 4, 2012 with a 21 % reduction target in its CO_2 emissions, and their application was accepted in 2016.

İzmir Bornova Municipality signed *Covenant of Mayor* by May 5, 2011 and committed 20 % reductions in greenhouse gas emissions by 2020. They prepared *"Bornova Municipality Sustainable Energy Action Plan"* and their plan was accepted by February 7, 2013. Bornova Municipality is also a member of Energy Cities initiative.

İzmir Seferihisar Municipality signed, *Covenant of Mayors* by December 5, 2011 and committed 20 % reductions in greenhouse gas emissions by 2020. They have started to develop emissions inventories as a part of devising "Seferihisar Municipality Sustainable Energy Action Plan**"** and aimed to integrate other environmental measures to their action plan. Its Sustainable Energy Action Plan has a 23 % reductions target and accepted. Seferihisar Municipality is also a member of Energy Cities initiative

İzmir Karşıyaka Municipality is a member of ICLEI, signed Covenant of Mayors and prepared its *Sustainable Energy Action Plan* by June 10, 2012 and committed 35 % reductions in greenhouse gas emissions by 2020. A CO2 inventory was developed and renewable energy and sustainable transport projects were developed to meet their CO2 reduction targets and its *Sustainable Energy Action Plan was accepted.*

Eskişehir Tepebaşı Municipality is a member of ICLEI signed Covenant of Mayors on 2013 and prepared its *Sustainable Energy Action Plan* by December 3, 2014 and committed 23 % reductions in greenhouse gas emissions by 2020 and its *Sustainable Energy Action Plan was accepted.* The Tepebaşı Municipality focused on the widespread use of the energy efficient applications and aimed to increase the use of clean and renewable energy resources, to contribute climate change mitigation. Tepebaşı Municipality resorted to widespread use of solar energy in Municipal services and households.

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Furthermore, use of electric-bikes and electric buses in transport were promoted as clean energy alternatives.

Ankara Çankaya Municipality became a signatory to Covenant of Mayors by March 6, 2015 and became a member of ICLEI. Çankaya Municipality submitted its *Sustainable Energy Action Plan* in 2017 with an 20 % reduction target in its overall greenhouse gas emissions.

İstanbul Maltepe Municipality became a signatory to Covenant of Mayors by October 8, 2014, and submitted its *Sustainable Energy Action Plan in 2016 with an 22 % reduction target in* CO_2 *emissions.*

Antalya Metropolitan Municipality submitted its Sustainable Energy Action Plan by January 13, 2013 with a 23 % reduction target in its CO2 emissions and it was accepted in 2014. Their strategy rests on energy efficiency measures and integration of public transport. In this context, Antalya Metropolitan Municipality have plans on the use of alternative fuels and technologies in transport along with smart traffic applications.

Istanbul Kartal Municipality is a member of ICLEI and developed a number of environmental initiatives to reduce ecological footprint of Kartal like recycling, environmental education, installation of solar panels in parks and development of smart irrigation systems.

Kayseri Metropolitan Municipality switched to rail system for public transport and integrated rail stations with bicycle stations. Kayseri Metropolitan Municipality received financial support from AFD for urban development and tramway line projects.

Diyarbakır Metropolitan Municipality developed a Solar House Project to demonstrate possible uses of solar energy in electricity generation, cooling and heating houses in curbing carbon emissions. The Municipality has also installed a solar panel system to meet its own energy demand for municipal services like water distribution pumps.

6. THE COMMON FEATURES OF LOCAL LEVEL EPI FOR CLIMATE CHANGE ADAPTATION AND MITIGATION

Those projects developed by Turkish local governments have mainly focused on renewable energy, public transport, waste disposal and adaptation. There are a number of factors behind the accomplishment of local level EPI in certain municipalities in Turkey. Actually, most of those projects are ecological modernisation projects, with an available technology and has the potential of paying back the initial investments. In this context, projects that do not have an opportunity to pay back are likely to face problems in finances (Orhan, 2019).

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On top of financial viability, concerned local actors and membership in international local authority networks have facilitated the learning process and increased the likelihood of policy integration. The clear involvement of international actors, like international organisations, international development finance institutions and in some cases foreign governments, also contributed to finalisation of efforts towards EPI. Finally, policy entrepreneurs (both from public and private sectors) and consultancy firms, as well as, Turkish investment banks have all played roles in the accomplishment of EPI in several energy and transport projects, with positive environmental consequences. Although there are some other initiatives developed by Turkish local authorities, this sample contributes to development of a framework for our case. First of all, they are not local anymore and act as a part of international networks. Although their numbers are limited at moment, increasing numbers of municipalities are becoming a part of those networks. A number of other players are also involved in this process, ranging from foreign governments to development agencies, consultancy firms to private banks (Orhan, 2019).

There are a number of issues related to the context, i.e. the financial and administrative capacity of municipalities in Turkey. The sample of municipalities explored in this paper are relatively well-off municipalities with relevant financial and administrative capacities. Further research on the voter profile and their demands on environmental matters might have the potential to contribute explanations concerning the leadership behaviour of those municipalities.[4]

7. CONCLUSIONS

Local governments are the major actors of environmental policy in Turkey with substantial mandates ranging from waste management to wastewater management and transport to planning and zoning. Limited capacity for intervention and resource constraints pose problems for local governments and cities in Turkey. Furthermore, interventions of central government agencies, central government's centrally driven appetite for economic growth, centralisation of planning authorities and support for large scale infrastructure projects and planned large scale mining projects, likely to constrain local government and cities' efforts towards a sound environmental policy (Orhan, 2014: 109-122).

Departing from successful experiences of Turkish municipalities' in a multilevel context, this article argued for the possibility of EPI in local level where multiple dividends exists. Win-win situations in which it is possible to attain multiple goals like urban mobility and climate change mitigation, renewable energy production and savings in municipal expenses paved the way for integration of environmental concerns into other domains of municipal services.

[4] I would like to thank to the second referee for highlighting this point for further research.

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In Turkey, involvement of international players contributed to attainment of EPI despite prevalence of barriers. Although, local governments are crucial actors and drivers of change in achieving EPI for climate change adaptation and mitigation, involvement of international actors is an indispensable factor for policy success in Turkey. This argument also applies to other developing countries, because new policy ideas, technology transfer and financial resources have the potential to stimulate policy change.

In this context, the new ideas for change came from international networks of local governments for climate change. They translated new policy ideas to local governments and cities and contributed their action plans. Policy entrepreneurs brokered between local governments and networks. Simultaneously, certain financial institutions mediated between international donors and local governments. International organisations and certain foreign governments also contributed to capacity building efforts.

At the end of the day, local level climate change mitigation and adaptation requires EPI. EPI in Turkish context has certain conditions. Departing from successful experiences of Turkish municipalities' in a multilevel context, ecological modernisation solutions and existence of multiple dividends have the potential of activating the potential for EPI, with the support and involvement of international players.

Ye again, there are a number of unanswered issues in this paper. One of them is about the effectiveness of local climate policies. This paper aimed to identify successful EPI cases in Turkish municipalities. Indeed, we do not have relevant data about the effectiveness of EPI initiatives because there are long term commitments and we need to wait until dust settles down to make a through analysis. The second issue is about the internal dynamics of municipal initiatives and factors behind their involvement in climate politics. Further research on the party affiliation and personal attitudes of mayors and municipal bureaucracies as well as the interaction between local and central government agencies have the potential of shedding light on this unanswered issue.

Finally, Turkish local governments acted as pioneers in committing themselves to climate change adaptation and mitigation. They prepared their emission inventories, climate action plans and sustainable energy action plans. The Turkish government followed their suit and during the publication process of this paper, the Ministry of Environment and Urban Affairs was renamed as the Ministry of Environment, Urban Affairs and Climate Change. The New Green Deal initiatives from the EU and the USA and potential trade barriers for Turkish exports, as well as the availability of certain financial incentives for climate mitigation and adaptation paved the way for the inclusion of climate change concerns into Turkish government's agenda. Although some worries exist about the motivation of the

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government, the role and impact of international factors on environmental policy convergence has manifested itself once again in Turkey.

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