

URBAN AREAS: HOW ARE MEDITERRANEAN CITIES INNOVATING TO COPE WITH THE CLIMATE CRISIS? The case of the City of Izmir

Mert Türkben ¹

About the City of Izmir

Izmir is one of the major port cities in the Mediterranean Basin. Located on the west coast of Turkey by the Aegean Sea, Izmir belongs to the broader region of Southeast Europe. With a population of 4.5 million inhabitants, Izmir stretches over an area of 12.000 km² and comprises 30 districts, including highly urbanized and rural ones.

Izmir has a history of 8.500 years during which trade and interactions through the Mediterranean have played a central role. The port has always been at the core of Izmir's identity and the city has long been a hub of dense networks of maritime connections. For hundreds of years, the goods traded through the Silk Road have been sent to Mediterranean and European countries from the Port of Izmir. People also brought their arts and their culture. The city has become the point where Eastern and Western cultures mingle and live together in prosperity. Its geographical location, history and demography have empowered the city for successful economic, social, cultural and technical trans-border interactions.

City-level international cooperation

Today, the Izmir Metropolitan Municipality is greatly inspired by the city's history. The multi-ethnic, religiously diverse, and multi-lingual periods of the city have offered more opportunities and prosperity to its people.

Therefore, the Mayor of the Izmir Metropolitan Municipality, Mr. Tunç Soyer, has built his vision around the need to increase the connectivity and interactions of Izmir with cities and international organisations in the Mediterranean, in Europe and all around the world. Following his election in 2019, he sent letters to the

¹ Advisor on International Affairs, Izmir Metropolitan Municipality



Mayors of Barcelona, Beirut, Alexandria, Marseille, Thessaloniki, and Venice to offer them cooperation for improving the economic and cultural relationships among Mediterranean cities.

Since then, he has taken steps to bring Izmir to the centre of international networks and initiatives. He assumed impactful international roles, such as representing MedCities in the Euro-Mediterranean Regional and Local Assembly (ARLEM). He is the Global Executive Committee member of ICLEI-Local Governments for Sustainability. He is also an active contributor to organisations such as the United Cities and Local Governments (UCLG), Cittaslow and UN Food Systems Summit Champions Network. In the Council of Europe's Congress of Local and Regional Authorities, he was recently elected as the President of the Assembly of Regions and First Vice- President of the Congress following his role as a Congress Bureau Member since 2019. Izmir became in 2021, a Permanent Member of G20's engagement group titled Urban 20 (U20) which is a crucial city diplomacy initiative representing the voice of cities to G20 countries. In 2022, Izmir was awarded the Europe Prize by the Parliamentary Assembly of the Council of Europe (PACE) as the city most active in promoting European values and ideals.

International cooperation is vital in our common fight against the climate crisis: thanks to increased connectivity, our cities can attract the most valuable knowledge, expertise, and best practices from all around the world.

For example, Izmir is the first city in Turkey to prepare the Green City Action Plan (GCAP) as part of the EBRD Green Cities programme. We also prepared the Izmir Sustainable Energy and Climate Action Plan (SECAP) aiming to reduce carbon emissions by 40% by 2030. Based on these key documents, we created Izmir's Nature-Based Living Strategy. In 2022, Izmir was selected to be part of the EU Mission for 100 Climate-Neutral and Smart Cities by 2030. The municipality is now preparing Turkey's first Sustainable Urban Mobility Plan (SUMP) with a 3-million-euro grant from the EU as technical assistance.

In addition, the Izmir Metropolitan Municipality is closely following the launch of the Interreg NEXT MED programme, which is an EU transborder cooperation programme in the Mediterranean. One of the priorities of this programme is a greener, low-carbon and resilient Mediterranean. NEXT MED is a significant opportunity for our region. The Izmir Metropolitan Municipality has started preparations and is currently collaborating with many institutions and networks from Europe to submit multiple project applications.

Circular Culture concept

In recent years, Izmir has been hosting an increasing number of international summits and events as well. One of them was the United Cities and Local Governments (UCLG) Culture Summit

where the municipality launched an important umbrella concept called “Circular Culture”. This new concept offers a valuable framework and helps communicate the municipality’s priorities better. Circular Culture aims to foster harmony among people and nature. It offers a holistic approach to the climate crisis and many other challenges that our cities face. It has four pillars; Harmony with nature, harmony with each other, harmony with the past, and harmony with change. Harmony with nature offers new perspectives on human-nature and city-nature relations. Harmony with each other focuses on social democracy to minimize societal inequalities. The third pillar, harmony with the past, highlights that it is not possible to design the future of cities without benefiting from traditional knowledge and multiple cultures of the past. Lastly, the municipality considers harmony with change as a way to establish a more just city that is open to change in collaboration with other cities of the world.

The Circular Culture concept and the municipality's key strategic documents have proved to be extremely valuable, especially at a time of increasing climate-related disasters. During the last two years alone, Izmir saw one of the biggest forest fires in its history, a tsunami, a drought and a severe flood. This clearly shows the urgent need for climate adaptation.

Izmir Sponge City programme

There are a few examples of how the Izmir Metropolitan Municipality is responding to some of these challenges. To increase the city’s resilience against both droughts and floods, the municipality established the Water Resources Research and Application Centre in 2021. Engineers, landscape architects and urban planners of the centre designed and launched the Izmir Sponge City programme in 2022. Two main components of this programme are rainwater harvesting and rain gardens.

The first component, rainwater harvesting has three targets: using water resources efficiently, preventing floods and protecting the bay from the flow of polluted rainwater. Each year, 75 million tonnes of rainwater fall on building roofs in Izmir. This is equal to one-third of Izmir’s annual water consumption. In the 11 central districts of Izmir, 47% of rainwater falls on the roofs. In this context, the municipality provides as an incentive five thousand rainwater tanks to five thousand buildings without any fee. Citizens willing to benefit from the programme submitted their applications to receive a rainwater tank for their buildings.

The second main component of the Sponge City programme is rain gardens. The aim is to create ten thousand rain gardens across the city. When citizens apply to join this initiative, the municipality provides them with the plants and necessary materials so that they can create their own rain gardens. This way, rainwater is being restored within nature. Moreover, the scheme prevents rainwater from going into the sewage system and protects the city against floods.

In addition, the programme includes reconstructing some parts of the roads and public spaces with permeable concrete to allow the flow of rainwater.

Launched in December 2022, the 5-year target of the Izmir Sponge City Programme is to decrease the rainwater flow within the city by 70%.

Transport-related projects

The Izmir Metropolitan Municipality is also dedicating great efforts to transport which is crucial for enhancing social justice and achieving sustainable urban development. Izmir has been benefiting a lot from EU funds and from working with European financial institutions on transport-related projects. With the Izmir Sustainable Urban Mobility Plan that the municipality is currently preparing with an EU grant, the administration aims to reduce private car usage and increase walkability, cycling and electric mobility.

The municipality has started to switch to electric buses and also changed some of the municipal vehicles to electric ones. Izmir has the first electric public bus fleet in Turkey. We generate the electricity of these buses from solar panels placed on the roofs of municipal buildings.

The municipality is also planning to purchase an additional 100 electric buses and install new solar power panels to generate the necessary electricity from renewables. For financing this, it applied to the EU project titled "Sustainable Mobility and Reliable Transportation Plus (SUMART+)".

Izmir is also part of the EU Maritime Decarbonization project. In that framework, the EU offers a blending finance solution mixing EU grants with loans from international financial institutions for the acquisition of four electric ferries.

In parallel, large-scale infrastructure investments have been made to build new metro and tramway lines. The European Bank for Reconstruction and Development (EBRD) currently finances two metro line constructions in Izmir. When completed, these metro lines will carry almost half a million passenger per day.

Promoting bike usage is also a priority. Izmir has a 111-kilometre-long bike path. One of these paths encircles the entire bay continuously. The Municipality is focusing on the integration between bike usage with public transportation. Ferry passengers riding a bike benefit from a very low and symbolic fee policy. Buses have been equipped to facilitate carrying bikes. The municipality also established a bike rental system. Since 2020, the number of available bikes in this system has more than doubled with 26 new rental bike stations established across the city.

Izmir is the first city in Turkey to be included in the Eurovelo, a network of 17 long- distance cycle routes that cross and connect Europe. In October 2023, Izmir hosted the European Cyclists Federation's EuroVelo Bicycle Tourism Conference. These kinds of conferences and events increase the visibility of bicycles as a sustainable way of transportation, while promoting a cycling culture and a behavioural shift in our societies.

Living Parks and ecological corridors

In addition to these efforts on transport, the Izmir Metropolitan Municipality has carried out projects on Living Parks and ecological corridors.

In Izmir, the municipality aims to ensure the penetration of nature into the city. By planting natural flora specific to Izmir in the parks and gardens, the biodiversity in the region is drawn into the city. The green areas start functioning as part of the ecosystem.

Living Parks which are located in the urban periphery of Izmir, are places where people can interact with wildlife, see biodiversity, and experience agriculture. They protect the ecosystem, re-establish urban-rural connection and offer green spaces with multiple usages. For example, the Living Park in Gediz Delta, where 10% of the world's flamingo population lives, raises awareness of citizens about Izmir's biodiversity and offers bird-watching opportunities, with paths adapted for walking and cycling.

So far, five living parks have been completed, and the municipality plans to create a total of 35 of them.

The penetration of nature into the city is accelerated by connecting Izmir's park areas to each other by seven ecological corridors. Through this way, we facilitate citizens' easy access to natural areas.

Resilience against forest fires

Another initiative carried out by the Izmir Metropolitan Municipality focuses on increasing the metropolitan territory's resilience against forest fires. In order to recover from one of the biggest forest fires in our city's history, Izmir Metropolitan Municipality prepared and started implementing a comprehensive action plan.

The municipality is currently greening the entire city, starting with the areas damaged by the fire. Throughout this process, it uses specific types of trees and bushes suitable to the Mediterranean climate, requiring no irrigation, and able to grow by themselves after a natural disaster. Instead

of a single type of pine, more fire-resistant species such as oak, terebinth, and *lilium temulentum* are included in the forest restoration process.

The same approach is followed in other green areas of Izmir. Instead of purchasing plants from elsewhere, Izmir local species are planted in all green areas. As a result, the cost of irrigation has been reduced by at least 50%. In the medium-term, the Municipality will save 20 million Turkish Lira and protect its most precious water resources.

Conclusion

Mediterranean cities share a common region that offers common opportunities but also common challenges. As Mediterranean cities, we need to work together, innovate, and inspire each other to build a sustainable future in the region. Taking full advantage of opportunities such as the EU Mission for 100 Climate-Neutral and Smart Cities by 2030 and the Interreg NEXT MED programme while working on creating new channels for strengthening our collaboration should be a shared priority.