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Empowering climate adaptation through inspiring ideas in Bursa, Türkiye

A community-inclusive approach enhances citizen participation in climate resilience efforts

Bursa Metropolitan Municipality launched Türkiye's first climate adaptation-themed Ideathon, a citizen-driven innovation competition engaging universities, civil society, and public institutions nationwide. This Ideathon transformed local creativity into practical solutions for the city of Bursa's environmental challenges, setting a new standard for community-led climate adaptation in Türkiye.

Key Learnings

- **Meeting local challenges by collecting national solutions:** Open to participants from all across Türkiye, the citizen innovation competition bridged national expertise with Bursa's pressing local issues – including flooding, urban heat islands, and water scarcity. By raising public awareness, the initiative deepened understanding of climate risks and empowered citizens to see themselves as active contributors to the solutions.
- **Local support fosters innovation:** Testing innovative and promising ideas with municipal departments requires expert guidance and a supportive environment. The Smart City and Innovation Centre of Bursa Metropolitan Municipality provides the mentorship, infrastructure and resources needed to transform inspiring concepts into real-world solutions.
- **Community participation creates ownership:** By involving university students, researchers, engineers and volunteers, Bursa built a shared sense of responsibility for making the city more climate-resilient and sustainable. Collaboration among local authorities, universities, Non-Governmental Organisations, and youth strengthens scientific credibility and community ownership.

About the region

Bursa is Türkiye's fourth-largest city, located in the Marmara Region in the northwest of Turkey. The city is home to more than 2.2 million residents. The city extends from the highlands of Mount Uludağ to the shores of the Marmara Sea, encompassing urban areas, fertile farmlands, and industrial zones. This mix of geography and economy makes Bursa both vulnerable to climate impacts and an important city for Türkiye's adaptation efforts.

Climate Hazards

Droughts, Water Scarcity, Extreme Heat

Sector

Urban

Key system

Local Economic System



Republic of Türkiye



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BURSA



Climate Threats

According to the [Bursa Green City Action Draft Plan](#) and the [Bursa Sustainable Energy and Climate Action Plan \(BUSECAP\)](#), average temperatures in the region are projected to rise by 2.5 to 3°C by 2100 under the highest CO₂ emission scenario (SSP5-8.5). Intense rainfall and flooding pose growing threats to the district's villages, while seasonal droughts and water scarcity are increasingly affecting agriculture and green infrastructure. In addition, urban heat islands – meaning higher temperatures within the city compared to its surroundings – along with air pollution, increase public health risks and energy consumption due to higher cooling demands.

"Those who know their soil, protect their trees, and preserve their water also safeguard their future. With our vision of a greener Bursa, we are working day and night to build a city that lives in harmony with nature. Our future will thrive only together with nature."

Mustafa Bozbey, Mayor of Bursa Metropolitan Municipality

Better climate governance improves on-the-ground climate resilience

Over the past decade, Bursa Metropolitan Municipality has made significant progress in mainstreaming climate action into its governance structure, embedding climate priorities into policies and plans.

In 2020, Bursa Metropolitan Municipality strengthened its institutional framework by founding the [Zero Waste and Climate Change Branch Directorate](#), becoming one of Türkiye's first metropolitan municipalities

to establish a dedicated climate governance unit. The “Bursa Declaration on Combating Climate Change”, co-signed by 52 public institutions, non-governmental organisations, and local administrations, stands as Türkiye’s first local multi-stakeholder declaration on climate action. By taking the lead and bringing together public institutions, industry, universities, and civil society around a common goal, Bursa committed to:

- monitor Bursa’s climate risks,
- make data-based decisions,
- protect biodiversity,
- strengthen the city’s resilience against heatwaves, floods, and droughts, and
- raise public awareness.

Signing the declaration represents Bursa’s determination to build a future through collective wisdom and shared responsibility. Cooperation among public, academic, private, and civil actors in areas such as data sharing, awareness-raising, climate adaptation projects, and the integration of local strategies underscores the willingness to act.

Advancing adaptation through an Ideathon

Following its declaration on adapting to the challenges associated with climate change, Bursa Metropolitan Municipality organised the Climate Adaptation Ideathon within its climate governance framework – Türkiye’s first open, citizen-focused Ideathon on climate adaptation. The Ideathon’s purpose is to build local resilience by turning existing knowledge into practical, community-driven solutions. The application period for collecting innovative climate adaptation ideas closed in April 2025. In total, the initiative received 127 team project applications, and at least 400 people participated.



Figure 2: Participants presenting their ideas during the Climate Adaptation Ideathon. Image Credit: Bursa Metropolitan Municipality.



Figure 1: Short introduction texts of the 20 finalist projects. Image Credit: Bursa Metropolitan Municipality.

The teams consisted of two to five people, working on their ideas for one month. On the day of the Ideathon presentation, participants shared the top 20 projects with an audience of approximately 200 attendees at an open-to-the-public event. This initiative created a space for young people and researchers from across Türkiye, as well as local innovators in Bursa, to collaborate and design practical solutions for the city's climate challenges. By cooperating with local universities and civil society organisations, the Ideathon brought together scientific knowledge and community-based ideas.

This inclusive process allowed the participants to analyse climate challenges, such as heat islands, flash floods, and water scarcity, and develop realistic solutions tailored to Bursa's local conditions. Online training facilitated mutual learning and encouraged sharing climate adaptation experiences, which will further guide Bursa's adaptation actions.

After the first jury evaluation at the Ideathon, the teams participated in an online training for project implementation and worked for 24 days on further developing their ideas into projects. They also received support from municipal experts, providing input on Bursa's challenges. Different municipal units reviewed the projects for their technical feasibility, cost estimation, and potential integration into municipal plans.

The top 20 teams presented their ideas to the Ideathon jury – among them the following implemented projects:

- Rain Wheel: Focuses on managing, storing, and reusing rainwater through permeable surfaces, enabling rain to percolate, and creating rain gardens – small green spaces, which absorb excess water – to build climate-resilient urban spaces.
- AI-Based Neighbourhood Water Management: Uses Nature-based Solutions, such as rain gardens and permeable streets, to reduce flood risks, while applying digital monitoring at the neighbourhood level for improved water management.
- Nilüfer Green Corridor: Connects green spaces through trees and shrubs by creating an ecological corridor within the city to increase biodiversity and reduce inner-city temperatures.
- Bursa AquaAdapt System: Collects and reuses rainwater for sustainable urban water management and adaptation to water scarcity.
- Green Resilience – Bursa's Climate Adaptation Journey: Proposes a resilient neighbourhood model to cope with local disasters and rising temperatures.
- Adaptive Green Modules: Designs flexible green and shading systems in public spaces that can adjust to changing weather conditions.

The competition not only encouraged academic and community engagement from across Türkiye but also highlighted the municipality's role in turning global climate goals into local action. Through broad collaboration and participation from across the country, Bursa showed how a local, yet open, innovation model can bring together knowledge and public awareness to create real impact on urban climate adaptation policies and practices. The Ideathon was not only a competition but also helped the teams turn their ideas into projects addressing five key topics that combine adaptation with mitigation.

- **Urban Green Areas and Ecosystem Services**: Projects that strengthen the city's adaptation to climate change by enlarging and creating green spaces, protecting natural ecosystems, and supporting biodiversity, such as green roofs and vertical gardens.

- **Sustainable Mobility and Smart City Solutions:** Environmentally friendly and smart mobility reduces Bursa's transport-related carbon emissions. Enhancing the efficiency of public transport, expanding bicycle and pedestrian routes, promoting the use of electric vehicles, implementing the 15-minute city model, and integrating smart city applications are the main focuses of this theme.
- **Climate-Resilient Infrastructure and Disaster Management:** Improving Bursa's resilience to extreme weather events focuses on protecting urban areas against floods, heatwaves, and droughts, as well as creating climate shelters at public transport stops and integrating nature-based solutions into disaster management.
- **Energy Efficiency and Renewable Energy Use:** Improving Bursa's energy consumption and increasing the use of renewable energy sources includes solutions to enhance energy efficiency in buildings, integrating solar and wind energy, and implementing sustainable energy models in industry and housing.
- **Waste Management and Circular Economy:** Key areas include reducing waste generation, improving recycling systems, encouraging composting practices, and developing industrial ecology approaches, meaning to imitate nature in industrial processes, where nothing goes to waste.

Funding and new Policy supporting adaptation actions

A strong, collaborative network has turned Bursa into a national centre for innovation and climate adaptation. It has fostered collaboration between diverse groups from across Türkiye while ensuring that every idea remains rooted in Bursa's local needs and data. Through this inclusive approach, the city has demonstrated how community participation and strong institutions can collaborate to build measurable resilience. Complementing these efforts, the Bursa Sustainable Urban Environment Plan (BUSECAP) – funded by the Clean Technology Fund under the Climate Investment Funds – supports infrastructure projects and policy reforms that strengthen the city's resilience. Together with BUSECAP, it provides a clear, data-driven roadmap for sustainable urban growth, climate adaptation, and environmental protection.



Figure 3: With the Ideathon Participants and Municipality team. Image Credit: Bursa Metropolitan Municipality.

At the same time, the Green City Action Plan, supported by the European Bank for Reconstruction and Development and the Clean Technology Fund, identifies priority infrastructure investments and policy measures to help Bursa address environmental challenges and promote sustainable urban development. Bursa is using this plan to define key environmental issues and implement greener, more climate-resilient solutions in areas such as water management, energy efficiency, air quality, and urban planning – helping to create a cleaner, greener, and more liveable city for future generations.

Summary

Bursa's journey demonstrates how local governments can translate European technical guidance into community empowerment. The Climate Adaptation Ideathon embodies the city's commitment to participatory climate governance: merging data, design, and creativity to build a resilient, green, and inclusive urban future. The Climate Adaptation Ideathon was designed as a multi-stakeholder innovation ecosystem, uniting universities, non-governmental organisations, and public institutions under the coordination of Bursa Metropolitan Municipality. Through this approach, the Metropolitan Municipality successfully established a national network of collaboration – inviting participants from across Türkiye while maintaining a strong focus on addressing Bursa's local climate challenges.

Further information

This work is part of Bursa's commitment under the Covenant of Mayors for Climate, Energy and the EU Mission on Adaptation to Climate Change (Mission Charter 2023). It contributes to the implementation of BUSECAP, the Green City Action Plan and aligns with Türkiye's national adaptation priorities.

- [Bursa Climate Change Adaptation Thematic Idea Competition Final Report](#) (in Turkish)

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