

VIENNA, AUSTRIA

In this story, learn more about the innovative adaptation efforts that Vienna is implementing to tackle extreme heat and flooding risks. From urban greening to developing a climate data portal, Vienna is demonstrating how a major EU city can implement on-the-ground adaptation solutions.

EU MISSION IMPACT

The EU Mission on Adaptation to Climate Change has supported Vienna by providing funding, expertise, and collaborative platforms. Through the Mission, Vienna accessed EU funds like Horizon Europe and the LIFE Programme for urban greening initiatives and advanced flood management systems.

The MIP4Adapt Technical Assistance has helped the region build capacity, including comprehensive vulnerability assessments that guide data-driven decisions. Collaborative efforts with other Mission Charter Signatories facilitated knowledge exchange, enhancing Vienna's resilience and promoting sustainable urban development.

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Vienna reacts to increasing climate challenges with far-sighted urban planning and by implementing ambitious adaptation solutions. That's why numerous streets and squares are currently being redesigned to make them greener and cooler. When planning new urban development zones, we prioritise climate adaptation from day one.

CLEMENS HORAK

Head of Department Urban Development and Planning

REGIONAL PROFILE

Vienna, the capital of Austria, is a vibrant and historic city located in the eastern part of the country along the banks of the Danube River. With a population of approximately two million, it is Austria's largest city and a cultural, political, and economic hub.

CLIMATE CHALLENGES

Vienna faces significant climate challenges, including rising temperatures and increasing heatwaves. Flooding risks from the Danube River and heavy rainfall events are also escalating, which require effective management strategies. Additionally, urbanisation and climate change contribute to biodiversity loss, impacting local ecosystems. Engaging the community in adaptation efforts is crucial, yet there remains a gap in awareness about climate impacts. These challenges highlight the urgent need for coordinated responses and innovative solutions.

SOLUTIONS

Vienna implemented several innovative adaptation solutions to address its climate challenges. These include extensive urban greening initiatives, which involve green roofs and the creation of new parks to help cool the city and enhance biodiversity. To encourage adoption, Vienna offers financial incentives covering up to 20–50% of installation costs and mandates the inclusion of green roofing in new large-scale developments. Examples include the Vienna Main Train Station area and the Biotope City Wienerberg.

Advanced flood management systems, such as flood retention areas and reinforced riverbanks, significantly reduce flooding risks. Key components include the New Danube Channel (Entlastungsgerinne), a 21-kilometer flood bypass channel parallel to the main river, and the Danube Island (Donauinsel), an artificial island serving as both a recreational area and a flood barrier. Real-time monitoring through sensors and gauges enhance the city's ability to manage flood risks.

Comprehensive vulnerability assessments guide data-driven decision-making, ensuring targeted interventions. The city's Open Data Portal makes over 400 datasets accessible to the public, promoting transparency and innovation. Predictive analytics and real-time monitoring inform policies and urban planning, optimising city services and increasing operational efficiency

Vienna continually tests and implements innovative solutions through pilot projects. One such initiative is the introduction of permeable pavements. By replacing impermeable surfaces with materials like porous asphalt and permeable concrete, the city reduces surface runoff by up to 90%, aiding storm water management and reducing heat absorption. These pavements are installed in selected sidewalks, plazas, and parking areas, contributing to urban cooling and groundwater recharge.

OUTPUTS

The adaptation solutions implemented in Vienna have significantly improved the city's resilience to climate risks. Urban greening initiatives have reduced the urban heat island effect, enhancing public health and liveability. Flood management systems have effectively mitigated the impact of extreme weather events, safeguarding infrastructure and communities. Comprehensive vulnerability assessments have enabled data-driven decision-making, ensuring that interventions are targeted where they are needed most. These outcomes not only strengthen Vienna's capacity to adapt to climate change but also provide a scalable model for other European cities. By sharing its best practices and successes, Vienna hopes to contribute to the broader goal of building climate resilience across Europe.



LESSONS LEARNED

Planning and preparation is key: A comprehensive vulnerability assessment is needed to inform adaptation actions and their priority levels.

Leverage EU support: Successful strategies utilised EU support for funding and expertise, fostering cross-departmental collaboration, and actively engaging stakeholders and the community.

Nature-based Solutions Success: Insights gained highlight that combining Nature-based Solutions with traditional engineering enhances effectiveness.

