

Ten Recommendations for Climate Change Adaptation Measures for the City of Mödling

1. Expansion of sustainable irrigation and sustainable design of public green spaces

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- ✓ Optimize irrigation for extreme heat periods (e.g., deep root irrigation in trees, pipe cross sections, drip irrigation close to the ground, ensure sufficient capacity exists in the municipality)
- ✓ Implement decentralized water storage for trees (e.g., Sponge city, Aqua Bag)
- ✓ Ensure sufficient infiltration areas for trees and shrubs (i.e., soil moisture from rain)
- ✓ Implement demand-oriented and water-efficient irrigation of green areas (through sensors and Geographic Information Systems GIS), which would depend on the type and condition of the vegetation/trees, location factors (e.g., root area, soil, microclimate, root and groundwater depth) and weather (air temperature, wind and solar intensity)
- Change to heat, dry and pest resistant trees (e.g., silver lime) and shrubs with high potential leaf area indices (e.g., winter bark, pedunculate oak)
- ✓ Densify vegetation in existing green areas (i.e., parks, street spaces, squares, green parking lots)
- ✓ Create new green areas through unsealing (with a focus on public places)

2. Sustainable design and irrigation of private green spaces

- Target advice to specific groups (e.g., private and institutional forest and garden owners, companies in industrial and commercial areas, farmers, forestry companies)
- ✓ Implement a tree protection program (similar to Vienna)
- ✓ Initiate a tree support program for new trees in gardens (similar to the city of Graz)
- Conserve green areas/or unseal private parking spaces and inner courtyards by means of green area target values in the development plan, considering green roofs, façades/balcony greening and blue areas
- 3. Construction / renovation of green roofs on a minimum flat roof area of 200 m² (adapted from NÖ ROG)
- 4. Expansion of the subsidy program for green roof areas, as well as for façades and vegetated balconies
- 5. Definition of a **minimum value** of 0.50 to 0.70 for the **reflectivity of new roof surfaces and road/path surfaces** (with consideration for areas with special designations such as monuments, the old town center, etc.)
- 6. Increased shading in public areas through addition of trees, arbors, awnings and solar panels (with a minimum reflection), as well as by raising the maximum building height
- 7. Creation of new **cool public outdoor lounges** with green areas and water as well as additional drinking fountains in pedestrian **hot spots** (e.g., train stations)
- 8. Development of **a cold air strategy for Mödling** (green belts, cold air preparation areas, cold air and supply air channels, shaded blue areas with moving water)
- 9. Integrated collection, monitoring, management, assessment and planning of green and blue areas and other factors (e.g., shading, low absorption roofs) to enhance city cooling. This can be done using a GIS and Urban Climate Quality Mapping (UCQM). UHI adaptation should also be integrated in local development concepts and be facilitated through provision of the necessary databases and capacities.
- **10. Regional cooperation** between the neighboring municipalities and the district in the implementation of adaptation measures to urban heat islands, i.e., in joint action planning and spatial planning (protection of forest areas especially against fire, development and design of industrial and commercial areas, large construction projects, regional development concepts, collection and sharing of databases)









