



Waste Management and Climate Change – an Overview



- Around 3.2% of the overall global greenhouse gas (GHG) emissions are attributed to the waste management sector.
- > Globally, the largest share (approx. 60%) arises from landfilling waste.
- > During the decomposition of organic waste, landfill gas is produced which contains large amounts of methane.
- \triangleright Methane (CH₄) is the <u>second biggest contributor to climate change</u> after carbon dioxide (CO₂).
- In Vienna, since 2008, no untreated waste goes to landfill anymore. Therefore, the Viennese municipal waste management sector has a positive net-climate effect.
- ➤ Good news to start with:

These emissions can be avoided without sacrificing anything; on the contrary, society actually gains a lot in the process

Vienna Climate Guide



For solving problems, you need a plan plus effective actions.

Vienna has a plan: It is called Wiener Klimafahrplan, which translates to Viennese Climate guide.

This roadmap is Vienna's strategy to combat climate change. It includes measures to reduce emissions, promote renewable energy, enhance building efficiency and support emission-free transportation, with the <u>aim of becoming climate-neutral by 2040</u>.

This guide contains **over a hundred specific actions**, short- and long-term, which will help us reach our goal. And since climate change is already happening, it doesn't only include climate protection measures but also measures that help us adapt to the changing climate.

Further Climate Strategy Papers in Vienna



> Climate protection programs

include individual measures in <u>5 fields of action</u> (district heating & power generation, living, enterprises, mobility, city administration)

> Smart Climate City Strategy Vienna

Vienna's way to become a best practise example.

Main purpose: sharpens the climate action targets and defines goals

> Urban Development Plan

specifies whether an area is designated as green space or for traffic purposes, for commercial buildings or housing construction.

Includes measures against urban heat islands



Vienna Climate Guide: 3 Main Elements





In Vienna, circular economy has been identified as a key factor in order to become a climateneutral City.

It is important to redefine waste as a resource, reduce climate impacts from waste to a minimum and use the net positive effects. Waste management is a key sector towards a circular economy.





Organisation of planning for climate protection in Vienna



At the top of the Organisation, the Mayor and Governor of Vienna, Mr. Michale Ludwig,

stands.

Strategic Level

Councilor for Climate, Environment, Democracy and Personnel

Executive Office of Climate Affairs

MA 31

Water

supply

Municipal Council Office (MD)

On the Operative Level a number of different Municipal Departments are found - e.g.:



MA 20 MA 2

Energy Envir
planing and tal
efficiency prote

Environmen
tal
protection –
Environmen
tal agency

MA 42 MA 45

City

gardens

Water Waste Forestry and protection management Agriculture and Vehicle fleet

MA 48

MA 49 Vienna Canal Forestry and Water Agriculture disposal

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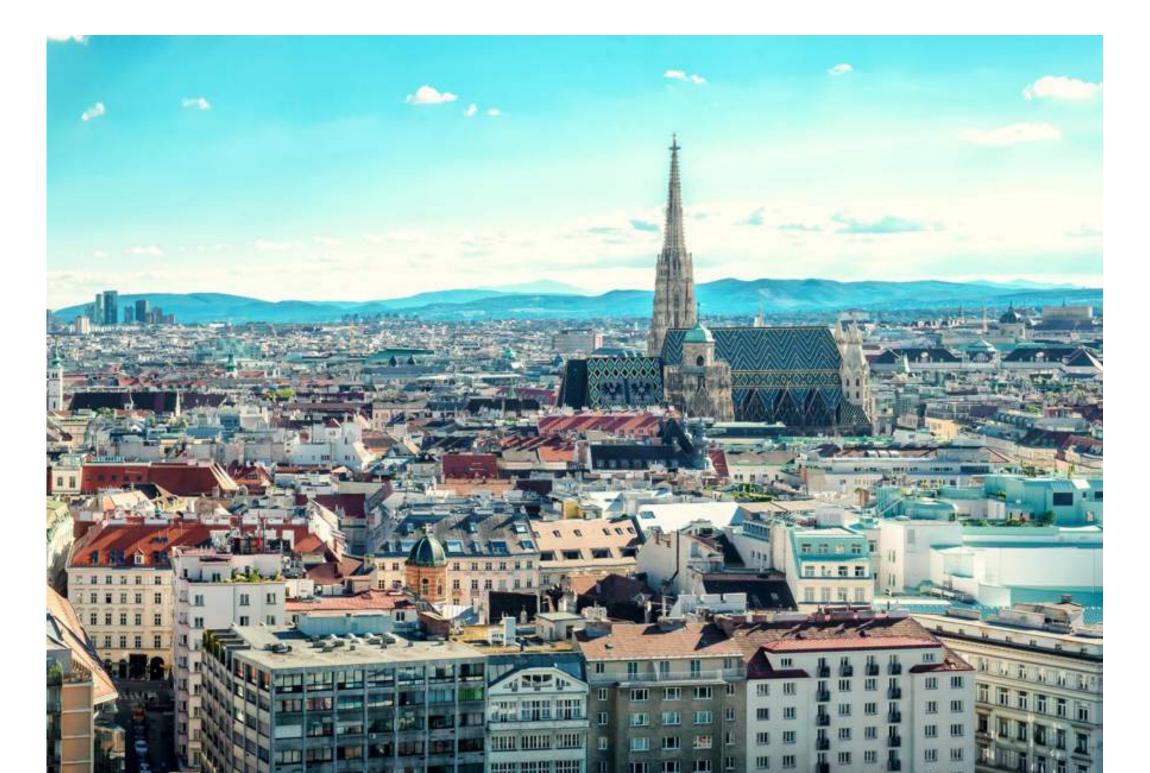
The Viennese Model of Waste Management



The City of Vienna is responsible for the entire chain of municipal waste management:

1

Planning



2

Collection of Waste



Disposal







3

Treatment of Waste

Municipal Waste Management: Approach of the City of Vienna



- → Best environmental technology
- Promotion and implementation of (53!) measures of the Viennese
 Waste Prevention Programs
- MA48-Tandler (Reuse shops),
- Separate collection of recyclables (e.g. biowaste, textiles, plastics/metals). Focus: Good quality for high quality recycling very ambitious recycling targets!
- Energy recovery (WtE) from residual waste with production of district heating, electricity and district cooling

→ No municipal waste goes directly to landfill (requirement of the EU landfill directive). Landfill gas (from waste disposed of in the past) is captured and converted into electricity and local district heating.





Urban Cleanliness in Vienna



The City of Vienna (Municipal Department 48) is responsible for street cleaning in Vienna. Cleaning the nearly 2.800 kilometres of the city's road network requires precise planning of staff deployment and an optimum combination of manual and mechanical work.

Facts and Figures:

- > approximately 1.000 employees for street cleaning
- road network: 2.800 kilometres
- > over 21.000 public waste bins
- cleaning at approx. 400 events per year
- > 21.000 running metres of market areas
- > approx. 3.800 dog waste bag dispensers



13 Separate Collection Centre for Municipal Waste







Separate collection is a key factor for high quality recycling





In Vienna
233.000 bins for recyclables
and
234.000 bins for residual waste
are found.



Vienna: a climate friendly and clean City



Well-cleaned streets in a large city convey a feeling of safety, improve the sense of well-being and thus contribute significantly to quality of life. The contribution of the Viennese population, tourists and commuters is essential to keeping Vienna tidy. With the launch of the "Clean City" initiative in 2007, a comprehensive package of measures for improving cleanliness was introduced.

Our three pillars:







Expanding Services



BABY?

546 48

The number of public bins in Vienna increased from 14,000 to over 21,000 and ashtrays were added to all of them. Also their visibility had been improved through orange framing around the openings and stickers with humorous slogans. Other added infrastructure includes signs against dog fouling in green spaces as well as approximately 3.800 dog waste bag dispensers.



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Providing Information



Information and awareness-raising through campaigns, community clean-ups, events like the annual "Mistfest" celebration and information provided by the waste consulting service are a key-factor. Special programmes for children and young people complement the multiple programs offered.





Fining wrong behaviour: The Waste Watchers



The Waste Watchers execute the Vienna Cleanliness Act and can issue fines. Infractions can be penalised with a fine of EUR 50 or a report may be filed, leading to a penalty of up to EUR 2,000. The fines and penalties collected are earmarked for cleanliness measures.

Despite the fines, the litter patrol is well accepted by the population and they are even requested to patrol specific areas.





The efforts pay off!



The cleanliness measures of recent years are effective and contribute to Vienna being at the top of the international ranking of quality of life year after year. Many delegations visit Vienna to exchange experiences.

Success from 2008 to 2022

- illegally dumped bulky waste: -50%
- > illegally dumped refrigerators: -60%
- > over 100,000 official acts by the WasteWatchers
- > dog waste bags: 100,000 filled bags a day
- > cigarette butts: 128 million/year deposited in the
- > appropriate bins

Most recent honour: Vienna Tourism Award MA 48 received the Vienna Tourism Award in November 2023 for the extraordinary efforts in the field of Urban Cleanliness.



Take home messages



- > A **good waste management** can avoid significant amounts of greenhouse gases and therefore contribute to **climate protection**.
- The most important measures are the recovery of raw materials through separate collection, energy recovery of non-recyclable residuals in waste-to-energy plants combined with a landfill ban for untreated municipal waste.
- ➤ Vienna already has a very efficient waste management system with a positive net-climate effect but aims to further improve the system on all different levels.
- ➤ Well-cleaned streets in a large city convey a feeling of safety, improve the sense of well-being and thus contribute significantly to quality of life.

 Therefore, Vienna is ranking at the top of the international ranking of quality of life year after year.

12 a 14 de dezembro de 2023

5.º ENCONTRO NACIONAL DE

LIMPEZA URBANA

& URBAN CLEANING EXPO

AUTÓDROMO DO ESTORIL, ESTORIL | CASCAIS

Limpeza urbana ao serviço das pessoas e dos territórios



