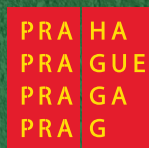




# Prague Environment Selected Information 2021

Selected Information  
from the Prague Environment Report

Prague Environmental  
Information System (IOŽIP)  
THE CAPITAL CITY OF PRAGUE



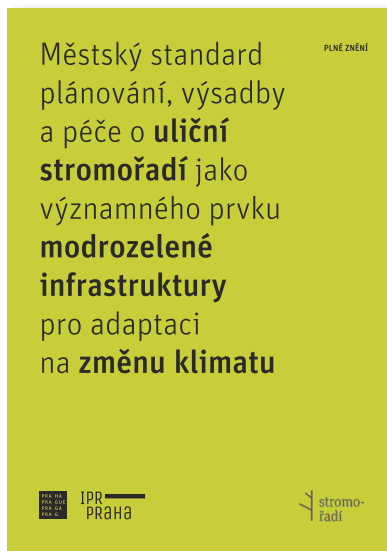
# CLIMATE PLAN OF PRAGUE UNTIL 2030

The main aim of the Capital City of Prague's Climate Plan is reducing its greenhouse gas emissions in the territory of Prague by 45 % by 2030 compared to 2010.



## Klimatický plán hl. města Prahy

In fulfilling the goals of the **Capital City of Prague's Climate Plan until 2030** – its part the Climate Change Adaptation Strategy – two key documents were developed and subsequently adopted by the Prague City Council:



The **Prague Rainwater Management Standards** will help prevent heat islands and preserve the natural water regime. They lay out a comprehensive approach to drainage in the urbanised area, which places emphasis on **capturing rainwater where it lands, maximising absorption and minimising surface runoff**. The basic principles of the standards are **minimising impermeable surfaces** as part of the project planning phase, **draining rainwater off into vegetation, collection of rainwater and absorption into the soil**.

In order to live up to these principles, "**nature-based solutions**" are used.

The Rainwater Management Standards specify the manner in which municipal organisations and private entities should approach rainwater management and blue-green infrastructure projects in general.

The **Municipal Standard for Planning, Planting and Caring for Street Trees** is an important element of blue-green infrastructure for adapting to climate change that comprises a set of essential principles for quality planning, planting and maintenance of trees on the street.

Quality planning refers to both project preparation and actual creation of the system of rows of trees, the importance of which extends beyond the particular street in question, forming a functional system within the neighbourhood or indeed the whole city.

Interconnected rows of trees must become part of the urban blue-green infrastructure that fulfils the required ecosystem functions independently, without the addition of produced energy. They are an important element for maintaining the sustainable habitability of the city in times of climate change.

The capital City of Prague's climate plan until 2030 was approved by the City Council of Prague on May 27<sup>th</sup>, 2021 (see ZHMP Resolution No. 27/30 dated 27<sup>th</sup> May 2021). Detailed information on climate protection in Prague and the approved Climate Plan can be found at: <https://klima.praha.eu> and <http://portalzp.praha.eu/ochranaklimatu>

# PRAGUE'S PRIORITIES IN THE ENVIRONMENTAL FIELD

Prague is the capital of the Czech Republic, at the same time its largest city (496 km<sup>2</sup>) and population (1.275 million as of December 31<sup>st</sup>, 2021). In terms of the quality of the environment, Prague must address issue similar to those of other large cities worldwide. These are mainly the impact of car traffic, noise, water and energy management, waste management, but also sustainable land use, care for cleanliness, greenery and valuable natural sites in the city.

At present, climate protection is a key priority. The basic strategy in this area is the City of Prague **Climate Plan until 2030** adopted in May 2021.

In its *Programme Statement for the 2019–2022 election period*, the Prague City Council identified a healthy environment as one of the basic preconditions for people's quality of life and simultaneously builds environmental policy on natural motivation, respect and public participation.

One of the main intentions of Prague in environmental field in this election period is fulfilling the adopted **Strategy of Adaptation of the Capital City of Prague on climate change**. Specifically, it is in relation to increasing the amount of greenery in the streets, revitalising courtyards, adding water elements to the streets and also creating an action plan for planting trees with the long-term intention to plant up to one million new trees in Prague. Farmers' markets with local products were supported. In the area of greenery, the areas of parks, forests, forest

parks and other recreational areas in Prague were being expanded and revitalised. Acquisition of green areas into the ownership of the city continued. As part of the care of city parks and greenery, their biodiversity was increasing. Community gardens and gardening colonies were supported. In terms of water, the revitalisation of Prague's streams and water bodies continued, new lakes, and ponds were created. Rainwater priority was seepage at or near the point of impact. The use of rainwater in the city was supported, for example, for irrigating greenery.

In the **municipal waste management** field, the city follows the sequence: 1. prevention, 2. minimisation, 3. recycling, 4. energy recovery, 5. landfilling. It supports the collection of bio-waste and improves the network for the collection of sorted waste.

In the field of **responsible development of Prague**, the priority is the territorial development of the city, which minimises the traffic demands of the inhabitants and offers enough goals in easily accessible distances.

In the **transport** field, public transport is being further improved and developed, among others, in the form of tramlines, railway stops or the preparation of metro D. Bicycle transport and the construction of new cycle routes is supported. The aim is to significantly improve the conditions for pedestrians and all other users of non-motorised transport.

## Prague – Basic Characteristics

Area [km <sup>2</sup> ]	496.2	Types of land [ha] at 31 <sup>st</sup> December	
Administrative division		agricultural land	19 543
number of City Districts	57	forest land	5 251
number of Cadastral Districts	112	water bodies	1 097
Location (City centre)		developed areas	5 082
geographical latitude	50°4'53.193" N	other areas	18 647
geographical longitude)	14°25'38.39" E	Population – number of inhabitants	1 275 406
Altitude [m n. m.]		– females	623 121
maximum (Zličin)	399	– males	652 285
minimum (Suchdol a Praha 8)	177	average population	1 267 173
Climate Praha - Karlov (2021)		population density per 1 sq. km	2 570.3
annual air temperature [°C]	10.1	Houses, apartments (2021) *	
annual rainfall [mm]	550.6	Apartments started	9 446
Vltava River		Completed apartments	5 228
length [km]	30	Living space per 1 completed apartment in m <sup>2</sup>	59.9
Average flow rate in Malá Chuchle [m <sup>3</sup> .s <sup>-1</sup> ]	137	Of which are in family houses	114.4
		Gross domestic produkt per capita*	
		– CZK	1 264 456
		– EURO	49 316
		Share of unemployed persons [%] **	2.76

\* Data as of January 13<sup>th</sup>, 2021

\*\* Proportion of achieved job seekers aged 15–64

Source: ČSÚ, ČHMÚ, ČÚZK, MPSV

# CLIMATE SYSTEM

## Evaluation of meteorological factors for 2021 from Prague stations

Compared to **the norm of 1991–2020**, the temperature in Prague for the **year 2021** can be considered normal with a deviation of  $-0.3\text{ }^{\circ}\text{C}$  and an average **annual temperature at Prague-Ruzyně of  $+8.7\text{ }^{\circ}\text{C}$** , making it the second coldest in the last decade behind 2013. Since 1946, the year 2021 ranks alongside the years 1948, 1951, 1967 and 1974 as only the twenty-fifth to twenty-ninth warmest years. The spring was cool, with a highly subnormal April and May (deviation of  $-3.3$  and  $-3.1\text{ }^{\circ}\text{C}$  respectively) and August was also subnormal with a deviation of  $-2\text{ }^{\circ}\text{C}$ . The month of September had a temperature above the norm (deviation of  $+1.5\text{ }^{\circ}\text{C}$ ) and the highest temperature deviation of  $+2.5\text{ }^{\circ}\text{C}$  was measured in June following the cool spring. In the other months, the average temperature was within the norm.

**The highest maximum daytime temperature of  $+34.7\text{ }^{\circ}\text{C}$**  was measured in 2021 on 20 June at the Karlov station and the highest average daytime temperature of  $+29.3\text{ }^{\circ}\text{C}$  was also measured 20 June at the Klementinum station. **The lowest minimum daytime temperature of  $-19.1\text{ }^{\circ}\text{C}$**  was measured at the Kbely station 15 February, and the lowest average daytime temperature of  $-11.2\text{ }^{\circ}\text{C}$  was measured 12 February at the Ruzyně station.

The warmest station in Prague in 2021 remained Klementinum with an average annual temperature of  $+11.3\text{ }^{\circ}\text{C}$ , while Ruzyně was the coldest with an annual average of  $+8.7\text{ }^{\circ}\text{C}$ . There were two significant heat waves in 2021, from 16 to 21 June with six tropical days (temperature over  $30\text{ }^{\circ}\text{C}$ ) and 4 tropical nights (temperature does not fall below  $20\text{ }^{\circ}\text{C}$ ) measured at Klementinum, and from 13 to 15 August with three tropical days and one tropical night at the Klementinum. In contrast, there was a cold spell with daily highs below zero from 7 to 15 February. The Klementinum's series of long-term absolute extremes of daily max temperatures (measured since 1775) was surpassed seven times in 2021, twice in June and once each in January, March, April, May and October. No absolute minimum temperatures were surpassed at the Klementinum this year.

**The trend of warming and the impact of the city's heat island** can be seen on the graphs comparing the changes in the annual number of characteristic days at the Ruzyně station on the outskirts of Prague and the Klementinum station in the centre. The number of tropical days, when the daytime high is 30 or above, was 4 at Ruzyně in 2021, which is below average, while the most in the centre was 14 at Klementinum.

No very hot day (with a daytime high of  $35\text{ }^{\circ}\text{C}$  or over) occurred in Prague in 2021. There was a tropical night (low of  $20\text{ }^{\circ}\text{C}$  or higher) at least once at all stations but Ruzyně, with the most tropical nights at Klementinum with 11, then 3 at Vinohrady and 2 at

Karlov. There were 101 frosty days (daytime low below  $0\text{ }^{\circ}\text{C}$ ) at Ruzyně and 40 at Klementinum, and 22 freezing days (daytime high below  $0\text{ }^{\circ}\text{C}$ ) at Ruzyně and 12 in the centre of Prague (Klementinum, Karlov, Vinohrady).

The above-average **annual rainfall of  $567.9\text{ mm}$**  in 2021 measured at Prague-Ruzyně represents 115% of the long-term norm for 1991–2020. The month of January was exceptionally above average at Ruzyně (220% of the norm), as was May (177% of the norm), while the months of February and August were above average (146% and 145% respectively). The months of April, September and October were below average (48%, 43% and 41% of the norm), while the other months fell within the normal limits. The highest daily rainfall within Prague of  $51.7\text{ mm}$  was measured during the high occurrence of storms on 8 July in Horní Počernice, with over  $45\text{ mm}$  also falling on the same day in Zadní Kopanina, Radotín, Komořany, Chodov, Michle and Běchovice. The highest monthly rainfall of  $139.4\text{ mm}$  was measured in June at the PVS Karlov station, with the highest annual rainfall in Prague of  $649\text{ mm}$  being in Zadní Kopanina.

Intense short-term precipitation particularly occurred during the storms of 24 June and 8 July, with an hourly total of often over  $20\text{ mm}$ . There was no period of pronounced drought with no rainfall in 2021.

The **average wind speed** at Prague-Ruzyně in 2021 was within normal limits. The strongest winds were in May (with an average wind speed of  $4.4\text{ m}\cdot\text{s}^{-1}$ ). The year's maximum instantaneous wind speed in Prague was  $29\text{ m}\cdot\text{s}^{-1}$ , recorded 13 March at Karlov, with a similar amount recorded 21 October when the windstorm Ignatz passed through with a maximum instantaneous gust of  $28.9\text{ m}\cdot\text{s}^{-1}$ , also at Karlov, with wind gusts at most Prague stations exceeding  $21\text{ m}\cdot\text{s}^{-1}$ , and wind speeds at higher altitudes in the Czech Republic reaching hurricane force.

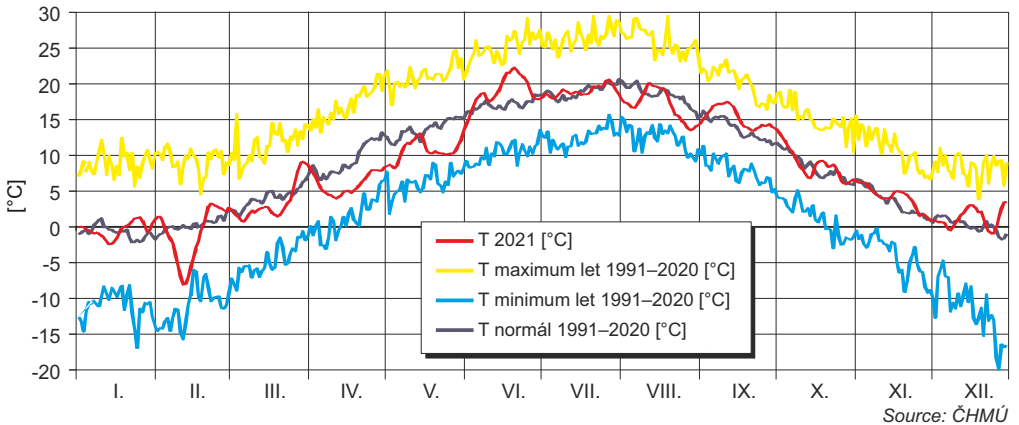
The **annual total sunshine of  $1702\text{ h}$**  was average, with above-average sunshine being recorded in October (157% of the norm), and the sun shining least compared to the norm in August and November at 70%. The **average annual cloud cover** in Prague was within normal limits. **Storm activity** at most Prague stations was average.

The most frequent storms were in August and July. The most storm days in the year was at Ruzyně (32). **Hail** was observed at stations in Prague on 20 May in Zadní Kopanina and 13 July at Ruzyně station.

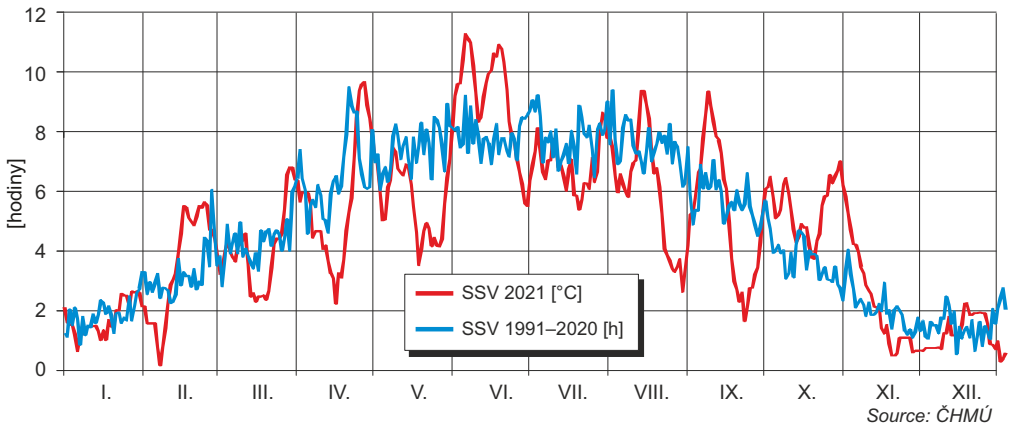
According to the sum of new snow height at Ruzyně of  $64\text{ cm}$  (daily increase in snow height), the year 2021 was **highly below average for snow**, ranking second lowest over the last 10 years after the year 2013, with 48 days with snow coverage, and 17 days of snow at the Klementinum. The maximum snow level in Prague in 2021 of  $16\text{ cm}$  was measured 9 February in Suchdol.

# CLIMATE SYSTEM

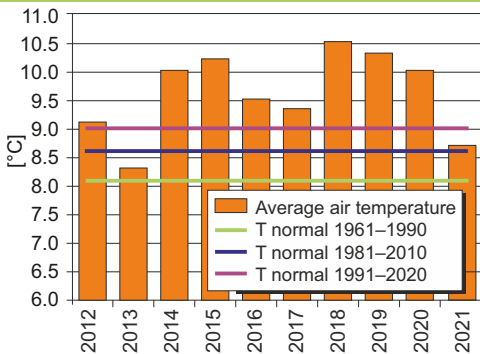
Average daytime air temperature T, 10-day rolling average, Prague-Ruzyně, comparison of 2021 and norm for 1991–2020



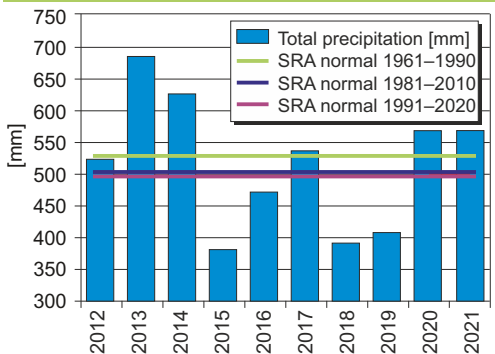
Daily duration of sunshine, 10-day rolling average, Prague-Ruzyně, comparison of 2021 and norm for 1991–2020



Average air temperature, 2012–2021

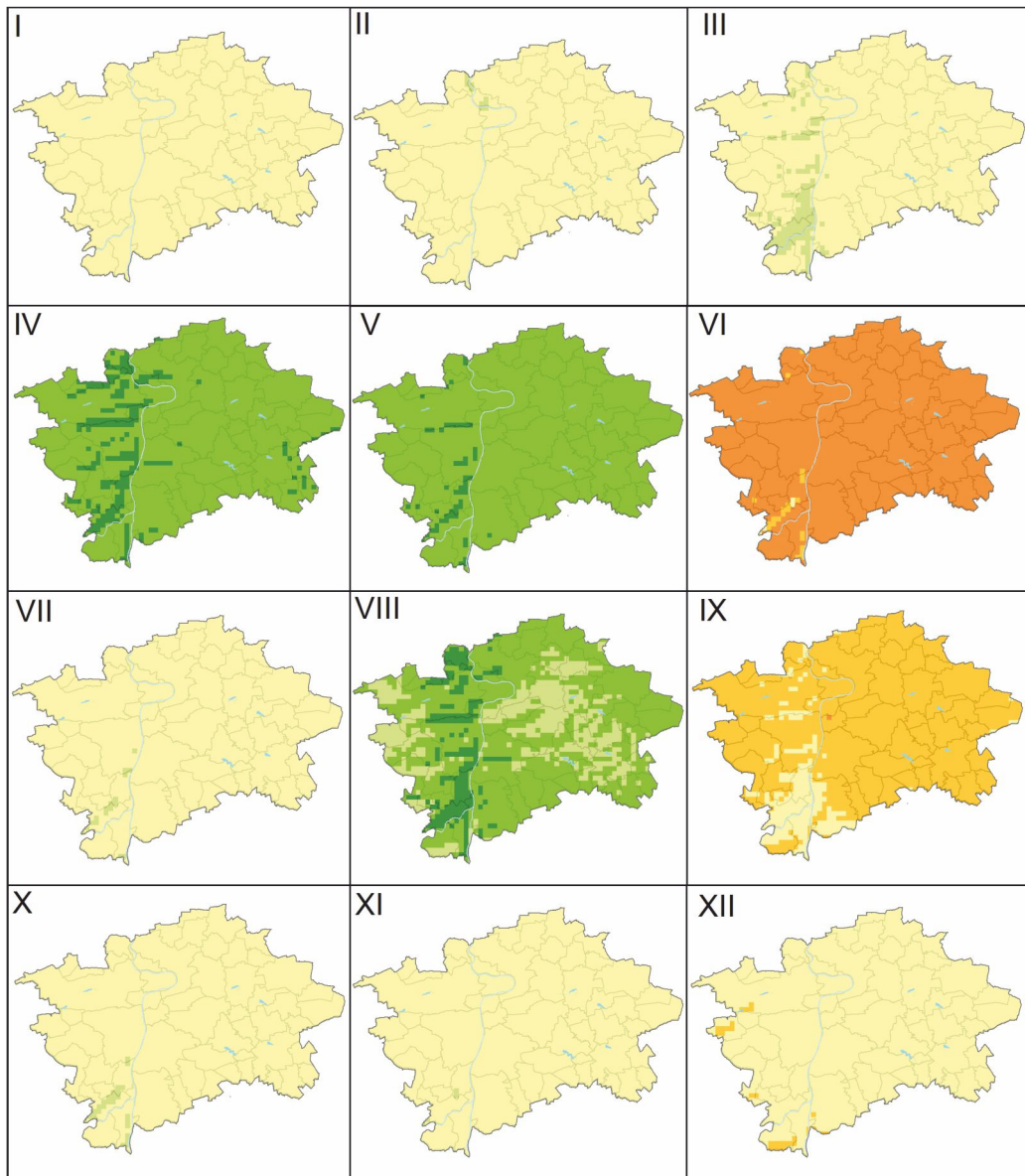


Total precipitation, 2012–2021, Prague-Ruzyně




# CLIMATE SYSTEM

Evaluation of abnormality of the 2021 monthly average temperature compared to the norm for 1991–2020




 extremely subnormal

 subnormal

 strongly above normal

 strongly subnormal

 normal

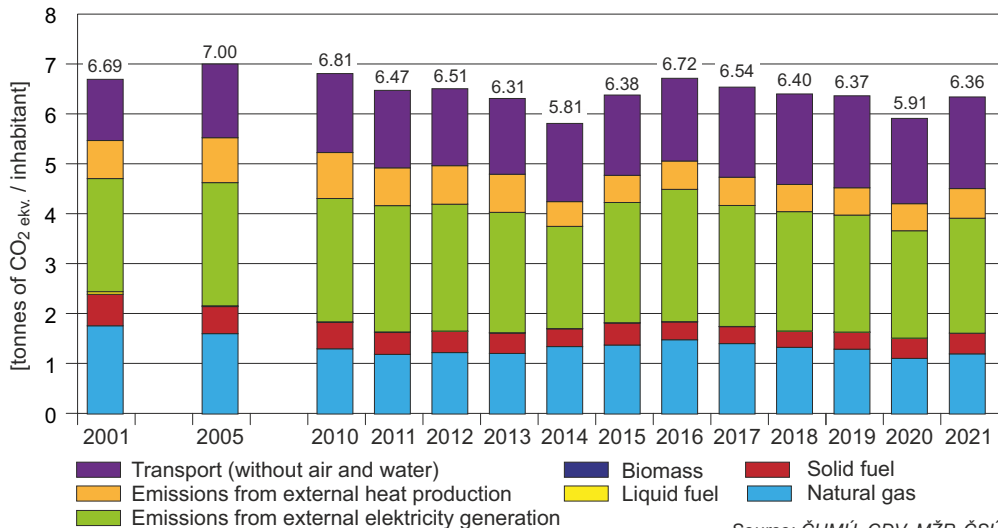
 extremely above normal

 above normal

Source: ČHMÚ

# CLIMATE PROTECTION AND ADAPTATION TO CLIMATE CHANGE

## Specific emissions of greenhouse gases in the Capital City of Prague territory, 2001, 2005, 2010–2021

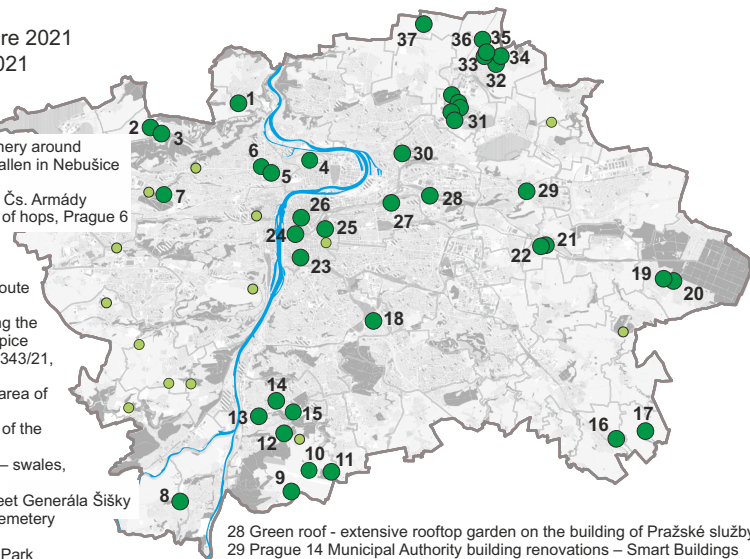


Source: ČHMÚ, CDV, MŽP, ČSÚ

Status as of 12/2021

- Projects completed before 2021
- Projects completed in 2021

- 1 Revitalisation of Obecní dvůr
- 2 Restoration of greenery – planting of additional trees in Fit-park
- 3 Revitalisation and planting of greenery around memorial site – monument to the fallen in Nebušice
- 4 Výstaviště Prague projects
- 5 Planting of green belt on the street Čs. Armády
- 6 Construction of a green wall made of hops, Prague 6
- 7 Revitalisation of the area outside Obora Hvězda
- 8 Planting of 20 trees
- 9 Planting of row of trees along the route to Dolní Břežany
- 10 Planting of row of cherry trees along the street K Břeččám, Prague – Cholupice
- 11 Installation of rows of trees on lots 343/21, 343/26, 343/14, 803/13 and 303
- 12 Planting of 80 trees in the built-up area of Prague 12
- 13 Reducing the energy consumption of the Prague 12 town hall building
- 14 Implementation of drainage works – swales, Prague 12
- 15 Planting of almond trees by the street Generála Šišky
- 16 Gardening work at the Kolovraty Cemetery
- 17 Revitalisation of wells
- 18 Planting of fruit trees at Třešňovka Park
- 19 Water features for playgrounds
- 20 Revitalisation of greenery on primary school grounds – Stage II
- 21 Planting of row of trees on the street Vilémovská
- 22 Planting of row of trees on the street Národních hrdinů
- 23 Installation of mist sprayer Folimanka
- 24 Planting of trees on Jungmannovo náměstí
- 25 Revitalisation of Riegrovy sady park, gardeners' facilities
- 26 Installation of spray pads in Prague 2 parks
- 27 Smart grid at the Pražacká sports complex



- 28 Green roof - extensive rooftop garden on the building of Pražské služby
- 29 Prague 14 Municipal Authority building renovations – Smart Buildings
- 30 Rainwater retention in the complex of Správa služeb hl. m. Prahy
- 31 New tree plantings – part 1 and part 2
- 32 Planting of greenery along Polabská
- 33 Planting of trees and shrub layer Schoellerova
- 34 Planting of wildflower meadow, Prague – Čakovice
- 35 Revitalisation of greenery, Třeboradice Cemetery
- 36 Restoration of avenue of trees along the historic route – Tryskovičká
- 37 Social Services Centre – accumulation and retention tanks

Source: OCP MHMP

# AIR

The City of Prague has long numbered among the areas with a high level of air pollution. The emissions burden primarily stems from the heavy traffic and the use of local furnaces in areas with predominantly older family homes. Transport accounted for 71.9% of total nitrogen oxide (NO<sub>x</sub>) emissions in 2021. **No regulations, warnings or smog situations were declared within the City of Prague in 2021.**

Compared to 2020, a **slight increase in the emissions burden for PM<sub>2,5</sub> a PM<sub>10</sub> suspended particles, benzo(a)pyrene and nitrogen dioxide** was recorded in 2021. The likely cause was less favourable meteorological conditions than in the previous year.

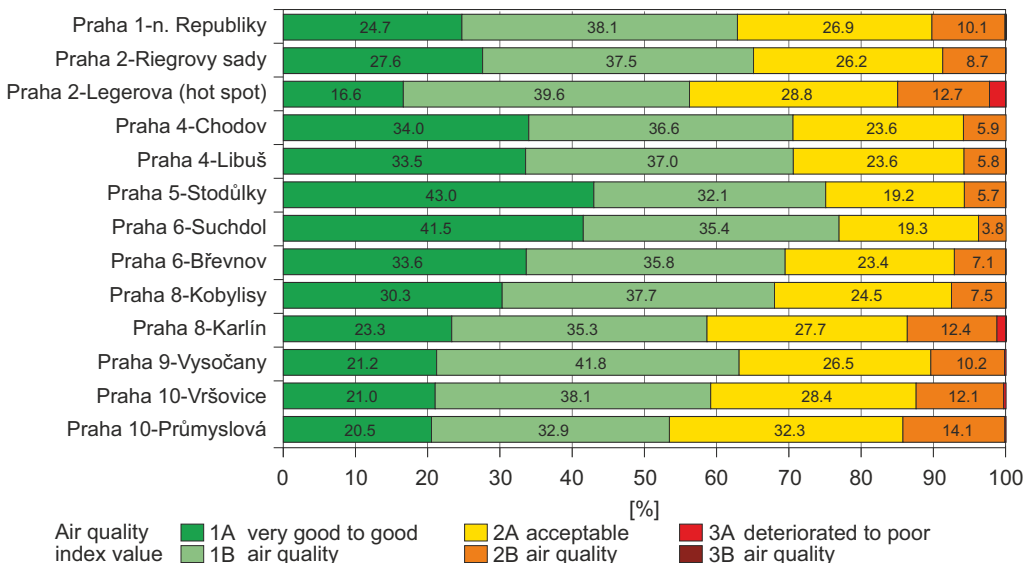
**Neither the short-term nor the annual emission limit for NO<sub>2</sub> was exceeded at any location with sufficient data to be evaluated in 2021. Likewise, the emission limit for average annual concentration of PM<sub>2,5</sub> and PM<sub>10</sub> suspended particles was not exceeded at any station with sufficient data for evaluation, nor was the daily emission limit for PM<sub>10</sub> exceeded.**

Compared year-on-year, **there was a slight increase in the concentration of benzo[a]pyrene**, but the emission limit was not exceeded at any of the locations with a valid annual average. **The emission limit for ground-level ozone** was not exceeded in 2021 (on average for the 3 years 2019–2021) at any of the six evaluated stations within the conurbation. For all other monitored pollutants, the emission limits were also met.

Based on the air quality index (AQI), it can be stated that the **first AQI level (very good to good air quality) predominated at most of the evaluated Prague stations in 2021**, with the second AQI level (acceptable air quality) occurring at a maximum of 46%. The third AQI level (degraded to poor air quality) occurred in more than 1% of cases at two traffic stations.

Good **dispersion conditions** were recorded in 2021 on 269 days (73.7%), with slightly unfavourable dispersion conditions occurring on 79 days (21.6%), and unfavourable dispersion conditions on 17 days (4.7%).

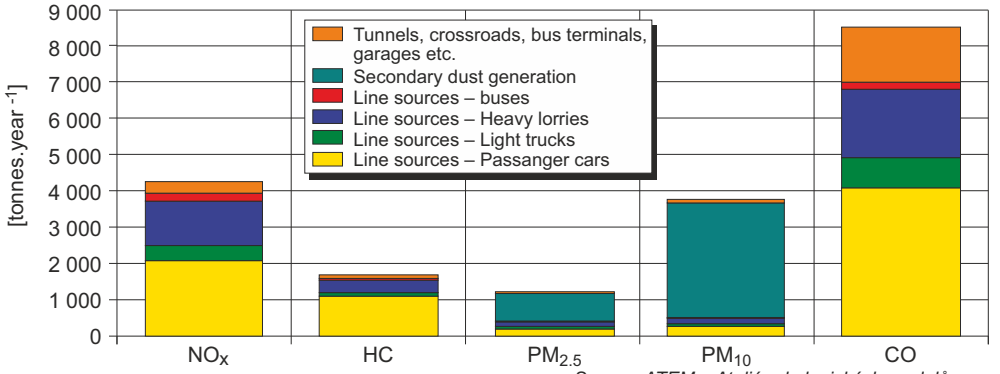
## Total index of air quality (IKO) at the stations in the Prague agglomeration in 2021 – representation of individual index values



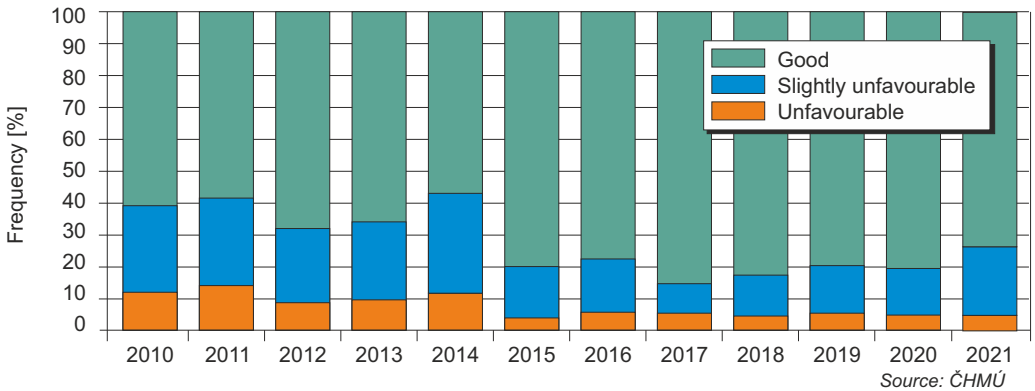


# AIR

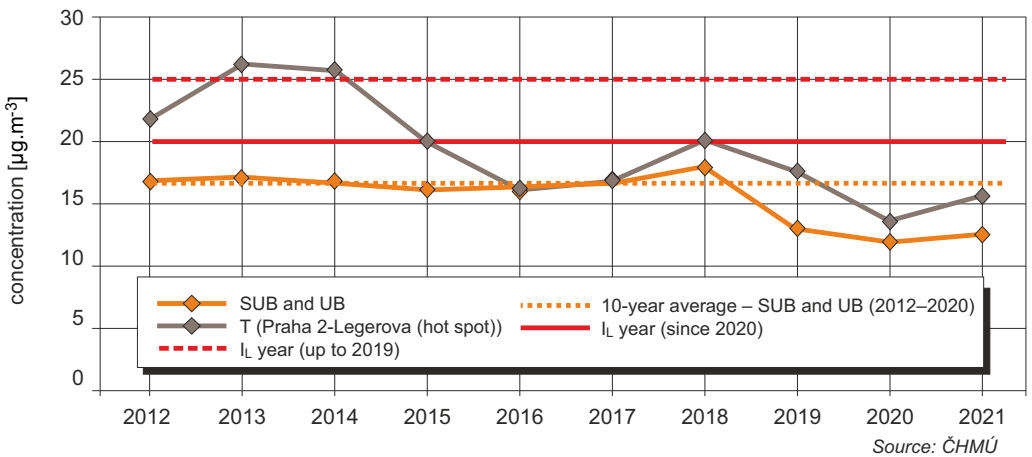
## Traffic emissions – selected pollutants, 2021



## Frequency of dispersion conditions, Prague, 2010–2021



## Annual average concentrations PM<sub>2.5</sub>, 2012–2021



# WATER

The water quality in the Vltava and Berounka Rivers has been monitored on 4 profiles in Prague and its surroundings for a long time. For the majority of monitored indicators in the period 2020–2021, water on these profiles were classified by the first and second (partially third) grades of the rating scale, except for microbiological and biological indicators classified by grades 1 to 5, in total assessment (resulting quality grades) 1 profile was classified with grade 4 and 3 profiles with grade 5.

On small watercourses, water was evaluated according to the percentage of measurement results in individual water quality classes for the last time in the two-year period 2018–2019, on 38 profiles. The share of values falling into the 5th class of water quality for the years 2018–2019 partially increased compared to the 2011–2015 period (out of a total of 38 deteriorations in 17 profiles and improvements in 11, in others without change with zero representation of 5th class), at the same time the representation of values falling into I. and II. class significantly decreased (improvement in 26 profiles, in 11 deterioration).

Supply of potable water to citizens is kept on high level permanently. Water works Želivka, from which the water is supplied to Prague by a 52 km long adit supply conduit, represents a valuable source of water for the capital city. The water source Želivka represented 66.3 % on the total volume of 105.7 mil. m3 of potable water produced in 2021.

Almost each household is connected to a public water supply network.

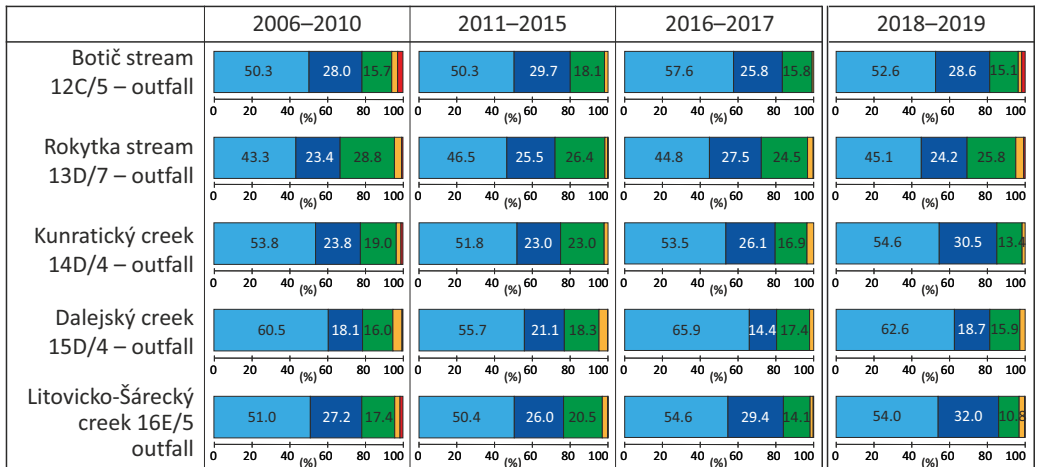
Drinking water consumption in households from the public water supply network has been decreasing in the long term with some fluctuations – in 2021 it was about 114 l/per person/per day, 2020 about 112 l/per person/per day, in 2019 about 113 l/per person/per day. Loss of water from network leaks were reduced from 46% in 1996 to values below 20% since 2014 - in 2021 losses amounted to approximately 14.5%.

Drinking water quality is regularly monitored and complies with domestic and European standards.

Ca 99% of households are connected to the water 3 supply system. In 2021 ca 119 mil. m of wastewater was treated (100% of wastewater), while 92.1% was treated at the central wastewater treatment facility (ÚCOV) and the residual wastewater at auxiliary facilities in suburban parts of the city. The volume of pollutants dispersed into groundwater complies with a pre-set limit and is being reduced for a long time.

Since 2005, flood protection of the inner city has been in place, as well as a full flood protection line in the outer parts of the city since 2015. In 2021, preparations for increasing flood protection in the Old Town continued, as did preparations for supplementing and expanding flood protection on the basis of experience from the 2013 flood. Implementation of stabilisation of the DN 2000 drain in Troja was also commenced.

## Evaluation of water quality in selected profiles of small water streams – Ratios of classification into classes of water quality for the given periods

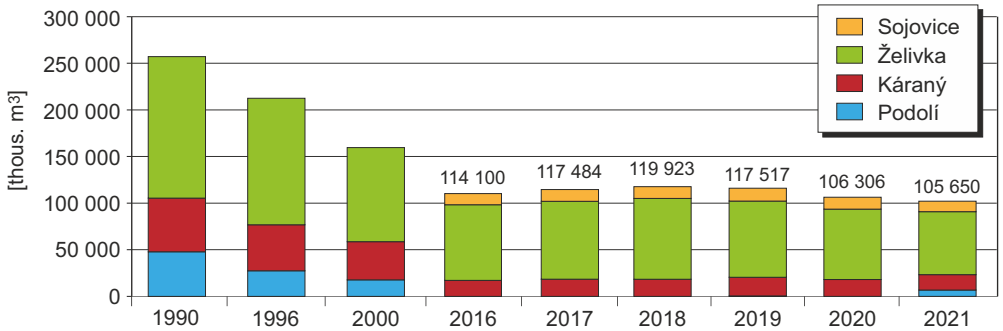


Water quality classes: 1 – Unpolluted water 2 – Slightly polluted water 3 – Polluted water 4 – Heavily polluted water 5 – Very heavily polluted water

Source: OCP MHMP

# WATER

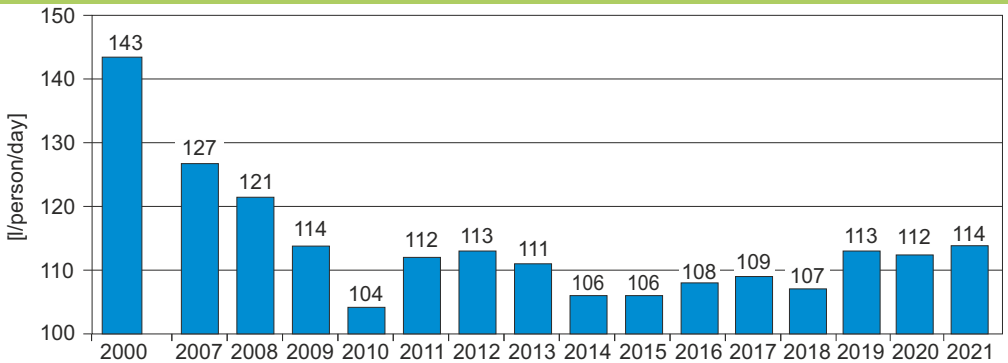
## Evolution of manufacturing drinking water in individual waterworks from 1990 to 2021



Note: In connection with the change in ownership at the end of 2013, the values for the Sojovice water preparation plant are presented individually from 2014

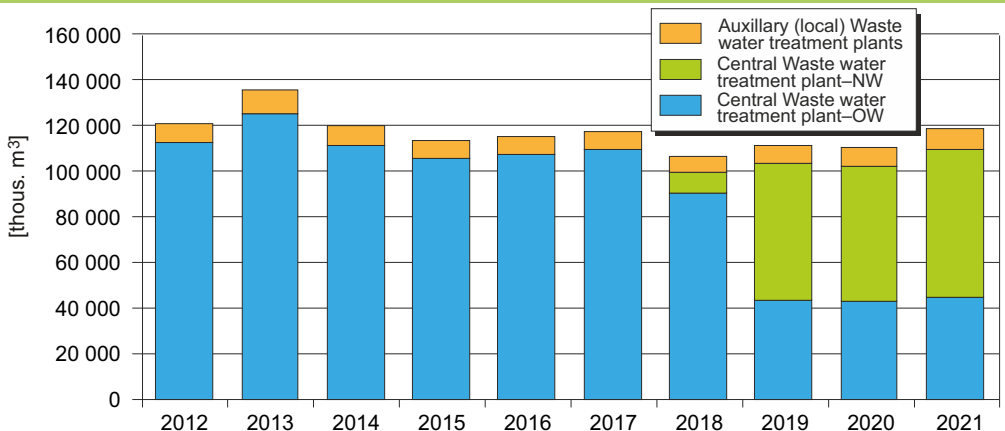
Source: PVK, a. s.

## Evolution of the specific consumption of drinking water in households in Prague, 2000, 2007–2021



Source: PVK, a. s.

## Amount of cleaned wastewater at the Central waste water cleaning facility (ÚČOV) and wastewater cleaning branches (ČOV), 2012–2021



Note.: NW – New waterline, OW – Old waterline

Source: PVK, a. s.

# LANDSCAPE, NATURE AND GREENERY

The balance of areas according to the ČÚZK records for Prague in 2021 shows only a slight increase (2 ha) of the total built-up area compared to the previous year (these made up approx. 10.2% of the city's total land area at the end of 2021, the total increase since 1990 being 815 ha). Significant growth of the acreage of "other areas" is also recorded, by 31 ha compared to 2020. The acreage of agricultural land fell year-on-year by 30 ha.

Sustainable land use is systematically taken into account in the city's development plans, including the use of old unused buildings or areas, usually of industrial development (known as brownfields).

A positive aspect in the city is that almost every year, the area of land designated to fulfil the function of woodlands, i.e. wooded areas, increases. In 2021 no increase compared to 2020 was recorded, but overall it has grown 393 ha since 1990.

Within the territory of Prague, there is a relatively large number of valuable natural locations protected by law within different protective grades. City focused on the management and maintenance intensively. On December 31, 2021, legal protection of 93 low-area specially protected lands (including 8 national natural landmarks, 69 natural landmarks and 16 national reservations) was secured within the city territory. This is an extensive variety of lands

from geological and paleontological locations through botanic, zoological, entomological to even wooden locations of a total size of 2.428,6 ha (ca 4.9% of the entire city area). Within the Natura 2000 system formation, 11 important European locations were approved by governmental regulations within the city territory in total. Furthermore, in the capital city area, there were 12 natural parks formed. At the same time, 26 important landmarks and 198 trees received protection as commemorative trees.

The city cares about the nature, country and greenery systematically also by the plantation of tree avenues, parks in the historical part of the city and woods (with recreational function) found predominantly in the suburban parts. The objective is to avoid any reduction of greenery in the city, but to increase it.

Thanks to the planting of new forest stands, the area of forests has increased by 393 ha (by about 8%) since 1990.

An important part of Prague country are also water streams and reservoirs. City takes care of the projects for their revitalisation (projects Renewal and Revitalisation of Prague Reservoirs /91 locations already reconstructed / and Streams for Life) on a regular basis.

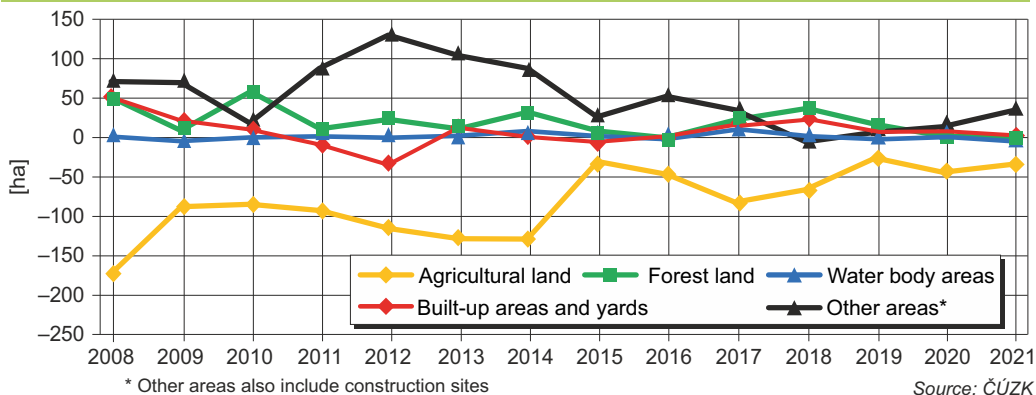
## Total levels of types of land, as at 31<sup>st</sup> December 2021 [ha]

Aggregate areas of land types	Code	2016	2017	2018	2019	2020	2021
Agriculture land	02–07	19 800	19 717	19 649	19 617	19 573	19 543
– Arable land	02	14 367	14 220	14 139	14 084	14 030	13 978
– Hop garden	03	0	0	0	0	0	0
– Vineyards	04	10	12	12	12	12	15
– Gardens	05	3 946	3 950	3 954	3 965	3 971	3 986
– Orchards	06	606	601	599	591	590	585
– Permanent Grassland	07	871	935	945	964	970	970
Forest land	10	5 173	5 195	5 233	5 249	5 251	5 251
Water areas	11	1 087	1 096	1 096	1 094	1 101	1 101
Built-up areas	13	5 005	5 021	5 057	5 066	5 080	5 080
Other areas**	14	18 557	18 592	18 586	18 595	18 616	18 616
<b>Total area*</b>		<b>49 621</b>	<b>49 621</b>	<b>49 621</b>	<b>49 621</b>	<b>49 621</b>	<b>49 621</b>

Note: \* differences in the total area are caused by rounding  
 \*\* other areas include building sites

# LANDSCAPE, NATURE AND GREENERY

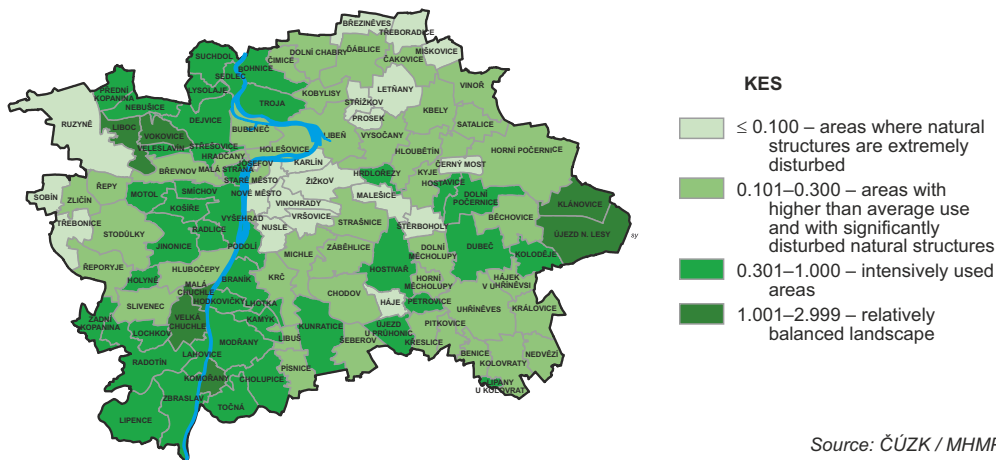
## The decline and growth of areas based on type of land, 2008–2021



## Newly forested areas, 2006–2021



## The level of KES (coefficient of ecological stability) in cadastral areas of the Capital City of Prague



# WASTE

For a long period of time, the annual waste production in Prague has ranged between 4 and 5 million tonnes depending on the extent of construction activity. In 2021, 5.07 mil. tonnes of waste was produced within the capital (4.45 mil. t in 2020, 5.08 mil. t in 2019). Of the total waste produced, approx. 32.3% was utilised within the City of Prague, of which energy use made up 18.9%, 9.3% represented waste used for landscaping and 63.7% was recycled. Waste disposal by landfilling within the city was ended in 2020 (termination of the Dáblice landfill). Waste incineration without energy use has long made up for less than a tenth of a percent of the total waste production. The largest part of waste produced is disposed of outside the Prague region.

**The amount of waste produced by citizens in 2021** reached **446.0 thousand tonnes**, which works out to approx. **352.2 kg per capita**. The comprehensive **Prague municipal waste management system** continued to be developed.

The portion of waste handed over for material or energy use totalled 81.1% in 2021, with 52.4% being energy use. In 2021, an **increase in the volume of recyclable waste collected in street and home receptacles** (paper, glass, plastics, beverage cartons, etc.) increased once again – the total amounted to approx. 61.9 thousand tonnes (in 2020 it was 59.6 thousand tonnes, in 2019 60.3 thousand). Collection of hazardous waste is still provided for (collection

yards, stable hazardous waste collection points and mobile collection).

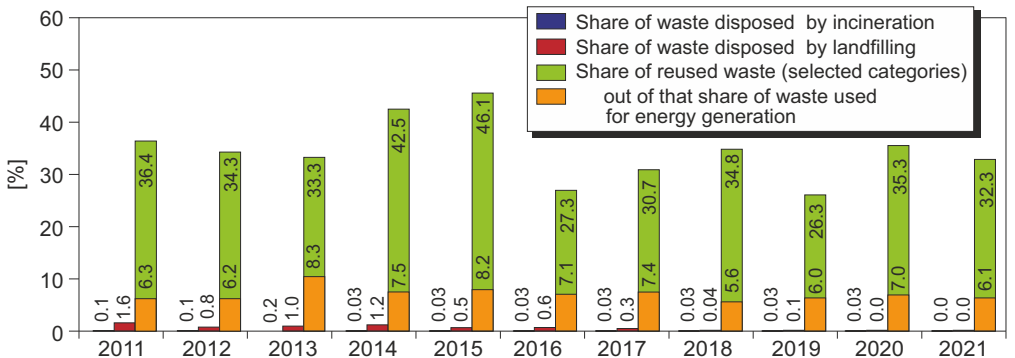
At the end of 2021, there were **19 City of Prague collection yards** in operation. The number of recyclable waste collection points within buildings in the Prague Heritage Reservation and, on a pilot basis, in other municipal districts was increased (2 652 compared to 2 222 in 2020), while there were also 3 453 public collection stations. **Biowaste collection** also continued to play an important role in the system (seasonally through large-scale containers, also through the stable biowaste collection point in Prague 10 – Malešice, City of Prague collection yards and the **first City of Prague municipal composting plant in Slivenec**, plus starting 1 January 2020, **city-wide bin collection** has been operated) – the total production of biowaste in 2021 totalled 17.6 t, with the amount obtained through home bins totalling 6.7 t. The collection of bulky waste also continued to play a significant role, also taking place through City of Prague collection yards and large-scale containers set up on the streets of Prague. Until the midpoint of 2021, collection of selected commodities was also provided for via mobile collection yards. At the end of 2021, citizens also had receptacles for the collection of edible oils and fats at their disposal at 485 stations, as well as three re-use points at City of Prague collection yards. Pilot projects were also conducted for the collection of food waste from households in apartment buildings.

## Production of waste in the territory of the Capital City of Prague, 2013–2021 [thous. tonnes]

		2013	2014	2015	2016	2017	2018	2019	2020	2021
Total		3811	4269	4161	4602	4517	5187	5080	4451	5072
Out of that category	Hazardous	79	62	71	58	64	99	124	98	97
	Others	3732	4207	4090	4544	4453	5087	4956	4353	4974

Source: OCP MHMP

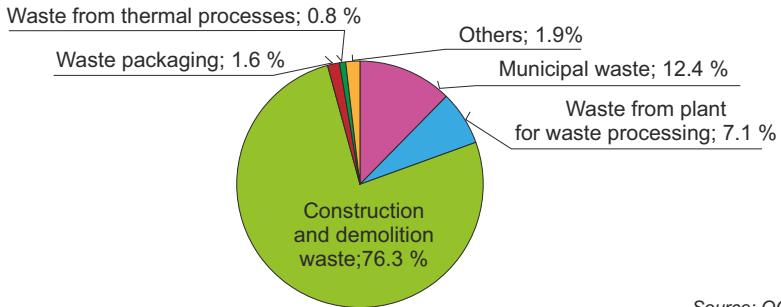
## Ratios of waste from the total used and eliminated waste in the territory of the Capital City of Prague (selected methods of use), 2011–2021



Source: OCP MHMP

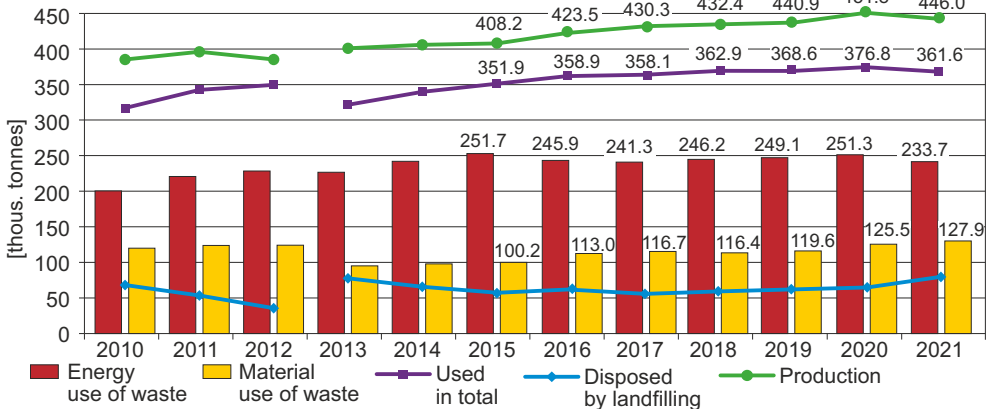
# WASTE

## Ratio of waste produced in Capital City of Prague territory based on origin, 2021



Source: OCP MHMP

## Evolution of the production and treatment of household waste, 2010–2021

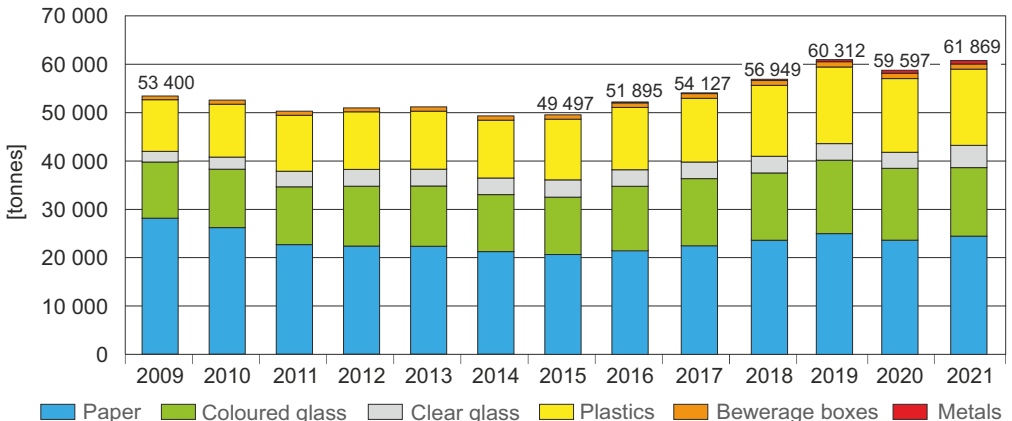


Source: OCP MHMP

In 2013 there was a change in methodology.

Due to a fire at ZEVO Malešice in 2021, operations were limited and some of the mixed municipal waste that would have been used for energy there had to be landfilled.

## The amount of separated waste in street and house equipment, 2009–2021



Source: OCP MHMP

# NOISE

An important issue for the city remains the noise outside. The predominant source of noise is the automobile traffic.

Following the calculations within the Strategic Noise Map 2017 for Prague agglomeration (data from 2016), ca 73% of population was impacted by noise  $L_{dvn}$  exceeding 55 dB.

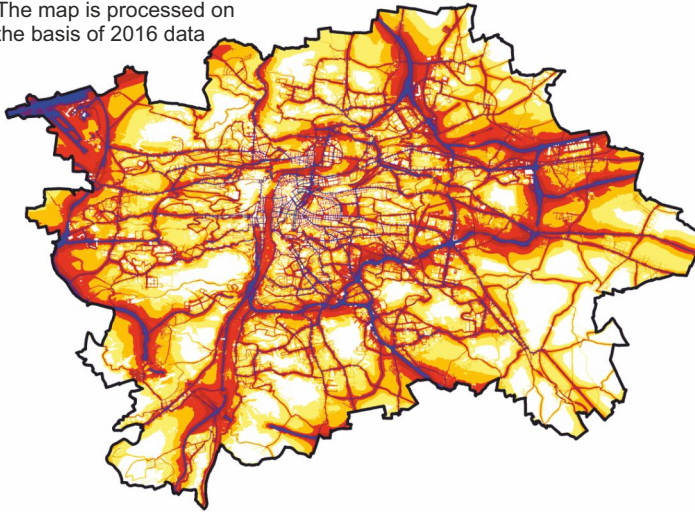
On the basis of strategic noise maps, critical places are identified the primary attention in planning and execution of anti-noise measures is focused on. Such measures include the construction of anti-noise barriers, replacements of surfaces at selected roads, reconstruction of tram routes, modernisation of vehicle part of the mass transit etc.

The selection of possible anti-noise measures is focused on the **Action Plan for Noise Reduction**, which follows the development of the strategic noise map. The valid action plan in 2021 was the **2019 action plan based on the third round of strategic noise mapping**.

In 2021 as well as in the previous years, the antinoise measures were executed also in the airport Praha/Ruzyně. Besides standard operational, technical and economic measures for the reduction of noise from air traffic, it's necessary to implement limitations of night operation – flights of airplanes during night hours.

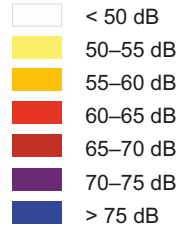
## Strategic map of the noise situation, 2017

The map is processed on the basis of 2016 data



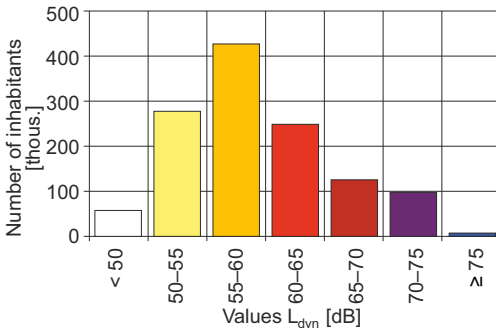
### Bands of noise

Descriptor  $L_{dvn}$



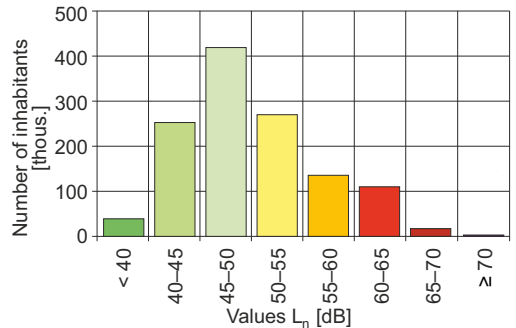
Source: IPR Praha, MZd ČR

### Number of citizens impacted by noise from all sources – descriptor $L_{dvn}$ [dB], 2016



Source: MZd ČR

### Number of citizens impacted by noise from all sources – descriptor $L_n$ [dB], 2016



Source: MZd ČR



# NOISE

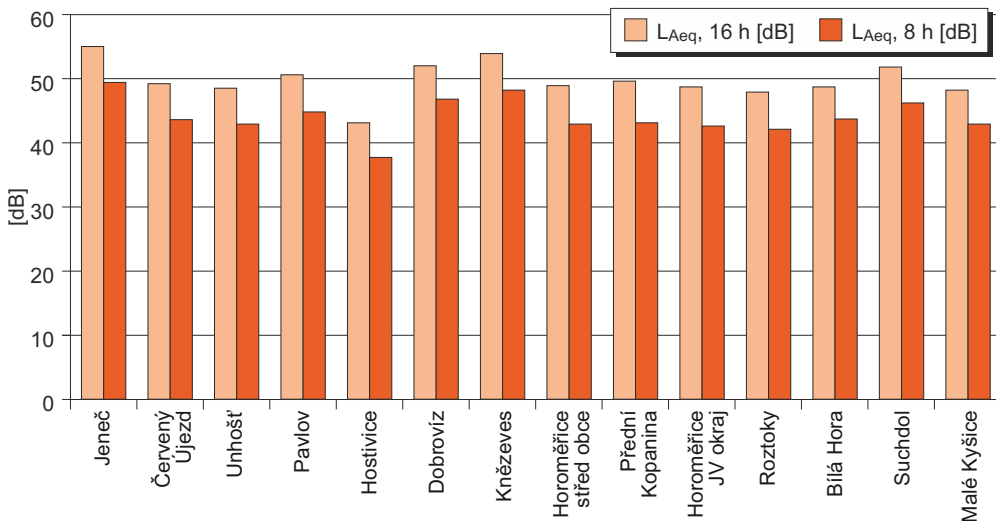
## Acoustic curtain (PHC) realized in the period 2009–2021

Street	PHC number	Height [m]	Length [m]	Cadastral district
Průmyslová	1000043	3	307	směr Poděbradská
Jižní spojka	202	4	564	Rabakovská – Přetlucká, směr Švehlova
		5	144	Přetlucká – Lanový most, směr Švehlova
		3	611	Lanový most – Klučovská, směr Průmyslová
Jižní spojka – val, PHC	999407	6	340	Spořilovský plácek
Jižní spojka	212	3	136	Záběhlická – Spořilovská, směr Chodovská
	212	3 až 6	571	Záběhlická – Spořilovská, směr V Korytech
Jižní spojka	999429/2	5	611	Na Strži – 5. května
Jižní spojka	999063	7	753	Spořilov I; Sliáčská – Spořilovská, směr Spořilovská
Spořilovská – MPHIC	999416	7	102	2 mobilní PHC
		7	240	
		4	632	
Štěrboholská spojka	999325	4	72	Národních hrdinů, směr DC
		2 až 4	1 049	rampa Národních hrdinů, směr DC
		2 až 5	1 346	Národních hrdinů – Nedokončená, směr DC
		2 až 5	1 346	Národních hrdinů – ČSPH, směr ZC
5. května	211/999091	7	523	Vyskočilova – Jihlavská, směr ZC
5. května		7	157	Jihlavská – Michelská, směr ZC
5. května – MPHIC	999418, 1000161	5	495	2 MPHIS, Michelská – Vyskočilova, směr DC
Cínovecká – val, PHC	999341	8	605	Březiněves
Slánská	999062	5	172	Makovského – Bazovského, směr Karlovarská
		5	170	Makovského – Bazovského, střední PHS
		5	56	Makovského – Bazovského, směr Makovského
		5	116	Makovského – Bazovského, směr Makovského
		5	111	Bazovského – Opuková, směr Karlovarská
		5	164	Bazovského – Opuková, střední PHS
		5	175	Bazovského – Opuková, směr Makovského
		5	175	Bazovského – Opuková, směr Makovského
Bělohorská	44159	3	252	Za Oborou – supermarket Kaufland
Karlovarská	PHS 281	4	70	Drnovská – Možného
Karlovarská	PHS 275	4	184	Lišánská
Strakonická	PHS 801	4	229	Lahovská – Spodní, směr ZC
	PHS 800	4	205	Spodní – MUK, směr ZC
Kbelská	1000003	4	432	PHS Kbelská, Letňany, směr ZC
Kbelská		4	903	PHS Kbelská, Prosek, směr DC
Jeremiášova	PHS 732	6	205	Vackova – Hábova
Horoměřická	PHS 744	2	113	Želivka – V Šáreckém údolí, směr ZC

 PHC realized in 2021

Source: MHMP

## Equivalent levels of acoustic pressure $L_{Aeq,T}$ for day and night related to the conditions of a characteristic flight day in 2021



Stationary measuring stations

Source: Letiště Praha, a. s.

# TRAFFIC

Transport is a factor that considerably influences the quality of the environment in Prague. The demands for mobility are balanced by efforts to minimise the negative impact. A characteristic aspect of traffic volume in the central parts of the city since 2016 has been a partial oscillating of values (previously up until 2015 there was a steady annual decline) and steady growth in the city's outer zone (with the exception of 2015). In 2021, this volume rose again and approached the pre-COVID year of 2019. The number of passenger vehicles registered in Prague also increased, as in previous years.

As part of sustainable transport development, the city is expanding public transport, striving to complete the Ring Road, supporting reduction of fuel and energy consumption in transport, reducing transport's impact on air quality (including the use of CNG vehicles and supporting electromobility) and noise pollution, and supporting bicycle and pedestrian transport to the extent economically possible. **From the end of 2019, the city has been governed by the newly adopted Sustainable Mobility Plan in this area.**

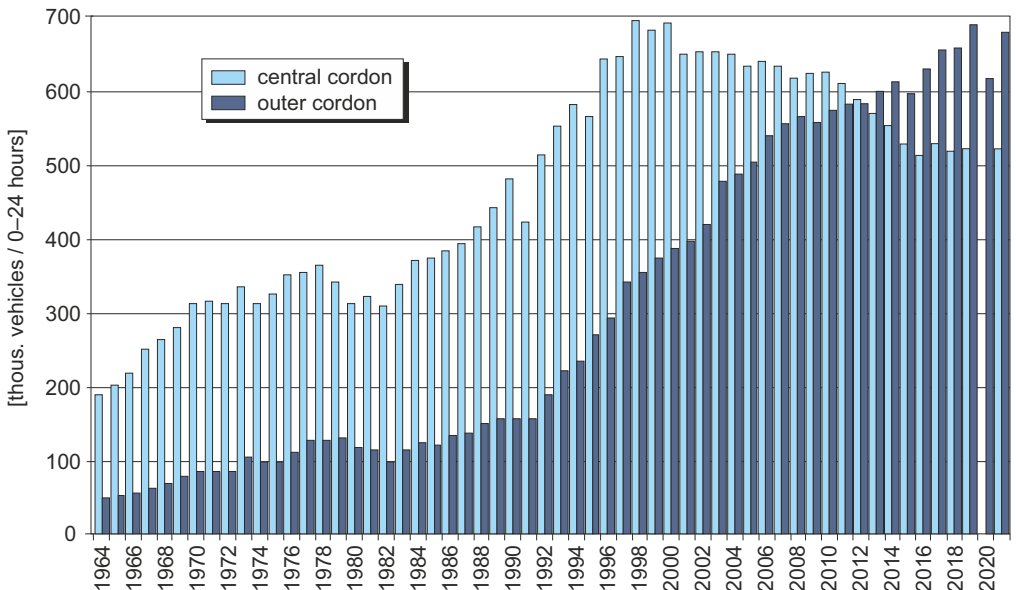
The priority of developing public transport is one of the pillars of the city's transport policy principles. In Prague and its surroundings, **mass transit is provided for by the system of Prague Integrated**

**Public Transport (PID)**, which includes the metro, trams, urban and suburban buses, railway, and also the funicular to Petřín and the ferries. At the end of 2021, there were 3 metro lines, 26 day and 9 night trams, 601 bus lines (170 urban, 431 suburban and regional), 39 railway lines with S and R designations, 7 ferry lines and 1 funicular in service under PID. Roughly 738.8 million passengers were transported under the PID system (a decrease compared to 2020).

The largest share was covered by the metro (32.2%) and buses and trolleybuses (30.8%). The modal share of public transport was 37% (pedestrian 35%, bicycle transport 1%, automobile transport 25%, (combined mass and car transport 2%)).

The **construction of cycling infrastructure** continued. At the end of 2021, approx. 530 km of cycle routes were marked with directional signage under the network of bicycle infrastructure. Of this network, approx. 215 km were protected marked and recommended routes and 193 km made use of integration measures (230.3 km if contraflow bicycle lanes are included). In 2021, 27.5 km of new bike lanes were installed (30.5 including shared lanes), as were 4.7 km of contraflow lanes, plus for example 28 bicycle crossings. The share of bicycle traffic in 2021 totalled roughly 1% of all trips in the city.

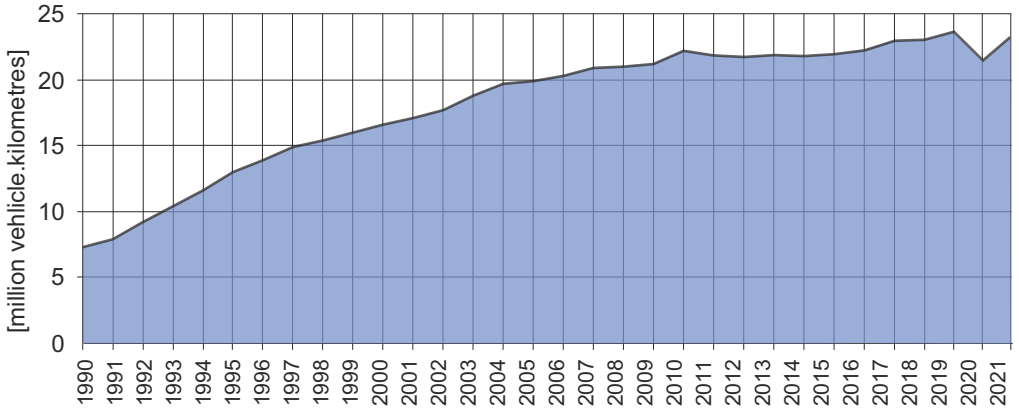
Traffic intensity in the central and outer cordon, 1964–2021



Note: Due to the pandemic only a third of the usual number of locations were counted in 2020 and thus cannot be compared year-on-year

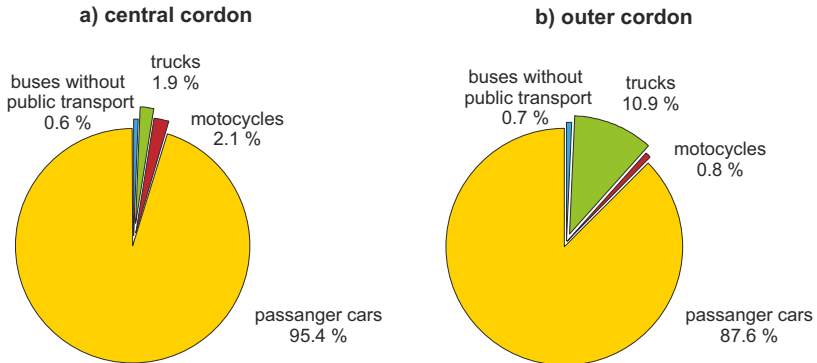
# TRAFFIC

## Traffic performance of automotive transportation for an average workday, 1990–2021



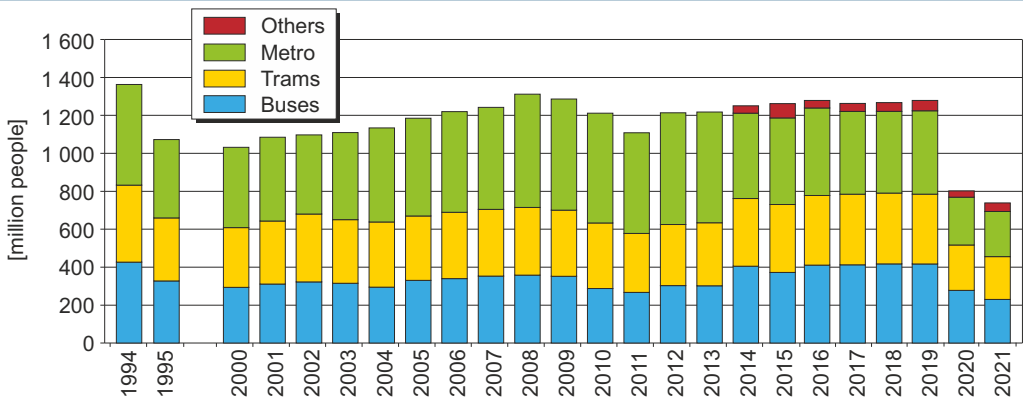
Source: TSK – ÚDI

## Composition of the traffic stream, 2021



Source: TSK – ÚDI

## Public mass transportation – annual number of transported people, 1994, 1995, 2000–2021

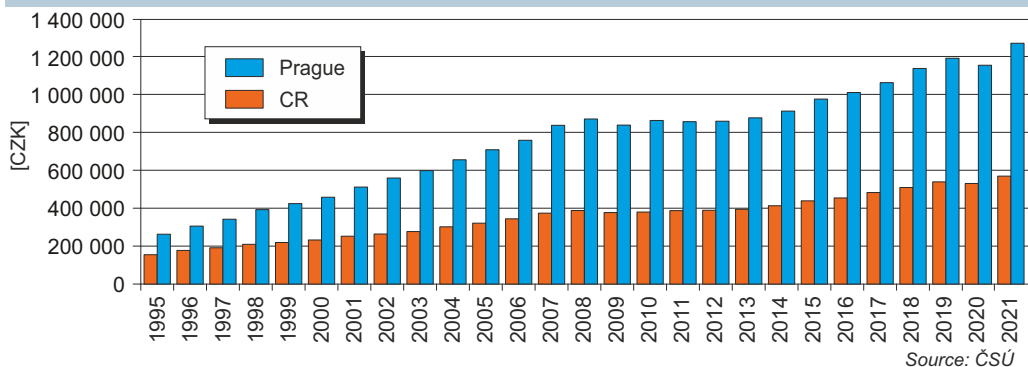


Note: Data for 2020 and 2021 were significantly influenced by the COVID-19 pandemic.

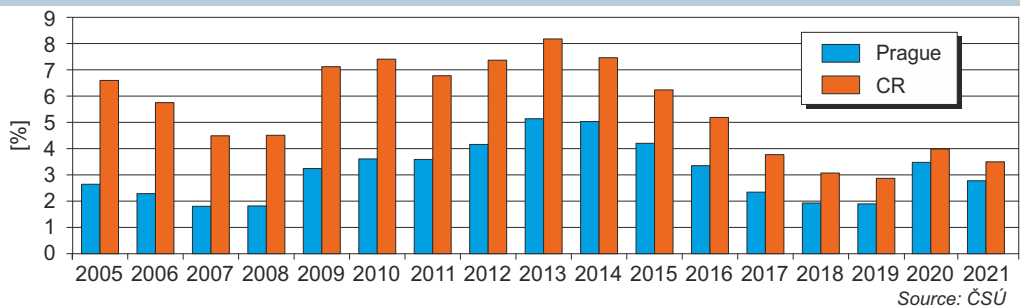
Source: TSK – ÚDI

# ECONOMY

## Gross domestic product per capita, 1995–2021



## Ratio of unemployed people, 2005–2021 (as at 31<sup>st</sup> December)



## Basic economic data on evolution in Prague – macroeconomic indicators, 2016–2021

	2016	2017	2018	2019	2020	2021
Gross value added in total (CZK million)	1 156 063	1 227 536	1 332 879	1 428 474	1 397 087	1 524 027
Gross national product at current prices						
– CZK million	1 285 249	1 366 020	1 479 057	1 580 995	1 535 399	1 677 194
– EUR million	47 542	51 889	57 670	61 589	58 060	65 413
– PPS million	70 960	75 496	81 082	84 935	80 199	87 259
Share of the region in the CR GPD as % (CR = 100)	26.8	26.7	27.3	27.3	27.0	27.5
GDP development at fixed prices, previous year = 100	102.9	104.4	105.4	102.7	93.5	104.8
Gross national product per capita						
– CZK	1 009 835	1 061 767	1 136 744	1 201 993	1 156 808	1 264 456
– EUR	37 354	40 331	44 323	46 825	43 744	49 316
– PPS	55 754	58 681	62 316	64 574	60 424	65 785
Gross national product per capita (PPS)						
– EU28 = 100 %	197.7	200.1	205.7	206.2	202.1	202.9
Gross national product per 1 employee (CZK)*	1 420 777	1 485 484	1 548 798	1 637 792	1 613 485	1 736 129
– CR = 100 %	155.9	155.4	155.1	153.6	151.3	152.3
Creation of gross fixed capital (CZK million)						
– CZK million	340 271	365 120	458 171	471 756	436 336	498 766
– Per 1 inhabitant (CZK)	267 355	283 797	352 132	358 665	328 746	376 026
– Share of the total THFK in the CR [%]	16.1	17.3	17.1	16.4	16.5	16.9
– Per 1 inhabitant CR = 100 %	133.6	142.2	140.1	133.3	132.8	136.3

<sup>1)</sup> PPS – unit for purchasing power

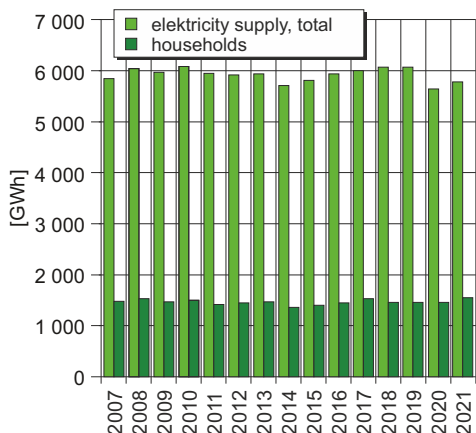
<sup>2)</sup> employees in the main status based on the location of the workplace

# ENERGETICS

In the context of the sustainable development of the city, Prague also deals with energy management. In accordance with the Municipal Energy Strategy, the city implements numerous activities in the field of energy savings. Based on energy audits, measures to reduce the energy consumption of buildings are taken, especially those buildings owned and used by the city (bureaus, schools, social institutes). By the end of 2021, **508 preventive measures** had been implemented at a **total cost of CZK 1.695 billion**. By insulating buildings, up to 50% of the energy consumption can be saved. In 2021, the subsidy program „Clean Energy Prague“ went on to support the replacement of heating systems into ecological media and to support the utilization of renewable sources in apartment buildings (CZK 19.8 million was paid for 855 accommodation units).

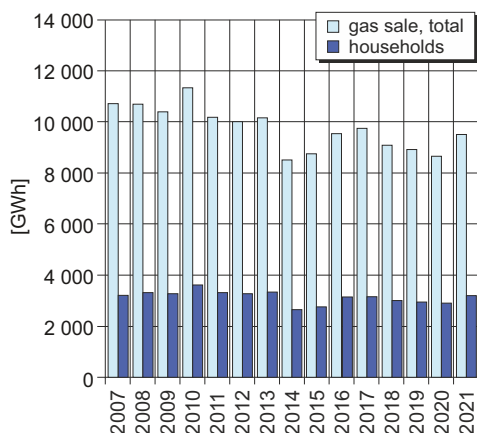
In 2021, the **payment of subsidies** for accepted applications as part of the **third call for Boiler Subsidies** continued in the City of Prague (implemented under the Operational Programme Environment and announced 21 September 2019 with the application cut-off on 30 October 2020). It total, **246 applications** were supported in the third call, with a total amount provided of **approx. CZK 27.5 mil** from EU funds. Boiler Subsidies III was immediately followed up on by the sub-programme "Improving Air Quality in the City of Prague – Acquisition of Ecological Household Heating under New Green Savings – Adaptation and Mitigation Measures" (subsidies provided from the state budget).

## Evolution of the consumption of electricity, 2007–2021



Source: PREdistribuce, a.s. (2007–2021), ERÚ (2018–2021)

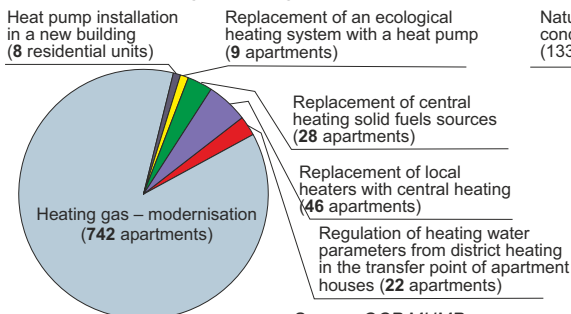
## Evolution of gas consumption, 2007–2021



Source: PPDi, a.s. (2007–2021), ERÚ (2018–2021)

## Clean Energy Prague Program – structure of the use of subventions, 2021

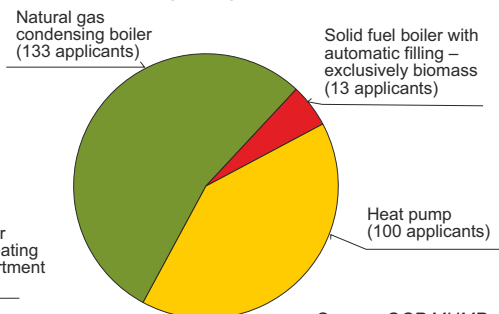
### Number of subsidised apartments by source type



Source: OCP MHMP

## Boiler subsidies in Prague, 3. request drawing structure of subsidies, 9/2019–10/2020

### Number of subsidised applicants by the type of source



Source: OCP MHMP

# ENVIRONMENTAL TOOLS AND POLICIES

When it comes to managing environmental protection, the Capital City of Prague implements tools that are available to it both as a city and as an autonomous region. Traditional tools include measures and processes stemming from legislation – the Environmental Impact Assessment (EIA), Integrated Pollution Prevention and Control (IPPC), strategic and urban planning documents (Actualised Strategic Plan 2016, the Regional Settlement Plan of the Capital City of Prague, Spatial Planning Materials), and economic tools, of which Prague implements, for example, grant processes and subsidy programmes for the field of environmental protection and energy utilisation (Grants supporting projects improving the environment in the Capital City of Prague /since 1996/, the Clean Energy for Prague subsidy programme /since 1994/).

Some of the modern tools supporting environmental protection that the city itself implements or that it supports in some way include **Environmental Education, Training and Awareness (EETA), Local Agenda 21, international projects, and the provision of information**. Numerous municipal districts are

active in volunteer programmes, especially in the implementation of Local Agenda 21, or in the implementation of individual environmental protection measures as part of Green Government actions. At the all-Prague level, projects of international partnerships are realised. The municipal informational support for experts and the general public is primarily ensured by the Prague Environmental Information System (IOŽIP) and the Regional Information System (ISU).

Long-term strategic plans in the field of protection and care for Prague's environment have been formulated in the City of Prague Strategic Plan, and since 2017 in the adopted **Climate Change Adaptation Strategy** and the follow-up implementation plans for sub-periods, and newly since 2021 in the adopted Prague Climate Plan 2030, as well as in a number of policy documents that focus on individual thematic areas.

In 2021, Prague had conceptual documents, action programmes and action plans for sub-fields of environmental protection at its disposal, all of which elaborated the given strategic objectives and intentions in detail.

## EIA & SEA

In 2021, the **Prague City Hall Environmental Protection Department (OCP MHMP)** received **28 notifications** of project plans as the competent authority (hereinafter the EIA process). Following the screening decision, 4 EIA processes found that the project was subject to assessment under the law in 2021, while in 14 cases the screening decision concluded that the project was not subject to assessment under the law. Five EIA processes were terminated at the request of the notifier (investor).

The OCP MHMP also issued 19 positive binding opinions under the provisions of Section 9a (6) of the Environmental Impact Assessment Act (verification opinions).

In 2021, the **Ministry of the Environment**, as the competent authority, received **4 notifications** of project plans concerning the territory of Prague. In the monitored period, 2 plans were found to not be subject to assessment and 2 plans were subject to assessment.

The **Regional Office of the Central Bohemian Region**, as the competent authority, received **2 notifications** of project plans with impact on the City of Prague. In the monitored period, one project was found not to be subject to assessment and one project was still in the screening decision process.

From the perspective of **Strategic Environmental Assessment ("SEA")**, the OCP MHMP, as the competent authority, received one notification of a concept subject to a screening decision under the law. Based on the screening decision, the process came to the conclusion that the concept will not be further assessed. The OCP MHMP also issued five opinions on the proposed content of a change to the Land Use Plan for the Settlement Area of the City of Prague under Section 50 (5) of Act No. 183/2006 Coll., on Spatial Planning and the Building Code (the Building Act), as amended, and Section 10g and 10i of Act No. 100/2001 Coll., on Environmental Impact Assessment.

### Announcements deposited in the respective offices of the Department of Environmental Protection of the Prague City Administration in 2021 (sorted by administrative units)

#### Administrative district / Number of projects:

Praha 4 / 4, Praha 5 / 1, Praha 6 / 3, Praha 8 / 2, Praha 9 / 3, Praha 13 / 1, Praha 15 / 3, Praha 16 / 2, Praha 20 / 1, Praha 22 / 1, other administrative districts / 0 projects.

Actions influencing more administrative units: 7

**Total number of intentions: 28**

# ENVIRONMENTAL TOOLS AND POLICIES

## IPPC

In the Capital City of Prague, **37 legally valid integrated permits** were issued and **345 were amended** in the period from when the Act came into effect until the end of 2021. Of these, a total of 12 integrated permits were abolished: 8 facilities

discontinued operations, and 4 facilities were exempted from the Act of Integrated Prevention.

**By the end of 2021, a total of 25 facilities with valid integrated permits were registered.**

Category	Unit / Operator	Category	Unit / Operator
–	LEMANT Finance s.r.o. / Avia motors s.r.o.	4.1 a)	Výrobní acetylenu / Linde Gas a.s.
1.1.	Teplárna Michle / Pražská teplárenská, a.s.	4.5.	INTERPHARMA PRAHA / Interpharma Praha a.s.
1.1.	Teplárna Malešice / Pražská teplárenská, a.s.	5.1. b)	Deemulgační stanice v areálu VRL Praha, a.s. / Purum s.r.o.
1.1.	Výtopna Třeboradice / Energotrans, a.s.	5.1. b)	Komplex zařízení určených k příjmu, skladování, úpravě a dalšímu využití odpadů / Dekonta a.s.
1.1.	Teplárna Veveslavín / Veolia Energie Praha, a.s.	5.1. b)	Neutralizační stanice I. v areálu Transfer Energy a.s. / Purum s.r.o.
1.1.	Výtopna Krč / Pražská teplárenská, a.s.	5.2. a)	Spalovna tuhého komunálního odpadu Malešice (ZEVO Malešice) / Pražské služby, a.s.
1.1.	Výtopna Juliska / Veolia Energie Praha, a.s.	5.2. b)	Spalovna nebezpečných odpadů v areálu FN Motol / Fakultní nemocnice v Motole
1.1.	Teplárna Holešovice / Pražská teplárenská, a.s.	5.4.	Skládka odpadů S-003 se sektorem S-001 Ďáblice / FCC Česká republika, s.r.o.
2.6.	Galvanovna v hale M6 / LATECOERE Czech Republic s.r.o.	6.4. b), bod 2	Výroba nápojů / KVM BEV CZ s.r.o.
2.6.	Povrchové úpravy galvanickým pokovováním a lakováním / TK Galvanoservis s.r.o.	6.4. b), bod 2	Závod na výrobu nealkoholických nápojů / Coca-Cola HBC Česko a Slovensko, s.r.o.
2.6.	Povrchové úpravy pro generální opravy podvozků / Czech Airlines Technics, a.s.	6.4. b), bod 2	Pivovar Staropramen / Pivovary Staropramen s.r.o.
3.1. a)	Zařízení na výrobu cementového slínku v rotačních pecích o výrobní kapacitě větší než 500 t denně / Českomoravský cement, a.s.	6.4. c)	Mlékárna Pragolaktos / Mlékárna Pragolaktos, a.s.
3.5.	Cihelna Štěrboholy / Jan Fiala - cihelna Štěrboholy		

## Overview of conceptual documents for the environment and related fields

### Documents adopted in 2021:

- Climate plan of the capital City of Prague until 2030 / Sustainable Energy and Climate Action Plan (SECAP);
- Air quality improvement program - Prague agglomeration CZ01 (document prepared under the auspices of the Ministry of the Environment);

### Documents in the state of preparations in 2021:

- City of Prague Drought and Water Shortage Management Plan
- Action Plan for the Regional Concept for Environmental Education and Awareness within the City of Prague for the period 2022–2025

### Other selected valid documents adopted before 31 December 2020:

- Climate commitment of the Capital city of Prague;
- The Capital City of Prague Climate Change Adaptation Strategy;
- Implementation plan for the Climate Change Adaptation Strategy of the Capital City of Prague for 2020–2024
- Regional Concept for Environmental Education and Awareness within the City of Prague for the period 2016–2025;
- General Drainage Plan of the Capital City of Prague;
- General Water Supply Plan of the Capital City of Prague;
- General Water Mains Development and Sewage Plan, as amended;
- Prognosis, Concept and Strategy of Nature Conservation and Landscape Protection in Prague;
- Strategy of Greenery Maintenance in the Capital City of Prague;
- City of Prague Waste Management Plan (as a waste originator - municipality);
- City of Prague Regional Waste Management Plan;
- Noise reduction action plan for the Prague 2019 agglomeration;
- The Territorial Energy Concept of the Capital City of Prague for the period 2013–2033 and the follow-up Action Plan for Implementation of the City of Prague Territorial Energy Concept for 2018–2022;
- Sustainable transport plan for Prague and its surroundings and the follow-up implementation plan for the period until 2023;

# ENVIRONMENTAL TOOLS AND POLICIES

## EVVO

The Capital City of Prague develops activities within environmental education, training and awareness (hereinafter EVVO) in connection with valid state legislation and conceptual documents, as well as international documents.

The basic regional strategic document for EVVO on the regional level in 2021 was the **Regional Concept of Environmental Education, Training and Awareness in the Territory of the City of Prague for 2016–2025**. This conception is continued by the

**action plans for the regional concepts of EVVO** for individual years or longer periods. Among the pillars of EVVO in Prague are schools and school facilities and non-governmental organizations, which mainly include centres of environmental education.

In 2021, 7 organizations were members of SSEV Pavučina. The realization of environmental education at schools is part of the framework educational programs and other documents and respective methodologies at all levels of the educational system.

### Financing EVVO in the Capital City of Prague from the 2021 Budget of the Capital City of Prague

Action Plan KK EVVO Total		42 581 248 Kč
including	Administration and maintenance of centres of environmental education – SEV Toulcův dvůr	3 500 000 Kč
	Administration and maintenance of centres of environmental education – SEV of the Forests of the City of Prague	5 658 600 Kč
	Grants supporting projects for improving the condition of the environment of the Capital City of Prague – area of EVVO (grant sphere IV + VI and other selected projects)	26 525 000 Kč
	Other activities and projects AP KK EVVO covered from the budget of the Department of Environmental Protection of Prague City Administration	6 897 648 Kč
<b>Information technology for the environment in relation to EVVO</b> (overall publication Prague Environment, content development of the Prague Environment portal etc. /budget of the Department of Environmental Protection of the Prague City Administration/)		<b>477 154 Kč</b>
<b>All-Prague programs of support for leisure activities of kids and youth on the territory of the Capital City of Prague</b> (sphere EVVO*)		<b>209 100 Kč</b>
<b>All-Prague programs of support for education on the territory of the Capital City of Prague</b> (sphere EVVO*)		<b>200 000 Kč</b>
<b>TOTAL</b>		<b>43 467 502 Kč</b>

\* Segmentation of projects to projects in EVVO sphere and other is indicative.

Source: OCP MHMP, SML MHMP, SVC MHMP

### Local Agenda 21 in Prague, 2021

The Local Agenda 21 and local Actions 21 (LA 21) are volunteer programmes and projects for the sustainable development of towns, cities and regions. The coordinator in the Czech Republic for these issues is the workplace for the Local Agenda 21 CENIA, the Czech Environmental Information Agency. Among other things, this agency manages a database of subjects involved in LA 21 ([ma21.cenia.cz](http://ma21.cenia.cz)). In 2013, the Capital City of Prague as a region officially adhered

to the principles of the local Agenda 21 by joining the association National Network of Healthy Cities of the Czech Republic, and by approving the Declaration of the project “Healthy Capital City of Prague”.

In 2021, LA21 projects continued at the level of individual municipal districts. For this year there are a total of **14 municipal districts**, of those 1 in Category A, 1 in Category B, 4 in Category C, 7 in Category D and 1 in the category of Interested Parties.

Category	City Districts
A	MČ Praha 14
B	MČ Praha 10
C	MČ Praha 5, MČ Praha 13, MČ Praha 18, MČ Praha – Dolní Počernice
D	MČ Praha 4, MČ Praha 7, MČ Praha 12, MČ Praha 15, MČ Praha 21, MČ Praha-Kolovraty, MČ Praha-Libuš
Applicants	MČ Praha-Troja

Source: CENIA

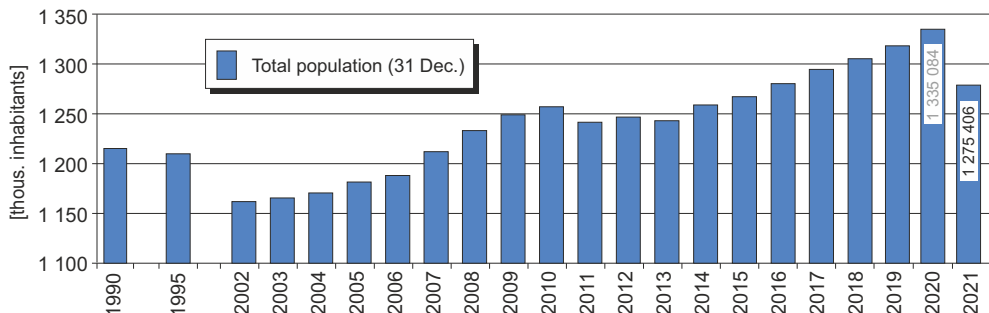


# POPULATION AND HEALTH

The number of births in Prague increased year-on-year between 2020 and 2021, with the number of deaths and number of deaths per 1000 inhabitants also rising. The standardised mortality in Prague for both sexes is lower than in the Czech Republic as a whole. It increased in 2021 for both sexes.

The most frequent group of causes of death are diseases of the circulatory system (led by other ischemic diseases of the heart and vascular diseases of the brain) and neoplasms. The number of deaths from neoplasms per 100 000 inhabitants is gradually declining.

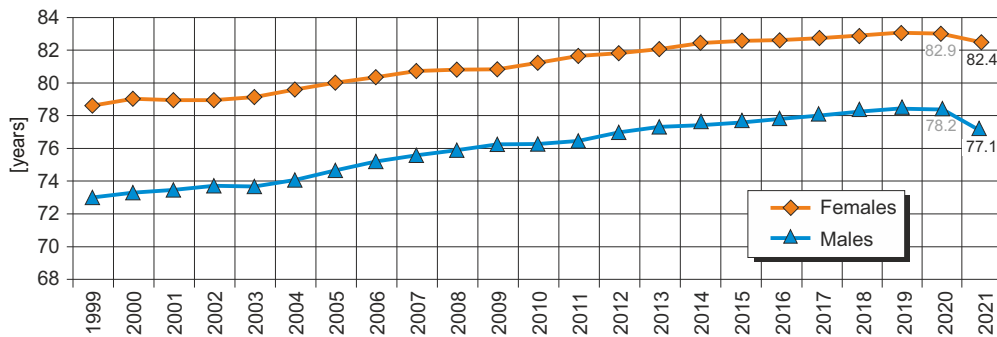
### Number of citizens in Prague, 1990, 1995, 2002–2021



Note: The number of citizens since 31<sup>st</sup> December 2021 has been connected to the 2021 census results and is not comparable to previous years..

Source: ČSÚ

### Life expectancy in Prague, 1999–2021



Note: The number of citizens since 31<sup>st</sup> December 2021 has been connected to the 2021 census results and is not comparable to previous years..

Source: ČSÚ

### Evaluation of water quality in Prague natural outdoor swimming pools, 2021

Natural swimming pool	Week of the year 2021																
	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Motol		☺	☺	☺		☺		☺		☺		☺		☺		☺	
Džbán		☹		☹		☺		☹		☺		☹		☹	☹	☹	☹
Hostivař		☹		☹		☹		☹		☹		☹	☹	☹	☹	☹	☹
Šeberák								☹		☹		☹		☹		☹	
Divoká Šárka				☺				☺						☺			
biotop Radotín			☺		☺		☺		☹	☺	☹			☹		☺	
biotop Lhotka			☺		☺		☺		☺		☺		☹	☺	☺		

- ☺ Water suitable for bathing
- ☹ Water suitable for bathing with sensorially noticeable Deteriorated properties

- ☹ Deteriorated water quality
- ☹ Water non-suitable for bathing
- ☹ Water dangerous for bathing

Source: SZÚ

# ENVIRONMENTAL INDICATORS

Indicator	Unit	2013	2014	2015	2016	2017	2018	2019	2020	2021	Source
Specific emissions of greenhouse gases	t CO <sub>2</sub> ekv./capita	6.31	5.82	6.38	6.72	6.54	6.41	6.37	5.92	6.36	ČHMÚ, CDV, MZP, ČSÚ (Re-counted values, 2019)
Annual electricity consumption per capita	kWh/capita/year	1175.1	1083.1	1112.1	1131.3	1181.6	1131.9	1121.2	1117.7	1231.1	2015–2021: ČSÚ, prev. PRE, ČSÚ/MHMP
Annual vehicle-kilometers travelled per capita	thousand vehicle-km/capita/year	5.78	5.76	5.52	5.50	5.67	5.53	5.63	5.12	5.68	TSK-ÚDI, compiled MHMP
Total number of vehicles per capita	numb./cap.	0.69	0.70	0.74	0.78	0.818	0.844	0.86	0.87	0.965	TSK-ÚDI
Length of selected bicycle routes											
– Marked bicycle routes, total	km	417	430	454	472	477	500.3	515	520	531	Prague Transportation Yearbook (TSK Praha)
– Protected cycle routes (bicycle paths)	km	161	163	167	173	178	186.5	194	200	215	
– Integration measures (bicycle lanes etc.)	km	85.1	92.1	98.5	102	106.9	117.3	126.9	159.8	193.0	
Air emissions of NO <sub>x</sub>	kg/cap./year	8.6	7.4	5.6	5.8	5.7	5.7	4.8	4.8	4.7	ČHMÚ, ATEM, compiled MHMP
Air emissions of SO <sub>2</sub>	kg/cap./year	0.5	0.2	0.1	0.2	0.2	0.2	0.2	0.21	0.11	
Quality of local air – number of exceedances of the PM <sub>10</sub> limit value											
– traffic station	number	20 Lege- rova, hot spot	24 Kar- lin	0 Vršo- vice	0 Vršo- vice	13 Vršo- vice	18 Vršo- vice	0 Vršo- vice	0 Průmy- slová	0 Vršo- vice	ČHMÚ, compiled MHMP
– background station	number	6 Řepo- ryje	2 Such- dol	0 Such- dol	0 nám. Repu- bilky	0 nám. Repu- bilky	3 nám. Repu- bilky	0 nám. Repu- bilky	0 nám. Repu- bilky	0 nám. Repu- bilky	
Average household water consumption	l/day/capita	111	106	106	108	109	107	113	112	114	PVK
Area of protected areas as percentage of the City total area	%	4.7	4.7	4.7	4.7	4.7	4.8	4.8	4.9	4.9	MHMP
Waste production per capita - household waste	t/capita/year	0.322	0.324	0.325	0.333	0.335	0.333	0.335	0.340	0.352	MHMP
The number of respiratory diseases as hospital admissions	Number per 1,000 inhab.	10.2	10.5	9.9	13.1	12.6	11.3	9.9	9.1	13.05	UZIS, Czech National Registry of Hospitalized Patients

# Protecting and increasing biodiversity



We have a surprisingly large number of different natural habitats in Prague with specific flora and fauna. One of our most important tasks is to **raise the diversity** of Prague's natural areas. **Join us in protecting Prague's nature.**

PRAŽSKÁ  
PŘÍRODA



More information on website: [www.praha-priroda.cz](http://www.praha-priroda.cz)

## BEVERAGE CARTONS

ARE NOW SORTED  
INTO THE CONTAINERS  
FOR PLASTICS IN PRAGUE



EKO KOM



prahatridi.eu

## Re-use days

Give things  
another chance

Bring in items you  
don't need anymore  
that are still in great  
condition – maybe  
they can help  
someone else!



Used spray-paint  
should be put  
in mixed waste bins!

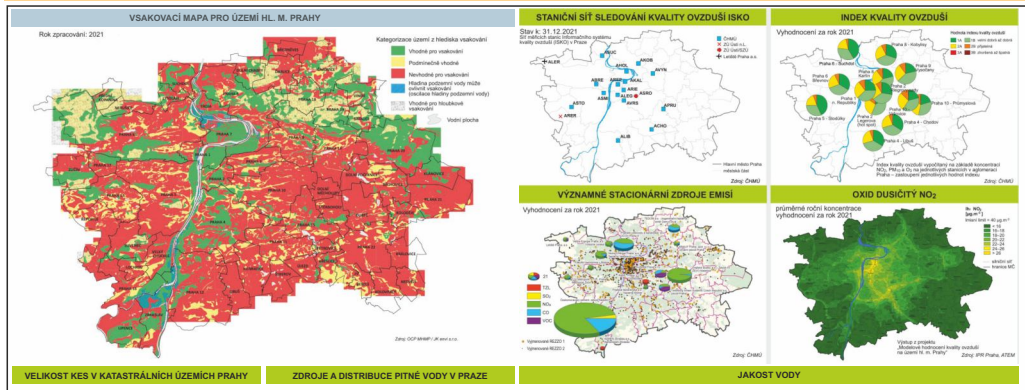


You can find **more information** on the website [portalzp.praha.eu/odpady](http://portalzp.praha.eu/odpady), [prahatridi.eu](http://prahatridi.eu), [reuse.praha.eu](http://reuse.praha.eu), [odpady.mojepraha.eu](http://odpady.mojepraha.eu), [bioodpad.praha.eu](http://bioodpad.praha.eu) and [klima.praha.eu](http://klima.praha.eu) in the Circular Economy section.

**The best waste is the kind that's never made! Let's prevent waste!**

You can find selected map information in the information materials of the set "Green Maps of Prague" and selected thematic maps, as well as on the city web

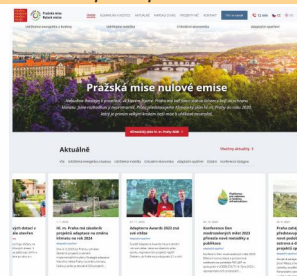
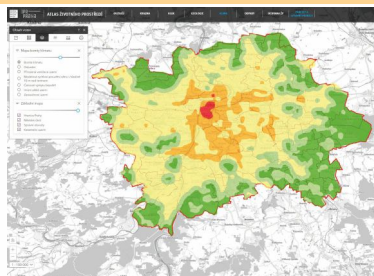
**Prague Environment – Selected information 2021, maps**  
[portalzp.praha.eu/rocekyzyp](http://portalzp.praha.eu/rocekyzyp)



**Prague Environmental Portal**  
[portalzp.praha.eu](http://portalzp.praha.eu)

**Atlas of the Environment in Prague**  
[www.geoportalpraha.cz](http://www.geoportalpraha.cz)

**Prague Climate**  
[klima.praha.eu](http://klima.praha.eu)  
[adaptacepraha.cz](http://adaptacepraha.cz)



**Contact details of selected organizations**

Organization, Address	Office, Head	Phone, fax, e-mail
Prague City Hall Mariánské nám. 2, Praha 1, 110 01 Jungmannova 35/29, Praha 1, 110 00	Environmental Protection Department (OCP MHMP) Štěpán Kyjovský, Department Director	tel.: +420 236 00 4296, 4246 e-mail: <a href="mailto:stepan.kyjovsky@praha.eu">stepan.kyjovsky@praha.eu</a> <a href="mailto:ocp@praha.eu">ocp@praha.eu</a>
Hygiene Institute of the Capital City of Prague Rytířská 12, p.s. 203, Praha 1, 110 01	MUDr. Zdeňka Schumová Head of the service office – Director	tel.: +420 296 336 711, <a href="mailto:podatelna@hygp Praha.cz">podatelna@hygp Praha.cz</a> , IDDS: zpqa12i <a href="http://www.hygp Praha.cz">http://www.hygp Praha.cz</a>
Czech Environmental Inspection Na Břehu 267/1a, Praha 9, 190 00	Regional Inspectorate Prague Wolkerova 40/11, 160 00 Praha 6-Dejvice	tel.: +420 233 066 111 <a href="mailto:ph.podatelna@cizp.cz">ph.podatelna@cizp.cz</a> IDDS: 4dkdztz <a href="http://www.cizp.cz">http://www.cizp.cz</a>

**More detailed information you can find on Prague Environmental Portal (in Czech)**

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 Jungmannova 35/29, 110 00 Praha 1, Czech Republic



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 (Prague City Hall photo archive)

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