
Number	EMI16
Indicator name	Wastewater production
Area	M
Indicator definition	<p>The total amount of wastewater generated in the administrative territory of the city/city district/municipality. It is wastewater from households, the public sphere and companies. Can be stated by volume or by means of a pollution indicator (BSK5). This is then converted into corresponding greenhouse gas emissions.</p>
Indicator unit	kg CO ₂ e/pers.
Key words	Waste water, wastewater treatment, waste
Reason for tracking and usability	<p>The production of waste (including wastewater) in total represents 3 – 10 % of greenhouse gas emissions in the cities of the Czech Republic and the Slovak Republic. Connecting the population to sewage with a final wastewater treatment plant (WWTP) and better wastewater treatment using modern technologies will reduce greenhouse gas (GHG) emissions compared to individual solutions (reservoirs, septic tanks, anaerobic lagoons, etc.). Technologies and equipment enabling anaerobic decomposition of sewage sludge have a significant mitigation potential. The area of wastewater management is in the competence of cities/city districts/municipalities and operators of the relevant water management infrastructure.</p>
Completeness, representativeness, validity	<p>The indicator is sufficiently representative if it is possible to obtain data on the production of waste water and the method of management of this waste water. Validity may be reduced by the fact that general calculation coefficients (e.g. the number of inhabitants connected to the WWTP) are used to calculate the indicator and not specific data on the production of wastewater and sludge. Completeness is further reduced if there is a larger number of non-sewered residents in the given city/city district/municipality and they use individual treatment plants.</p>

Description of data processing	<p>From the sewerage and wastewater treatment plant operator, it is necessary to obtain data on the total production of wastewater in the town/city district/municipality in cubic meters (m³). These are then converted to greenhouse gas emissions according to the relevant emission factor. A more accurate method is provided by more specific data on total pollution at the WWTP inflow, expressed in tonnes of biochemical oxygen demand per calendar year. These are again converted to greenhouse gas emissions according to the corresponding emission factor. Furthermore, it is appropriate to estimate the number of inhabitants living in households not connected to the sewerage system with a final waste treatment plant and to determine the corresponding greenhouse gas emissions according to the relevant coefficient. When calculating the indicator, it does not matter whether the WWTP is located in the territory of the city/city part/municipality or not.</p>
Data source	<p>The primary source of data is the operator of water management infrastructure (sewerage and WWTP). The secondary is a city/city district/municipality – department of the environment, or a statistical office.</p>
Tracking frequency	<p>Once every year</p>
Urban influence	<p>The city/city district/municipality and the organizations managed by it may partially influence the production of wastewater in their facilities, e.g. by introducing technologies to save water consumption or by separate collection of rainwater and sewage. They also have an important say in connecting households to sewers with final WWTPs in areas where they have not yet been built. The overall impact of the city/city district/municipality on the value of the indicator is only indirect, in this case the technologies used in wastewater treatment and the method of sludge management have the greatest role.</p>
Presentation method	<p>The results will be presented in a uniform Klimasken framework on a five-point scale according to specified intervals (kg CO₂e / inhabitant)</p>
Responsibility	<p>Processor KLIMASKEN, city, city district, municipality</p>