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Increase in overall air emissions from 2020 to 2021

CO₂ emissions from fossil sources 7.3% higher than in 2020, but still well below 1995

Vienna, 2023-10-09 – Emissions of air pollutants and greenhouse gases increased in 2021 compared to the values of 2020. This is shown by the current data from Statistics Austria's air emissions calculation. However, most emissions in 2021 were below the comparable year of 1995. Especially CO₂ emissions from the combustion of fossil fuels were 5.4% lower.

"Since the beginning of records in 1995 to 2021, emissions of most air pollutants and greenhouse gases decreased, in some cases considerably. Both private households and the economy contributed to this development. However, after a sharp decline in 2020 due to the pandemic, many air emissions increased again in 2021," explains Statistics Austria Director General Tobias Thomas.

For sulphur dioxide, for example, the increase of 6.3% in 2021 compared to 2020 can be explained by the higher use of fuels. For particulate matter, increases of 6.0% and 7.4%, respectively, were recorded for PM₁₀ and PM_{2.5} compared to 2020, which can be attributed to the renewed rise in construction activities and the weather-related increased use of biomass. Carbon monoxide emissions rose by 11.0% from 2020 to 2021. The main reasons for this were the increased demand for heating and the associated increase in the use of biomass in private households, as well as the increase in iron and steel production after the pandemic. From 2020 to 2021, CO₂ emissions from fossil sources increased by 7.3% and CO₂ emissions from other sources by 12.8%. The main reasons for this were the increased volume of traffic and the rise in industrial production after the pandemic. The increase in these climate-effective CO₂ emissions amounted to a total of 8.6%.

Decline in emissions from fossil fuel combustion since 1995

Between 1995 and 2021 the highest decreases were achieved for sulphur dioxide (SO₂ -75.1%), non-methane volatile organic compounds (NMVOC -53.5%) as well as carbon monoxide (CO -43.8%). Also, emissions of particulate matter (PM_{2.5} -40.7%), methane (CH₄ -38.2%), nitrogen oxides (NO_x -31.5%) and PM₁₀ (-29.2%) were significantly reduced.

The increased use of renewable energies, like fuelwood or biomass, caused a 104.1% rise in climate-neutral CO₂ emissions from biogenic sources between 1995 and 2021. In the same period, a reduction in emissions from the combustion of fossil fuels was achieved (-5.4%). CO₂ emissions from other sources (e.g. emissions caused by the conversion of limestone to cement clinker in cement production) showed an increase of 33.1%. Overall, these climate-effective CO₂ emissions slightly increased by 1.8%. Climate-effective and climate-neutral CO₂ emissions together rose by 18.9% since 1995.

Private households reduced emissions of all observed air pollutants and greenhouse gases in the period from 1995 to 2021 with the exception of CO₂ from other sources (+11.0%), CO₂ from biogenic sources (+30.9%) and N₂O (+2.7%). Emissions from the economy fell for all air pollutants and greenhouse gases except for process-related CO₂ emissions from other sources (+33.3%) as well as climate-neutral biogenic CO₂ emissions (+201.1%).

For detailed results and further information please refer to our [website](#).

Carbon dioxide emissions 1995-2021 by polluter, in tons

Emission	1995	2020	2021	Change in % 1995-2021
Climate-effective CO₂ emissions				
from fossil sources				
Private households	17 847 800	14 712 600	15 501 100	-13.1
Economy	31 965 500	29 215 500	31 616 400	-1.1
Total	49 813 300	43 928 100	47 117 500	-5.4
from other sources				
Private households	76 000	87 400	84 300	+11.0
Economy	11 318 600	13 359 500	15 085 800	+33.3
Total	11 394 600	13 446 900	15 170 100	+33.1
Climate-neutral CO₂-emissions				
from biogenic sources				
Private households	7 033 800	8 309 500	9 206 700	+30.9
Economy	5 312 000	15 568 900	15 994 700	+201.1
Total	12 345 900	23 878 400	25 201 400	+104.1

STATISTICS AUSTRIA, Environment Agency Austria, air emissions accounts.

Information on methodology, definitions: The data for the calculation of the air emissions accounts, which is to be prepared on the basis of Regulation (EU) 691/2011 on European environmental-economic accounts, comes from the Austrian air pollutant and greenhouse gas inventory of the Environment Agency Austria. The air emissions accounts are a satellite account of the national accounts and therefore follow their rules. According to them, the air emissions accounts record all emissions of air pollutants and greenhouse gases according to the residence principle (all domestic and foreign emissions generated by domestic companies, institutions and private households). Other reporting obligations (according to UNFCCC, UNECE CLRTAP) follow the domestic principle (all domestic emissions are recorded, regardless of whether they are caused by residents or foreigners). The difference between the air emissions accounts calculation and the other reporting obligations mentioned lies in the different consideration of transport emissions (emissions from residents versus non-resident emissions). Based on the requirements of Regulation (EU) 691/2011, the time series starts with the year 1995. The deviation from the reporting obligations according to UNFCCC and UNECE CLRTAP (from 1990) is due to the fact that there is only comparable data at the level of economic activities from 1995 onwards and a back calculation to 1990 is not possible.

If you have any questions on this topic, please contact:

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