

Schweizerische Eidgenossenschaft Confédération suisse Confederazione Svizzera Confederaziun svizra Federal Department of the Environment, Transport, Energy and Communications DETEC

Federal Office for the Environment FOEN Air Pollution Control and Chemicals Division

## Graphics of annual values NABEL

The National Air Pollution Monitoring Network (NABEL) measures air pollution levels at 16 locations in Switzerland and monitors the development over the past few decades. The stations are distributed throughout the country and monitor pollution at typical locations (e.g. city-centre streets, residential areas, rural stations).

Time series data older than 1990 often exhibit gaps of a certain length. As pollutant concentrations vary considerably throughout the year, theses gaps cannot be simply ignored. The data series were therefore completed as follows: the monthly averages were calculated, then the missing monthly averages were obtained by linear regression of data series from another measuring station exhibiting similar variation over time, and finally, providing there were at least at least four valid monthly averages available for the station, the yearly average was then calculated from these values. Isolated gaps in the data series of the stations of Basel-Binningen (NO<sub>2</sub>) and Dübendorf (SO<sub>2</sub>) were interpolated directly by linear regression of the yearly averages. The Bern measuring station had to be moved in 1997, though it remained along the same thoroughfare hemmed in by tall buildings. The resulting inconsistencies in the time series were corrected.

Particulate matter (PM10 and PM2.5)	
Ozone (O <sub>3</sub> )	
Nitrogen dioxide (NO <sub>2</sub> )	6
Sulfur dioxide (SO <sub>2</sub> )	8
Carbon monoxide (CO)	
Lead (Pb)	
Cadmium (Cd)	
Zinc (Zn)	
Dust fallout	
Dust fallout	13



Particulate matter (PM10) number of daily mean values >  $50 \mu g/m^3$ 100 Data: FOEN and Empa 80 number of days 60 40 20 0 1997 1999 2001 2003 2005 2007 2009 2011 2013 2015 2017 2019 2021 2023 ----Urban, Traffic -Urban, north -Urban, south ----Suburban ---Rural, north ---Rural, south ----Alpine foothills/Jura Air quality standard -









Ozone number of hourly values > 120 µg/m<sup>3</sup>





Ozone maximum hourly value





Nitrogen dioxide 95th percentile of the 1/2-hour mean values





Nitrogen dioxide maximum daily mean





Sulfur dioxide 95th percentile of the 1/2-hour mean values 150 Data: FOEN and Empa 125 100 hg/m³ 75 50 25 0 1988 1992 1996 2000 2004 2008 2012 2016 2020 -Urban, Traffic -Urban, south -Urban, north ---Suburban ----Rural, north ---Rural, south ----Alpine foothills/Jura --Air quality standard





## Carbon monoxide maximum daily mean















Dust fallout annual mean

