

Statistics for the SDGs - indicators for regional priorities



Name of the indicator	3.F.4 Emission of particulate matter per capita
Sustainable Development Goal	Goal 3. Good health and well-being
Priority	Healthy human environment
Definition	Emissions of dust pollution per capita.
Unit	t/year
Available dimensions	total
Methodological explanations	<p>Emission of solid particles of macroscopic and colloidal fragmentation into the atmosphere, the concentration of which exceeds the average content of these substances in clean air, negatively affecting human health and the state and quality of the environment.</p> <p>Dust pollution is divided depending on the grain size into: dusts of macroscopic fragmentation with grain dimensions from 1 to 10002 m and dusts of colloidal fragmentation with grain dimensions from 0.001 to 12 m. Depending on the source of the dust or the form of its occurrence, the division is used into: dispersive dusts, i.e. those created as a result of mechanical fragmentation of solids (e.g. coal dust during crushing and grinding of coal in power plants) and condensation dusts, created as a result of condensation and solidification of vapors of various chemical substances (e.g. soot), occurring only in the class of colloidal fragmentation. The formation of dust pollution is inextricably linked to all production processes and combustion processes. Particularly large amounts of dust are generated during the combustion of solid fuels. The amount and characteristics of dust generated during the combustion of solid fuels depend on:</p> <ol style="list-style-type: none"> 1) type of fuel – degree of fragmentation, content and mineralogical composition of ash, caking ability, content of volatile parts, humidity, etc., 2) combustion conditions – type of grate, thermal intensity of the combustion chamber, combustion temperature, air and exhaust flow conditions, etc. <p>In addition, metallurgical processes and the production of building materials, especially cement production, are also "dust-generating". Dust pollution includes dust from the combustion of fuels, cement-lime and refractory materials, silicon, artificial fertilizers, coal-graphite and soot, brown coal, surfactants and polymers, as well as particularly dangerous dust pollution such as: chromium, mercury, lead, cadmium, arsenic, zinc, manganese, etc. Particularly toxic dusts also include aromatic hydrocarbons (including carcinogenic benzopyrene). The degree of harmfulness of dusts is determined by their concentration in the atmosphere, chemical and mineralogical composition. Of the mineralogical dusts, quartz is the most harmful.</p>
Data source	Statistics Poland
Data availability	Annual data, since 2010
Notes	
Data updated on	
Metadata updated on	