

The impact of dust from the Sahara on PM_{2.5} and PM₁₀ on air quality in the Pristina area

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Abstract

The purpose of this study was to determine PM_{2.5} and PM₁₀ dust particles in the air quality from Sahara dust in the Pristina area. The area of Pristina is the area with the most polluted air in Kosovo, due to the two power plants located in that area, the low-quality coal used as fuel by the two power plants and in households, traffic, etc. In addition to the usual state of air pollution, every year we also have very high pollution from dust coming from the Sahara, where we made a comparison of pollution from common sources and the impact of dust coming from the Sahara. PM consists of a multicomponent matrix originating from various anthropogenic sources (energy production, household, traffic, etc.) and natural sources (biomass burning, dust, etc.) which undergo several atmospheric processes.

Chronic exposure to particulate matter (PM) contributes to serious health effects, such as: accelerated aging, loss of capacity and reduced lung function, development of diseases such as asthma, emphysema, bronchitis, lung cancer and heart disease and the blows. the main causes of death.

Measurements of PM_{2.5} and PM₁₀ dust particles for this study were made in real time for the twelve months of 2020, based on the directive 2008/50 for clean air in Europe.

The device used to measure PM_{2.5} and PM₁₀ dust particles is the Gravimetric Optical Measure (GRIMM M180), which works according to the standard method: EN 12341:1999 and EN 14907:2005

Key words: air pollution, dust, power plants, coal, Pristina area.