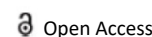




COMMENTARY



An Assessment on Dust Pollution: Atmospheric and Coal

Walter Gilbert*

Department of Environmental Science, Harvard University, Cambridge, United Kingdom

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Description

Fine solid matter particles make up dust. On Earth, it often includes airborne particles from a variety of causes, such as pollution, soil carried by the wind, and volcanic eruptions. About 20%-50% of the dust in homes contains dead skin cells. Small amounts of plant pollen, human hair, animal fur, textile fibres, paper fibres, and minerals from the soil, burned meteorite particles, and many other substances that may be present in the local environment make up the remaining portion of the air in workplaces and other human spaces.

Atmospheric

Oceanic dust, also known as atmospheric or wind-borne fugitive dust, originates in arid and dry areas where high-velocity winds are capable of removing primarily silt-sized material, deflating vulnerable surfaces. Although not all source areas have been significantly impacted by anthropogenic activities, this includes locations where grazing, ploughing, car use, and other human habits have further destabilized the soil. Very small particles suspended in the air, primarily mineral dust derived from the soil of the pedosphere of the Earth, are referred to as fugitive dust in terms of environmental air quality. A dust cloud is a sizable mass of fugitive dust. Sand-sized grains are saltated and subjected to abrasive sandblasting to create dust, which is then carried into the troposphere. Once in the atmosphere, this airborne dust, which is classified as an aerosol, can strongly cause local radiative forcing. In particular, saharan dust can be transported and deposited as far as the Caribbean and the Amazon basin, where it can modify rainfall patterns, cool the water, and affect air temperatures.

Roads

Road traffic-related dust may account for 33% of all air pollution. In addition to tyre and brake dust, road dust also includes building site dust, deposits of vehicle and industrial exhaust gas, and dust from paved or potholed roadways. Road dust has a crucial role in the production and atmospheric release of particles. In urban areas, as well as other places with heavy vehicle traffic on unsealed roads, such as mines and landfills, controlling road dust is a serious concern. Mechanical techniques like street sweepers, cars with vacuum cleaners, vegetable oil sprays, or water sprayers can be used to control road dust. Chloride of calcium can be used. Because of advancements in car engineering, there are now less PM10s created by traffic, which means that a greater percentage of those particles are being re-suspended.

Coal

When coal is crushed, ground, or pulverised, it becomes coal dust, a fine powdered form. Coal dust can be produced during mining, transportation, or mechanical handling of coal due to its brittle nature. This kind of dust is elusive. Coal that has been ground into dust before to combustion burns more quickly and efficiently and is simpler to handle. However, coal dust poses a risk to employees when it is present in the air outside of the machinery used for grinding and combustion. It poses the acute risk of creating an explosive mixture in the air and the longterm risk of giving persons who breathe it in large amounts lung disease. Coal dust particle size distribution is typically evaluated in mesh. Nutty slack is the colloquial British word for cheap fuel made up of coal dust (slack) and tiny chunks of coal (nuts).