



Magnetite Pollution

Why in News?

Recently, some Geologists have found the presence of Magnetite Pollution on the roadside Dust of Kolkata.

- The frequency of pollutants is **higher in areas with heavy vehicular traffic** and other polluting sources. The amount of magnetite is proportional to the traffic on a given road.

What is Magnetic Pollution?

▪ About:

- Magnetite pollution refers to the presence of a magnetic mineral called **Magnetite (Fe_3O_4) in the environment**, as a result of **human activities such as mining, steel production and industrial processes**.

- Magnetite is an oxide of iron. It is the **most magnetic of all the naturally occurring minerals** on earth. It is a natural magnet.
- Magnetite contains about **72% metallic iron in it**. It is found in Karnataka, Andhra Pradesh, Rajasthan, Tamil Nadu, Goa and Kerala.

▪ Impact:

◦ Ecological Impacts:

- Magnetic particles can **interfere with the migratory patterns of birds** and other animals, affecting their survival and reproduction.

◦ Soil and Water Contamination:

- Magnetite particles **can settle in the soil and water, contaminating these environments** and affecting the growth of plants and the health of aquatic life.

◦ Human Health:

- Inhaling magnetic particles can **cause respiratory problems and other health problems**, such as lung cancer, cardiovascular disease, and central nervous system damage.

◦ Building and Infrastructure Damage:

- Magnetic particles can **cause corrosion of steel structures and other metal objects**, leading to damage over time.

◦ Electronic Equipment Damage:

- Magnetic pollution can also interfere with the operation of electronic equipment, such as **compasses and navigation systems**.

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims

Q. In the cities of our country, which among the following atmospheric gases are normally considered in calculating the value of Air Quality Index? (2016)

1. Carbon dioxide
2. Carbon monoxide
3. Nitrogen dioxide
4. Sulfur dioxide

5. Methane

Select the correct answer using the code given below:

- (a) 1, 2 and 3 only
- (b) 2, 3 and 4 only
- (c) 1, 4 and 5 only
- (d) 1, 2, 3, 4 and 5

Ans: (b)

Mains

Q. Describe the key points of the revised Global Air Quality Guidelines (AQGs) recently released by the World Health Organisation (WHO). How are these different from its last update in 2005? What changes in India's National Clean Air Programme are required to achieve revised standards? **(2021)**

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