

2. Nanoparticles - induced air pollution is more harmful than PM10
 PM2.5 - induced air pollution. Explain. (150W)

Air pollution in India, hits the News usually in winter, particularly in areas like Delhi due to its geographical proximity. But it is a global, national affair. A study done to note number of deaths at early stage due to air pollution and health budget to take care of them, shown there is increase in health expenditure in 2 ways - Ayushman Bharat insurance & government hospital ~~exp~~ treatment expenditure.

Nano particle - left out Air pollutant.

~~While~~ PM2.5/PM10 are usually talked ~~about~~ particulate matter causing Air pollution. Reason is CPCB has facility to monitor these two pollutants only. But there is another potential pollutant, not often talk about - 'Nano particle'

1. Source - Dust Storms, soil-erosion, Industrial, manufacturing process etc,

Since its emergence is from different sources, it is difficult to contain.

2. In extensive study - on Nanoparticles, leaves us with less data on its effects. While PM10, 2.5 are studied much.

3. Chemically reactive

As nanoparticles are reactive, there is risk of assessment.
~~Study~~ Evidence shows, it ~~enters~~ mostly ~~is~~ mostly inhaled
and can also enter through Dermal contact

4. Disease - cardiovascular pulmonary

Evidence shows it can reach blood vessels and results in
blood clotting. Increased exposure to lungs can cause
lung cancer.

5. Present mechanisms inadequate

Current pollutant masks couldn't prevent as it
nanoparticle erodes such masks.

Way forward

Existing mechanisms has to be upgraded like
measuring facility for nanoparticles, extensive
interdisciplinary study, ~~existing~~ mechanisms (mask upgrade)
and detecting source and containment mechanism.
'Prevention is better than cure' holds good here.