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Smog Problem in New Delhi

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Air is all around us, but we can't see it. So what is air, exactly? It's a mixture of different gases. The air in Earth's atmosphere is made up of approximately 78 percent nitrogen and 21 percent oxygen. Air also has small amounts of lots of other gases, too, such as carbon dioxide, neon, and hydrogen. Air is an important environment for the breathing of all living things on Earth. It provides oxidation processes that supply the body with the necessary energy. In addition, it has the widest application in various fields of industry. Air is a significant supplier of energy: all living plants and animals depend on oxygen to generate valuable energy. Body cells take oxygen from the blood and produce energy after consuming food in the form of ATP. This biochemical generation of ATP is essential to maintain life on the Earth. So, this is one of the uses of air.

People need to breathe, and so do lots of other animals—and plants! Breathing is part of a process called respiration. During respiration, a living thing takes in oxygen from the air and gives out carbon dioxide. This process gives animals and plants the energy to eat, grow, and live life!

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How does Air Quality affect health

A variety of air pollutants have known or suspected harmful effects on human health and the environment. In most areas of India, these pollutants are principally the products of combustion from space heating, power generation or from motor vehicle traffic. Pollutants from these sources may not only prove a problem in the immediate vicinity of these sources but can travel long distances. Generally if you are young and in a good state of health, moderate air pollution levels are unlikely to have any serious short-term effects. However, elevated levels and/or long-term exposure to air pollution can lead to more serious symptoms and conditions affecting human health. This mainly affects the respiratory and inflammatory response systems, but can also lead to more serious conditions such as heart disease and cancer. People with lung or heart conditions may be more susceptible to the effects of air pollution. The health effects of air pollution have been widely publicised and it is now recognised by the government as the second-biggest health threat, after smoking. Nitrogen dioxide is an irritant gas; it can cause inflammation of the eyes, nose, throat and respiratory tract especially amongst those with existing respiratory problems. It can have both short-term 'acute' effects and long-term 'chronic' effects. Due to the strong oxidising nature of nitrogen dioxide, once present in the atmosphere it can also form complex atmospheric reactions forming further secondary pollutants such as ozone and toxic organic nitrates.

The air is filled with a toxic grey smoke to such an extent that the government has called a public health emergency. Images of the city have been appearing across the media – the air is so clouded you can't see the sky, and children have been given masks to protect their lungs. A day of breathing the New Delhi air has the same health impact as smoking 25 cigarettes. The government in India has taken drastic measures to reduce emissions. For two weeks, a program has been introduced to get private cars off the roads, with odd and even-numbered license plates being banned on alternate days.



Additionally, the Supreme Court has ordered a ban on farmers burning stubble to clear the fields in preparation for new crops. This problem has become so visible that it can no longer be ignored – which could be the way we need to show the climate crisis in order to beat it. “It’s actually a visual blanket that is smothering the city and I think it’s a tipping point, where a very intangible problem has become unavoidable from a visual perspective,” says Toby Smith, programme lead for Climate Visuals, a research organisation which campaigns for the effective visual language for climate change.

Health effects

2.2 million Children in Delhi have irreversible lung damage due to the poor quality of the air. In addition, research shows that pollution can lower children's immune system and increase the risks of cancer, epilepsy, diabetes and even adult-onset diseases like multiple sclerosis. Children are more vulnerable to the negative effects of air pollution as they are growing and developing which means that they breathe a higher rate of air per kilogram of their body weight. They also spend more time outside and are thus more exposed to it.

Poor air quality is a cause of reduced lung capacity, headaches, sore throats, coughs, fatigue, lung cancer, and early death.

Breathlessness

Chest constriction



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Irritation in eyes

Asthma

Allergy

Control

Require all politicians and all senior government officials in NCR to walk to work at least one day every week. Looking out the window and going tut-tut is not sufficient. This is suggested so they get a weekly first-hand experience, of what it really means to breathe in and cough out on the smog.

Car pooling: Reduce traffic-based air pollution and congestion by starting car pool lanes for those cars and four wheelers that have three or more passengers to encourage people to go for car pooling. Meanwhile, citizens too should take initiative and car pool with friends, colleagues, family wherever possible.

Use bicycles: Mark out bicycle lanes in residential colonies as well as on all roads in Delhi to encourage safe travel by bicycles. Meanwhile, citizens should also be encouraged to use bicycles.

Rapidly increase the number of air pollution monitoring stations

Aggressively implement the new air pollution control standards for coal-fired power stations.



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Better maintain roads to complexes such as Nehru Place to reduce the time a four wheeler spends on plying on such poor roads.

Communities near and downwind of power stations are the most severely affected by toxic emissions. Local capacity to better monitor and report emissions would complement and expand state governments' currently limited capabilities. This could be achieved by encouraging and supporting community participation in air pollution monitoring, especially of power stations in urban and peri-urban areas.

Burning of leaves, old tyres or any items in the open should be made a punishable offence in NCR with a fine of Rs 10,000 per incident as this is a major cause of air pollution. Citizens should be asked to report such incidents to helpline numbers and emails.

The Chief Minister of Delhi at that time, Arvind Kejriwal, came out with the following proposed[39] action items to attempt to reduce the air pollution.

All Delhi schools will remain shut for the next few days.

For the next five days, no construction and demolition work will take place in Delhi.

All diesel generator sets have been banned for the next ten days, except at hospitals and in emergencies.

The Delhi government will supply power to unauthorized colonies which use diesel generators.

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The coal-based Badarpur power plant will be shut down for ten days. There will be no-fly ash transportation from the power plant.

The Environment Department will launch an app to monitor the burning of leaves.

Vacuum cleaning of roads will start on 10 November.

Water sprinkling will start on all roads from the next following days.

People should stay at home as much as they can and they should try working from home.

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