



*Air pollution...
Deadly spike in Asthma*



Your life is rare, don't let it end by polluted air, so care it dear



Particulate Matter

IPCC REPORT 2021

This confirms that the current global efforts to address climate change do not reflect the scale of the crisis we are facing. This serious crisis have to be dealt more with ambitious nationally determined contributions.

More climate finance and long term decarbonisation plans should be highlighted in the 26th conference major of parties to the United Nations Framework Convention on Climate Change to be held in Glasgow. He warned that submitting the same NDC was not enough and that stronger emissions reduction targets were needed for 2030.

The world has been seeing unprecedented lethal heatwaves and floods in the recent times. These will only get worse as emissions continue to rise. Apart from natural changes to the Earth's climate excess global warming occur due to greenhouse gases caused by

Particulate matter which is the main pollutant from the emissions of fuel powered vehicles is a complex mixture that may contain soot, smoke, metals, nitrates, sulfates, dust, water and tire rubber. It can be directly emitted, as in smoke from vehicle emissions, fire, or it can form in the atmosphere from reactions of gases such as Nitrogen oxides.

PM 2.5 refers to a category of particulate pollutant that is 2.5 microns or smaller in size. The average cross-section of a human hair is 50 microns, which means that the size of Particulate matter can be even smaller than one thirteenth size of an human hair. This clearly indicates the smallest of sizes that is invisible to the human eye like the Covid-19, pose the real problems as they bypass the body's natural defences and can get deep into your lungs and potentially enter your bloodstream.

Affecting Lungs and Heart

Exposure to such particles can affect both your Lungs and Heart. Airborne Particulate matter is not a single pollutant, but a mixture of many chemical species from vehicle emissions. It is a complex mixture of solids and aerosols composed of small droplets of liquid, dry solid fragments, and solid cores with liquid coatings. Particles vary widely in size, shape and chemical composition, contain inorganic ions, metallic compounds, elemental Carbon, organic compounds, and compounds from the earth's crust. Diameter of 10 microns or less are inhalable directly into the Lungs inducing adverse health effects.





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SAVE WORLD

Maximum Green ways and days will be safe and savings too...



Health problems of Particulate Matter

The size of particles is directly linked to their potential for causing Health problems. Long-term exposure to particulate pollution can result in significant health problems like increased respiratory symptoms such as irritation of the airways, coughing or difficulty in breathing, decreased Lung function, spike in Asthma, development of chronic respiratory disease in children, development of chronic bronchitis or chronic obstructive Lung disease, irregular heartbeat, nonfatal Heart attacks, premature death in people with Heart or Lung disease, including death from Lung Cancer.

Weakening Respiratory Tract

In addition to the potential carcinogenicity of diesel exhaust, there has also been some concern that diesel particulate matter may contribute to other health problems, especially those associated with the respiratory tract.

Respirable particles such as those in diesel exhaust have been implicated as etiological factors in various types of chronic lung disease which may also increase the lung's susceptibility to Bacterial and viral infections, aggravate pre existing diseases such as Bronchitis and Emphysema, or Aggravate specific respiratory conditions such as Bronchial asthma. Diesel exhaust particulate a human carcinogen is based on findings of elevated Lung Cancer rates in occupational groups exposed to diesel exhausts. Diesel exhaust exposure is associated with an increased relative risk for Lung Cancer in the majority of reported human studies.

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Almost 100% of global warming has been caused by humans, which is the main reason for extreme hot weather which have become more frequent and without which these extremes would have been unlikely.

Now it is quite certain that human driven emissions are the main driver of the changes in the extreme hot and cold weather patterns on the global scale and warming of ocean leading to acidification of sea. The ability of scientists is to pinpoint the worse extreme weather events caused by climate change.

Previously, they could not link a specific event to warmer temperatures caused by human activity. But this is no longer a challenge, as weather attribution studies can now be produced. So the heatwave would be virtually impossible without human driven climate changes and it is proved with clear evidence.



CO₂

Carbon emissions are accelerating and the scale of impact is devastating



Carbon dioxide

Exposure to Carbon dioxide can produce a variety of health effects. These may include headaches, dizziness, restlessness, a tingling or pins or needles feeling, difficulty in breathing, sweating, tiredness, increased heart rate, elevated blood pressure, coma, asphyxia, and convulsions.

Carbon dioxide is a problem because it acts as a "greenhouse gas." Due to its molecular structure, Carbon dioxide absorbs and emits infrared radiation, warming the Earth's surface and the lower levels of the atmosphere thereby causing global warming which results in devastating climate changes. By increasing temperature and humidity, Carbon dioxide emissions increase the formation of smog, which has adverse effects on respiratory health. Through both direct and indirect fashions, Carbon dioxide pollution impacts our planet and human health.

One of the biggest benefits of reducing Carbon emissions is that it would decrease the number of deaths related to air pollution and help to ease pressure on healthcare systems. The ocean absorbs about one-quarter of the Carbon dioxide that humans create when we burn fossil fuels.

Too much Carbon dioxide in the ocean causes a problem called ocean acidification, which means that the sea becomes hotter and loses its Oxygen content. The surface ocean absorbs 90 gigatons of Carbon each year which is so huge. Carbon emissions act like a blanket in the air, trapping heat in the atmosphere and warming up the Earth.

IPCC REPORT 2021

Our sincere commitment is to make changes in the way we manage our environment, protect health and secure livelihoods with economic security for all is our main concern.

Our aim is to bring you the most perfect and exact updates and to make a change in the world. Global emissions will reach its peak by 2025 if it keeps warming at 1.5 degree Celsius. Even in the most optimistic scenario, there is only a 50% chance that global temperature rise will stop there.

Earth could exceed 1.5°C of global warming, which is the most safe limit, outlined in the Paris Agreement by early 2030s, as per the landmark report by the top senior climate scientists. Staying below 2°C this century will only happen if emissions reach net zero by 2050 is well publicised. Global emissions may peak some time in the middle of this decade.



*Wind energy will be an option
for energy independence*



Best things in life are free like the wind and the sun, use it maximum



Nitrogen dioxide

Nitrogen Dioxide is one from the group of highly reactive gases known as oxides of nitrogen or Nitrogen oxides. Other Nitrogen oxides include nitrous acid and nitric acid. Nitrogen dioxide is used as the indicator for the larger group of Nitrogen oxides and primarily gets in the air from the burning of fuel emissions of cars, trucks, buses, power plants etc.

Nitrogen dioxide can irritate airways in the human respiratory system. Such exposures over short periods can aggravate respiratory diseases, particularly Asthma, leading to respiratory symptoms such as Coughing, Wheezing or difficulty in breathing, hospital admissions and visits to emergency rooms.

Longer exposures to elevated concentrations of Nitrogen dioxide may contribute to the development of Asthma and potentially increase susceptibility to respiratory infections. People with Asthma, as well as children and the elderly are generally at greater risk for the health effects of Nitrogen dioxide and along with other Nitrogen oxides react with other chemicals in the air to form both Particulate matter and Ozone, which severely hurts the respiratory system.

Nitrogen dioxide and other Nitrogen oxides interact with water, Oxygen and other chemicals in the atmosphere to form acid rain. Acid rain harms sensitive ecosystems such as lakes and forests. The nitrate particles that result from Nitrogen oxides make the air hazy and difficult to see and also contributes to nutrient pollution in coastal waters.

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For the first time, the IPCC boldly states, unequivocal leaving absolutely no room for doubt that humans are responsible for the factual observed warming of the atmosphere, lands and oceans.

The rising global surface temperature has warmed faster since 1970 than in any other 50 year period over at least the last 2,000 years, with the warming also reaching ocean depths below 2,000 metres. The frequency and intensity of precipitation events have very much increased over most land areas.

This is because the much warmer atmosphere is able to hold more moisture which makes the wet seasons and rainfall events wetter. Presently the global concentrations of atmospheric Carbon dioxide is growing faster than at least the past two million years, which is a real concern for the existence, which is really unbelievable but a fact.



*Follow the
green footsteps
to go clean*

Your green footsteps will be a giant step for getting clean air to breathe



Sulphur dioxide

Sulphur dioxide is the component of greatest concern and is used as the indicator for the larger group of gaseous sulfur oxides which is abundantly found in the atmosphere at concentrations much lower than Sulphur dioxide. The largest source of Sulphur dioxide in the atmosphere is the burning of fossil fuels by power plants, vehicles and other industrial facilities. Smaller sources of Sulphur dioxide emissions include industrial processes such as extracting metal from ore, natural sources such as Volcanoes, Locomotives, Ships, heavy equipments that burn fuel with a high sulfur content.

Control measures that reduce Sulphur dioxide can minimise people's exposures to all gaseous Sulphur oxides. This may have the important co-benefit of reducing the formation of Particulate sulfur pollutants, such as fine sulfate particles. Emissions that lead to high concentrations of Sulphur dioxide generally also lead to the formation of other Sulphur oxides.

Sulphur dioxide can affect both health and the environment. Short-term exposures to Sulphur dioxide can harm the human respiratory system and make breathing difficult. People with Asthma, particularly children, are sensitive to these effects of Sulphur dioxide. Sulphur oxides can react with other compounds in the atmosphere to form small particles. These particles contribute to particulate matter pollution. Small particles may penetrate deeply into the Lungs and in sufficient quantities can contribute to health problems.

IPCC REPORT 2021

The real speed at which atmospheric Carbon dioxide has increased since the industrial revolution is at least ten times faster than at any other time during the last 800,000 years, and between 4 and 5 times faster than during the last 56 million years.

About 85% of poisonous pollutant of Carbon emissions are from the burning of fossil fuels. The remaining 15% are generated from deforestation & degradation. Extreme weather conditions, heatwaves and heavy rain have also become more frequent and intense across most land regions since 1950.

The report highlights that some of the recently observed hot extremes, such as the Australian summer of 2012–2013, would have been extremely unlikely without human influence on the climate. Human influence has also been detected for the first time in compounded extreme events.



Science
Not
Silence

The science of global warming is never beyond dispute, it cannot be silenced.



Ground level Ozone

Certain gases in the atmosphere can also cause air pollution. For example, in cities, a gas called Ozone is a major cause of air pollution. Ozone is also a greenhouse gas that can be both good and bad for our environment and it all depends where it is in earth's atmosphere. Ozone high up in our atmosphere is a good thing because it helps to block harmful energy from the sun, called radiation.

Ground-level Ozone is formed when volatile organic compounds and oxides of Nitrogen react with the sun's ultraviolet rays. The primary source of volatile organic compounds and oxides of Nitrogen is from sources like cars, trucks, buses, construction and agricultural equipment.

Lung damage

Ground-level Ozone reaches its highest level during the afternoon and early evening hours. High levels occur mostly during the summer months. It is a strong irritant that can cause constriction of the airways, forcing the respiratory system to work harder in order to provide Oxygen.

It can also cause other problems including, aggravated respiratory disease such as Emphysema, Bronchitis and Asthma, Lung damage, symptoms such as Coughing or a Sore throat, Wheezing, Chest pain, dry throat, headache or nausea, reduced resistance to infections, increased fatigue, weakened athletic performance etc.

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For example, incidences of heatwaves, severe droughts and fire weather happening at the same time are now more frequent. These compound events have been quite frequently seen in parts of Australia, Southern part of Europe, Northern Eurasia, parts of the United States and African tropical forests.

Oceans becoming hotter, higher and more acidic. They absorb 91% of the energy from the continues increase in atmospheric greenhouse gases, leading to ocean warming and more marine heatwaves, over the past 15 years. Marine heat waves cause the mass death of marine life, such as coral bleaching events.

They also frequently cause algal blooms and shifts in the composition of species. Even if the world restricts warming to 1.5 - 2°C, as is consistent with the Paris Agreement, marine heatwaves will become four times hotter.



***Air Pollution Causes
Lung Cancer, Spike in Asthma and Other
Chronic Respiratory Diseases***

Prevention is always better than cure... lets go green



HydroCarbons

A Hydrocarbon is any compound that consists of Carbon and Hydrogen atoms. They are organic compounds where 60% of air pollution is caused due to automobiles that run on these Hydrocarbon based fuels. Now the main culprit of this pollution is the incomplete combustion of these Hydrocarbons fuels. This causes Hydrocarbons to react with Nitrogen Oxides.

They are organic compounds which is the unique covalent nature of Carbon, where there plenty of Hydrocarbons in the world. So Gasoline, petroleum, Coal, Kerosene, Charcoal, natural gas etc are all a form of Hydrocarbons.

Chemical group

Some Hydrocarbons can cause other effects, including coma, seizures, irregular heart rhythms or damage to the kidneys or liver. The term 'Hydrocarbons' is often used when discussing traffic pollution. This refers to a group of chemicals of which volatile organic compounds are a subgroup where certain volatile compounds are known to cause Cancer.

The combustion of Hydrocarbons fuels releases CO₂, and other greenhouse gases that contribute to atmospheric pollution and climate change. Unlike fossil fuel impurities that result in byproduct emissions, Carbon dioxide is an unavoidable result of Hydrocarbon combustion. Serious toxicity and death occur due to Hydrocarbon exposure through inhalation, ingestion or aspiration. Apart from Pulmonary toxicity, Cardiovascular, nervous and gastrointestinal systems can all be affected.

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The IPCC says if Earth's climate was stabilised soon, some climate change induced damage could not be very easily reversed within centuries. For example, global warming of 2°C this century will lead to average global sea level rise of between two and six metres over 2,000 years.

Globally, Glaciers have been synchronously retreating since 1950 and are projected to continue the melting for certain decades after the current global temperature is being stabilised. Meanwhile the acidification of the deep ocean will continue to remain for thousands of years after CO₂ emissions cease.

The IPCC report does not identify any possible abrupt changes that would lead to an acceleration of global warming during this century, but today's current situation does not rule out such possibilities, where climate change can shock you seriously.



Oil and Coal are the biggest investments for air pollution which kills..



Carbon Monoxide

Carbon monoxide is a colorless, odorless gas that can be harmful when inhaled in large amounts which is released from the exhaust of fuel powered cars, trucks and other vehicles or machinery that burn fossil fuels. It is a potentially lethal gas which is highly toxic. During the incomplete combustion of Hydrocarbon fuels, when enough Oxygen is not supplied during the combustion reaction, Carbon monoxide is produced.

Breathing air with a high concentration of Carbon monoxide reduces the amount of oxygen that can be transported in the bloodstream to critical organs like the Heart and Brain. Carbon monoxide poisoning occurs when Carbon monoxide builds up in your bloodstream. When too much Carbon monoxide is in the air, your body replaces the Oxygen in your red blood cells with Carbon monoxide. At very high levels of Carbon monoxide it can cause dizziness, unconsciousness and even death in closed interiors.

These people already have a reduced ability for getting oxygenated blood to their hearts in situations where the heart needs more Oxygen than usual. They are especially vulnerable to its effects when exercising or under increased stress. In these situations, short term exposure to elevated Carbon monoxide may result in reduced Oxygen to the heart accompanied by chest pain, which is also known as angina. Signs and symptoms of Carbon monoxide poisoning may include dull headache, weakness, dizziness, nausea or vomiting, shortness of breath, blurred vision etc, which clearly shows that its almost killing us.

IPCC REPORT 2021

The prospect of frozen soils in Alaska, Canada, and Russia crossing a tipping point has been widely discussed. The main concern is that as the frozen ground thaws, large amounts of Carbon dioxide accumulated over thousands of years from dead plants and animals could be released as they decompose.

The IPCC report does not identify any globally significant abrupt change in these regions over this century. However, it projects permafrost areas releases more than 66 billion tonnes of CO₂ for each additional degree of global warming.

These Carbon emissions are quite irreversible during this century under all possible global warming scenarios. Natural drivers will modulate the human caused changes, especially at regional levels and in the near term, they will have little effect on long term global warming.



Carbon taxes should be imposed to develop into a post Carbon world



Carbon dioxide and Ozone

Some air pollutants deplete the Ozone layer and expose the Earth to dangerous radiation from the sun. Carbon dioxide contributes to air pollution in its role in the greenhouse effect. Carbon dioxide traps radiation at ground level, creating ground-level Ozone. This atmospheric layer prevents the earth from cooling at night. One result is the warming of ocean waters. Oceans absorb Carbon dioxide from the atmosphere. However, higher water temperatures compromise the oceans' ability to absorb Carbon dioxide. Over time, the effects of Carbon dioxide are compounded.

Carcinogenicity

Diesel exhaust is a complex mixture of combustion products of diesel fuel, with the exact composition depending on the type of engine, the speed at which it is run, and the composition of the fuel used. Diesel exhaust contains identified mutagens and carcinogens both in the vapor phase and associated with respirable particles, which are considered likely to account for the human Lung cancer findings because they allow penetration to the entire Lungs.

Reducing particulate matter pollution is a matter of identifying and seizing the use of common polluting sources of Particulate matter. Fossil fuel combustion is the primary contributor to atmospheric particle pollution, and any tasks done with fossil fuels can typically be accomplished with cleaner alternatives and that too at the earliest to avoid disasters.

IPCC REPORT 2021

The surface of Earth's rising temperature will certainly continue to increase until at least 2050 under all emission scenarios which are considered in this new report. The assessment shows Earth could well exceed the 1.5°C warming limit by early 2030s. If we reduce emissions sufficiently, there is only a 50% chance that the global temperature rise will stay around 1.5°C.

Carbon would need to be urgently removed at the earliest by using nature based solutions. Global warming stays below 2°C during this century only under these scenarios where Carbon emissions reach net zero around or after 2050.

Some aspects of climate change may be greatly magnified, including heatwaves, flooding from heavy precipitation events and rise in the sea level in coastal cities, along with rising low likelihood outcomes can arise.



Diesel engine exhaust emissions

Main chemicals associated with diesel exhaust emitted by diesel engines include Carbon dioxide, Carbon monoxide, Nitric oxide, Nitrogen dioxide, Sulfur dioxide, Sulphuric acid, Formaldehyde, Acrolein, Particulate matter, Anthracene, Ahenanthrene polycyclic aromatic hydrocarbons etc.

These are compounds in the Polynuclear aromatic hydrocarbon fraction from particulate extracts of diesel vehicles, Methyl Fluoranthene / pyrene Acenaphthylene, Trimethylnaphthalene, Dimethylbiphenyl, Naphthalen, eTrimethylphenyl, Dibenzothiophene, Fluorene, Phenanthrene, Anthracene, Methyl dibenzothiophene, Methylphenanthrene, Methylantracene, Ethylphenanthrene, 4H-cyclopenta phenanthrene, Ethyldibenzothiophene, 2-Phenylnaphthalene, Dimethylphenanthrene, Pyrene, Fluoranthene, Benzo dibenzothiophene, Benz Acenaphthylene, Benzo naphtho thiophene, Ethyl Methylphenanthrene, Benzofluorene, Cyclopenta Pyrene, Benzofluoranthene, Benzantracene, IndenolPyrene, 3Methylchrysene, Phenyl, Chrysene, 1, 2-Binaphthyl, Methylbenzantracene, BenzoFluoranthene, Benzopyrene, Benzantracene, Benzoperylene, Dibenzopyrene.

The other Airborne Particulate composition of inorganic constituents and emissions from diesel exhaust include Hydrogen, Boron, Carbon, Nitrogen, Sodium, Magnesium, Aluminum, Silicon, Phosphorous, Sulphur, Lead Potassium, Calcium, Titanium, Manganese, Iron, Copper, Zinc, Barium etc.

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The only July month on record that was warmer than this over Europe occurred in 2010, when western Russia experienced a much severe heatwave and the European average temperature was 1.7°C above its 1991-2020 level.

Average rising of the temperature has become a real concern all throughout this report and it's really alarming. It was above average for the majority of the ocean surface temperature. Invariably, colder areas have also remained warmer than average.

According to the recent European Union weather body report, the temperature average recorded in the last twelve months has remained above the thirty year average temperature over northern Siberia and the adjacent Arctic seas, northeastern Canada, northwestern Africa, the Middle East and the Tibetan Plateau. According to the reports these facts are really alarming.