


The focus of Environment Information System (ENVIS) is to disseminate environmental information to decision makers, policy planners, scientists and researchers across the world.

The CERC-ENVIS Resource Partner focuses on 'Environment Literacy - Eco-labelling and Eco-friendly Products' This bi-monthly e-bulletin features latest news, developments and innovations in the field.

Eco product

Environmentally-friendly soy air filter



Scientists of Washington State University and University of Science and Technology Beijing have developed a soy-based air filter that can capture toxic chemicals, such as carbon monoxide and formaldehyde, which current air filters can't. Using natural, purified soy protein and bacterial cellulose – an organic compound produced by bacteria – chemically capture gaseous pollution, not just particles like commercial air filters do. Typical air filters, which are made of micron-sized fibers of synthetic plastics, physically filter the small particles but are not able to chemically capture gaseous molecules. The materials are cost-effective and biodegradable. This study is published in the journal *Composites Science and Technology*

Source: <https://www.sciencedaily.com/releases/2017/01/170113155352.htm>

Smog: An Overview

The word "smog" is a combination of the words "smoke" and "fog." The term smog was first used in 1905 by Dr H A Des Voeux. Smog is a type of air pollution caused by tiny particles in the air. The smoke usually comes from burning of coal. Classic smog results from large amount of coal burning in an area and is caused by a mixture of smoke and sulfur dioxide.

The smog we see in the cities today is **Photochemical Smog**. Photochemical smog is produced when sunlight reacts with nitrogen oxides and at least one volatile organic compound (VOC) in the atmosphere. Nitrogen oxides come from car exhaust, coal power plants, and factory emissions. VOCs are released from gasoline, paints, and many cleaning solvents. When sunlight hits these chemicals, they form airborne particles and ground-level ozone or smog.

Smog also reduces visibility. It makes the sky brown or gray. It is very common in metropolitan cities because of huge number of traffic, industries and combustion of different types of fuel.

Cities located in basins surrounded by mountains may also have smog problems because it is trapped in the valley and cannot be carried away by wind. The time that smog takes to form depends directly on the temperature. Temperature inversions are situations when warm air does not rise instead stays near the ground. During these situations, if the wind is calm, smog may get trapped and remain over a place for days.

During the **Great Smog of 1952**, sulfurous coal smoke-industrial pollution-blanketed the city of London for five days (December 5–9). More than 4,000 people died from respiratory ailments as a result. It was so thick that the city had to shut down roads, railways and the airport.

Smog is unhealthy to humans and animals and can kill plants. It aggravates respiratory symptoms by inflaming breathing passages, decreasing the working capacity of lungs and causing shortness of breath, pain when inhaling deeply, wheezing and coughing. It can cause eye and nose irritation and dry out the protective membranes of the nose and throat and interfere with the body's ability to fight infection, increasing susceptibility to illness.


Source: <https://www.nationalgeographic.org/encyclopedia/smog/>
<https://www.conserve-energy-future.com/smogpollution.php>
<http://eduqreen.teri.res.in/explore/air/smog.htm>

Green Issue



Eco news

Air pollution, a bigger killer than tobacco



The World Health Organization (WHO) has listed air pollution as the top health threat for 2019. A study by WHO finds that air pollution is killing more people than tobacco and the number of deaths associated with the fine particulate matter in the atmosphere globally is around 8.8 million, twice more than that has been estimated previously. WHO estimates smoking kills about 7 million people a year globally. Worldwide, air pollution caused 120 extra deaths in every 100,000 people per year. "Smoking is avoidable but air pollution is not," said Thomas Münzel, a co-author of the Study. Experts said an "urgent and systemic transformation" is required in how we use Earth's resources.

Source: <https://globalnews.ca/news/5048256/air-pollution-kills-more-people-than-smoking-new-research-finds/>

Set Up "Smog Tower" SC orders Delhi Government



The Supreme Court has given three months' time and asked the Centre and Delhi government to set up a 'smog tower' at Connaught Place to deal with the problem of air pollution. Smog towers are structures designed as large-scale air purifiers to reduce air pollution particles. Giant air purification towers has been seen as a viable solution to clean polluted air in several countries. China had set up the world's largest air purification tower in the city of Xi'an. According to reports, the 100 metre-high tower was able to make significant improvements to air quality. India is not alone in trying to tackle the recurring issue of air pollution. The world over, cities have been trying to control this scourge.

Source: <https://timesofindia.indiatimes.com/city/delhi/set-up-first-smog-tower-in-cp-in-3-months-sc/articleshow/72784515.cms>

Take a deep breath... Don't choke.

Shield the earth and shield yourself from air pollution !

Eco tip

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