

Online repository:

Key words	Descriptions	Links/Resources
acid rain	When two common air pollutants, sulphur dioxide and nitrogen oxide combine with water in the atmosphere it forms a weak acid. When it rains this rain is acidic and is referred to as 'acid rain'.	https://innovate-eco.com/how-does-pollution-affect-biodiversity/
acidification	Acidification is a process that is characterized by increasing concentrations of hydrogen ions (H+) in soil or water. It can cause metals and their compounds to ionize, producing ions (such as Al ³⁺) in concentrations high enough to be toxic to plants, animals, and microorganisms. Consequently, increasing acidification is usually interpreted as a degradation of environmental quality. Acidification is caused by many influences, both natural and anthropogenic, but the most widespread problems are associated with a phenomenon commonly referred to as acid rain.	https://digitaleditions.library.dal.ca/environmentalscience/chapter/chapter-19-acidification/
air pollution	Air pollution is any substance suspended in the air that can have adverse effects on the health of humans and the wider ecosystem. This could be solid particles such as dust or soot from a coal-fired power station, or it could be gases that are invisible to the naked eye such as ammonia or carbon dioxide.	https://innovate-eco.com/how-does-pollution-affect-biodiversity/
biodiversity loss	Biodiversity loss refers to the decline or disappearance of biological diversity, understood as the variety of living things that inhabit the planet, its different levels of biological organisation and their respective genetic variability, as well as the natural patterns present in ecosystems.	https://www.iberdrola.com/sustainability/biodiversity-loss
Carbon dioxide	Carbon dioxide is a colorless and non-flammable gas at normal temperature and pressure. Although much less abundant than nitrogen and oxygen in Earth's atmosphere, carbon dioxide is an important constituent of our planet's air. A molecule of carbon dioxide (CO ₂) is made up of one carbon atom and two oxygen atoms.	https://scied.ucar.edu/learning-zone/how-climate-works/carbon-dioxide#:~:text=Carbon%
carbon monoxide (CO)	Carbon monoxide (CO) is an odorless, colorless gas formed by the incomplete combustion of fuels. When people are exposed to CO gas, the CO molecules will displace the oxygen in their bodies and lead to poisoning.	https://www.health.state.mn.us/communities/envir
deforestation	Deforestation is the purposeful clearing of forested land. Throughout history and into modern times, forests have been razed to make space for agriculture and animal grazing, and to obtain wood for fuel, manufacturing, and construction. Deforestation has greatly altered landscapes around the world.	https://education.nationalgeographic.org/resource/deforestation

eutrophication	<p>A process of pollution that occurs when a lake or stream becomes over-rich in plant nutrient; as a consequence it becomes overgrown in algae and other aquatic plants. The plants die and decompose. In decomposing the plants rob the water of oxygen and the lake, river or stream becomes lifeless. Nitrate fertilizers which drain from the fields, nutrients from animal wastes and human sewage are the primary causes of eutrophication.</p>	<p>https://www.eea.europa.eu/archived/archived-content-water-topic/wise-help-centre/glossary-definitions/eutrophication</p>
heavy metals pollution	<p>These heavy metals are found naturally on the Earth's crust since the Earth's formation. Due to the astounding increase of the use of heavy metals, it has resulted in an imminent surge of metallic substances in both the terrestrial environment and the aquatic environment. Heavy metal pollution has emerged due to anthropogenic activity which is the prime cause of pollution, primarily due to mining the metal, smelting, foundries, and other industries that are metal-based, leaching of metals from different sources such as landfills, waste dumps, excretion, livestock and chicken manure, runoffs, automobiles and roadworks. Heavy metal use in the agricultural field has been the secondary source of heavy metal pollution, such as the use of pesticides, insecticides, fertilisers, and more. Natural causes can also increase heavy metal pollution such as volcanic activity, metal corrosion, metal evaporation from soil and water and sediment re-suspension, soil erosion, geological weathering</p>	<p>https://www.sciencedirect.com/science/article/pii/S2405844020315346</p>
invasive alien species	<p>Invasive alien species are plants, animals, pathogens and other organisms that are non-native to an ecosystem, and which may cause economic or environmental harm or adversely affect human health. In particular, they impact adversely upon biodiversity, including decline or elimination of native species - through competition, predation, or transmission of pathogens - and the disruption of local ecosystems and ecosystem functions.</p>	<p>https://www.cbd.int/idb/2009/about/what/</p>
light pollution	<p>light pollution is a form of waste energy that can cause adverse effects and degrade environmental quality. Moreover, because light (transmitted as electromagnetic waves) is typically generated by electricity, which itself is usually generated by the combustion of fossil fuels, it can be said that there is a connection between light pollution and air pollution (from fossil-fueled power plant emissions). Control of light pollution therefore will help to conserve fuel (and money) and reduce air pollution as well as mitigate the more immediate problems caused by the excessive light.</p>	<p>https://www.britannica.com/science/light-pollution</p>

Nitrogen Oxides are a family of poisonous, highly reactive gases. These gases form when fuel is burned at high temperatures. NOx pollution is emitted by automobiles, trucks and various non-road vehicles (e.g., construction equipment, boats, etc.) as well as industrial sources such as power plants, industrial boilers, cement kilns, and turbines. NOx often appears as a brownish gas. It is a strong oxidizing agent and plays a major role in the atmospheric reactions with volatile organic compounds (VOC) that produce ozone (smog) on hot summer days.

<https://www3.epa.gov/region1/airquality/nox.html>

Nitrogen is an important element that gives plants the energy to grow. It's essential to all life on Earth, but it can be very damaging in excess.

Nitrogen pollution is caused when some nitrogen compounds – like ammonia and nitrous oxide – become too abundant. Phosphorus is a common component of mineral and manure fertilizers because it boosts crop yields. However, a large portion of phosphorus applied as fertilizer is not taken up by plants, and either builds up in the soil or washes into rivers, lakes and coastal seas.

Unwanted or disturbing sound in the environment that affects the health and well-being of humans and other living organisms. Noise pollution can cause health problems for people and wildlife, both on land and in the sea. From traffic noise to rock concerts, loud or inescapable sounds can cause hearing loss, stress, and high blood pressure. Noise from ships and human activities in the ocean is harmful to whales and dolphins that depend on echolocation to survive.

Leakage of petroleum onto the surface of a large body of water. Oceanic oil spills became a major environmental problem in the 1960s, chiefly as a result of intensified petroleum exploration and production on continental shelves and the use of supertankers capable of transporting more than 500,000 metric tons of oil.

Natural resources may be divided into regenerative resources such as land (arable and grazing land), air, ground water, forests, plants and animals, etc. on the one hand, and non-renewable resources such as oil, coal, natural gas, metals, minerals, etc. on the other hand. The exploitation of both regenerative resources and non-renewable resources is increasing, as more countries embark on industrialization and consume more resources.

<https://www.soilassociation.org/causes-campaigns/fixing-nitrogen-the-challenge-for-climate-nature-and-health/the-impacts-of-nitrogen-pollution/>

<https://phys.org/news/2018-01-phosphorus-pollution-dangerous-worldwide.html#:~:text=%22Eutrophication%20due%20to%20phosphorus%20pollution,such%20as%20consumption%20and%20swimming.%22>

<https://education.nationalgeographic.org/resource/noise-pollution>

<https://www.britannica.com/science/oil-spill>

<http://www.eolss.net/sample-chapters/c13/E4-25-04-03.pdf>

nitrogen oxides (NOx)

nitrogen and phosphorus pollution

noise pollution

oil spill

overexploitation of natural resources

plastic pollution	<p>Plastic pollution has become one of the most pressing environmental issues, as rapidly increasing production of disposable plastic products overwhelms the world's ability to deal with them. Plastic pollution is most visible in developing Asian and African nations, where garbage collection systems are often inefficient or nonexistent. But the developed world, especially in countries with low recycling rates, also has trouble properly collecting discarded plastics. Plastic trash has become so ubiquitous it has prompted efforts to write a global treaty negotiated by the United Nations.</p>	<p>https://www.nationalgeographic.com/environment/article/plastic-pollution</p>
soil pollution	<p>This invisible affliction appears when the concentration of pollutants on the surface becomes so high that it harms land biodiversity and endangers health, particularly through food. Activities such as stock breeding and intensive farming use chemicals, pesticides and fertilisers that pollute the land, just as happens with heavy metals and other natural and man-made chemical substances. Soil pollution is a global threat that is particularly serious in regions like Europe, Eurasia, Asia and North Africa, as indicated by the Food and Agricultural Organization of the United Nations (FAO). The FAO also affirms that both intense and even moderate degradation is already affecting one third of the world's soil. Moreover, recovery is so slow that it would take 1,000 years to create a 1 centimetre layer of arable soil.</p>	<p>https://www.iberdrola.com/sustainability/soil-pollution-causes-effects-solutions</p>
sulfur dioxide (SO ₂)	<p>Sulfur dioxide appears as a colorless gas with a choking or suffocating odor. Boiling point -10° C. Heavier than air. Very toxic by inhalation and may irritate the eyes and mucous membranes. Under prolonged exposure to fire or heat the containers may rupture violently and rocket. Used to manufacture chemicals, in paper pulping, in metal and food processing. Rate of onset: Immediate & Delayed Persistence: Minutes to hours Odor threshold: 1 ppm Source/use/other hazard: Disinfectant and preserving in breweries and food/canning; textile industry; batteries. CAMEO Chemicals. Sulfur dioxide is a colorless gas with a pungent odor. It is a liquid when under pressure, and it dissolves in water very easily. Sulfur dioxide in the air comes mainly from activities such as the burning of coal and oil at power plants or from copper smelting. In nature, sulfur dioxide can be released to the air from volcanic eruptions. Sulfur dioxide is a sulfur oxide. It has a role as a food bleaching agent, a refrigerant and an Escherichia coli metabolite.</p>	<p>https://pubchem.ncbi.nlm.nih.gov/compound/Sulfur-dioxide</p>
water pollution	<p>Water pollution is the contamination of water sources by substances which make the water unusable for drinking, cooking, cleaning, swimming, and other activities. Pollutants include chemicals, trash, bacteria, and parasites. All forms of pollution eventually make their way to water.</p>	
biodiversity	<p>Biodiversity, also called biological diversity, is the variety of life found in a place on Earth or, often, the total variety of life on Earth. A common measure of this variety, called species richness, is the count of species in an area. Biodiversity also encompasses the genetic variety within each species and the variety of ecosystems that species create.</p>	<p>https://www.britannica.com/science/biodiversity</p>

Ambient Air Quality A broader term used to describe air pollution in outdoor environments.

Anthropogenic processes Anthropogenic effects, processes, objects, or materials are those that are derived from human activities. Greenhouse gases are atmospheric gases such as carbon dioxide, methane, chlorofluorocarbons, nitrous oxide, ozone, and water vapour that slow the passage of re-

Greenhouse Gases radiated heat through the Earth's atmosphere.

<https://www.paho.org/en/topics/air-quality-and-health/ambient-and-household-air-pollution-and-health-frequently-asked#:~:text=Ambient%20air%20pollution%20is%20a,health%20and%20for%20the%20environment.>
<https://www.eea.europa.eu/help/glossary/ep-pollution-register-glossary>
https://uk-air.defra.gov.uk/air-pollution/glossary.php?glossary_id=32#32