بەناوی خوا

پیس بوونی ژینگە گەورەترین کێشەی ئەم سەردەمە پێم خۆش بوو لەم توێژینەوەیەدا ئەوە ڕوون بکەمەوە کە ئەندازیار کاریگەری گەورەی هەیە لەسەر پاک ڕاگرتنی ژینگە بە هەموو جۆری پسپۆریەکانیەوە هەر لە دروست کردنی هەر پرۆژەیەک یان ئامێرێک ،کەشتی ،شەمەندەفەر ،تۆڕی ئاو و ئاوەڕۆ، فرۆکە ،یاریگا ، کارگەکان ، ڕێگاوبان ، فرۆکەخانە ، پارک و باخچەکان ، بەنداو ، فرۆکە ، پردو تونێل و بیناو باڵەخانەو ئوتۆمبێل و ..... چەندان شتی تر

ئەم شتانەی سەرەوە ئەندازیار ئامادەکاریان بۆ دەکات بۆ ئەوەی بنیاد بنرێن وە کاریگەری راستەوخۆیان هەیە لەسەر ژینگە هەریەکەیان بە جۆرێک .

لەبەر ئەوە زۆر گرنگە کاری ئەندازیار هەر لە هووشیار کردنەوە و تێگەیاندنی خەڵکی و داتا کۆکردنەوەو دیزاین و نەخشەو سەرپەرشتی و جێبەجی کردن چونکە دەرئەنجامەکەی پەیوەستە بە ژینگەوە .

Causes and solutions of environmental pollution

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Contents

A) Abstract

Known as pollution that the entry of any material is undesirable to the natural environment, which makes them unclean and unsafe, as well as inappropriate use, and include contaminated materials: concrete materials, in addition to the sound, light, and temperature when they enter a Unnatural to the environment.

According to the (Pure Earth) organization concerned with environmental affairs, pollution affects more than 200 million people in a toxic way around the world, and has indicated that the effects of pollution go beyond that, as it has been found that there is an increase in the rate of children being born with birth defects in places experiencing pollution.

The level of intelligence of these children is about 30-40 points lower when they pass IQ tests compared to normal children, in addition to that, the average age of the residents of these places is less than 45 years; Because of their affliction with many diseases, from here the idea of reducing the problem of environmental pollution and finding solutions to it became an urgent necessity. Therefore, many efforts were made to find radical solutions to reduce the emission of pollutants to the environment by properly managing and treating wastewater.

From air pollution, waste recycling, effective hazardous pollutants management, and other solutions.

B) Type of pollutions:

1) Air pollution

1.1) reasons for air pollution:

There are many reasons that lead to air pollution , and the following are the most prominent reasons and sources for that:

a)Industrial pollutants:

Industrial treatment processes, in metallurgy factories, smelting, paper and pulp factories, oil refineries, chemical factories, sugar factories, cotton, and rubber manufacturing plants are responsible for one-fifth of air pollution, and contain the following pollutants:

a.1) The pollutants from power plants and industrial chimneys from the combustion of fossil fuels, which are: carbon dioxide gas, carbon monoxide gas, sulfur dioxide, hydrogen sulfide gas, and hydrocarbons.

a.2) Pollutants resulting from phosphate fertilizer factories, aluminum extraction, burning ceramics, steel making, and manufacturing some chemicals, include fluorine compounds.

a.3)Pollutants from metal manufacturing processes, such as dust and fumes laden with lead, chrome, and nickel.

a.4)Pollutants resulting from manufacturing processes of some chemicals, namely: hydrochloric acid, chlorine, nitrogen oxides, lead, zinc, arsenic, and copper oxides.

b)Vehicles:

Vehicles are the largest sources of air pollution, as they produce nearly two-thirds of carbon monoxide emissions, and about half of hydrocarbons and nitrous oxide emissions, and vehicle exhausts also produce some gases such as lead that have negative effects on vital societies, and they produce many volatile organic compounds that It results from the combustion of fuel in vehicles.

c)Burning fossil fuels:

The burning of fossil fuels to produce energy to do many activities such as cooking, heating, lighting, washing, etc., resulting in a variety of pollutants, including: Alheidrickroponat , and sulfur dioxide, and it should be noted that the electrical power plants, burning Fossil fuels, especially coal, produce about two-thirds of the sulfur dioxide emissions into the air.

d) Aircraft emissions:

Air pollution produces some gases that also contribute to air pollution in the world, as it is responsible for 2.5% of carbon monoxide emissions, in addition to 1% of hydrocarbon

emissions. Aircraft also emit some fumes that contain The many tiny particles that scatter through the air, scattering light, and blocking vision.

e) Agricultural activities:

The burning of forests, pastures and other agricultural lands produces about 60-65% of carbon dioxide emissions, and rice fields, burning biomass, and the excretion process of livestock produce 40% of methane emissions , in addition to the use of Pesticides are responsible for emissions of organophosphates, chlorinated hydrocarbons, arsenic, and lead.

f) Ionizing radiation:

These rays are characterized by having large and sufficient energy to ionize atoms and molecules, examples of ionizing radiation include alpha and beta particles resulting from nuclear explosions, scientific experiments that use radioisotopes , and nuclear weapons testing. It occurs naturally in the environment.

g) Cosmic radiation:

the atmosphere is constantly exposed to the penetration of charged particles of high energy from outer space, called primary cosmic rays, and when they penetrate into the atmosphere, they lose part of their energy gradually to disappear completely when they collide with oxygen and nitrogen atoms, which results in secondary rays completely different to the rays Primary and lower power.

h)Suspended particles:

This substance is a major pollutant for the air, as it contains dust from several different sources, the most important of which is coal dust from power stations and oil refineries, in

addition to cement and silica dust resulting from stone crushing, and it is reported that transportation produces large quantities of dust as well

1.2) Air pollution solutions:

The responsibility for solving the air problem rests on every individual in the community, as well as on governments, so everyone must adhere to some measures to reduce this problem, including the following:

a)Individual solutions:

a.1)Encouraging members of the same family to use public transport to move around, and thus a.2)reducing the number of cars on the roads, which contributes to reducing pollutant emissions.

a.3)Rationalization of energy use, such as: lights and heaters; To reduce the burning of fossil fuels to produce electricity, and thus reduce the amounts of pollution in the air.

Recycling and reusing things, which reduces the manufacture of new products, given that the manufacturing process produces a lot of pollutants.

b) Government-level solutions:

b.1) Investing in green energy by using renewable energy sources , such as wind and solar energy; To reduce fossil fuel burning processes.

b.2) Monitor companies and factories during manufacturing processes, and put all activities under close scrutiny; To reduce polluting emissions.

b.3) Design and manufacture of highly energy efficient transportation.

2)Water pollution

2.1)Causes of water pollution

There are many reasons that lead to water pollution , and here are some of the main ways that cause this:

a)Industrial pollutants:

industries, manufacturing and mining sites, and agricultural areas in the world are among the most important contributors to water pollution, and the resulting waste consists of toxic chemicals, and when this untreated water reaches the freshwater networks, it pollutes it. To water bodies and raise their temperature, which threatens the life of living organisms, and makes the water unfit for human consumption.

b)Dumping waste into the oceans:

In some countries of the world, household waste is collected and disposed of by being dumped into the oceans, and most of it takes 200 years to fully decompose.

c)Sewage and wastewater:

Sewage and wastewater - even after treatment - contains many harmful chemicals, bacteria, and some pathogens, and when it is not treated and reaches fresh water, it contaminates it and causes many health problems for living organisms.

d)Oil spills in water bodies:

Although these accidents are accidental, the amount of oil leakages and spills is very large, and it usually occurs during oil exploration operations in the oceans, or because of ships carrying oil.

e)Agricultural activities:

farmers resort to the use of chemicals to protect their crops from pests and insects, which cause damage to all living organisms when they enter the groundwater or mix with rainwater flowing into streams and rivers.

f)Global warming:

The problem of global warming is a major concern for the problem of water pollution, as it causes its temperature to rise, which leads to the killing of aquatic organisms, thus increasing the pollution of water resources.

g)Radioactive decomposition waste:

The uranium - a highly toxic substance - used in nuclear power plants causes water pollution if it is not disposed of in a correct way, and water sources and the environment in general are still exposed to this kind of pollution.

2.2)Water pollution solutions

There are many solutions to the problem of water pollution, and the following are the most important methods used to reduce it:

a)Wastewater treatment:

The process of wastewater treatment involves removing all pollutants from the water using effective physical, chemical and biological methods, to obtain clean water free of contaminants and suitable for use.

b) Green agriculture:

Green agriculture aims to grow plants and crops that are suitable for the climate by using an efficient irrigation system that reduces water and energy use, and reduces the entry of chemicals into the water.

c) Management of rainwater drainage:

The management of rain and snow drainage reduces the effects of surface runoff in streets, meadows, and other places, improves water quality, and prevents pollutants from entering it, which helps to use water effectively and without problems.

d)Reducing air pollution:

The problem of air pollution has a direct impact on water pollution, as the oceans absorb about 25% of the carbon dioxide emissions resulting from human activities in the atmosphere, which causes a rapid acidification of the oceans, which poses a threat to marine life and coral reefs.

e)Reducing plastic waste:

Individuals should reduce the use of plastic globally, along with improving the management of plastic concealers, as there are large quantities of plastic dumped into the oceans that come from land and cause pollution.

f) Rationalize water consumption:

everyone must conserve water; To reduce the problem of water pollution, which contributes to the access of all individuals in the world to clean water, in addition to this, water resources must be managed responsibly, and an awareness that water sources are extremely scarce, and must be preserved accordingly.

3)Soil pollution

3.1)Causes of soil pollution

There are many causes and sources responsible for soil pollution, and the most prominent of which are:

a)Industrial activities:

Industrial activities are the biggest contributor to the problem of soil pollution , as the increase in manufacturing and mining activities, and the increase in industries that depend on extracting minerals produce many polluting secondary wastes, and when they remain on the surface of the soil for a long time, they make them unfit for use.

b)Agricultural activities:

The increasing use of chemical fertilizers and pesticides has reduced soil fertility, destroyed its structure, and made it easily susceptible to erosion, as they are industrial chemical compounds that do not degrade naturally; Because they were not formed naturally, in addition to the fact that some plants absorb these pesticides, and when they decompose, they return again to the soil, causing contamination.

c)Personal waste:

the personal excreta of humans and sewage system water is generally disposed of directly into landfills and dumpsites, where biological waste pollutes the soil; Because human bodies are full of toxins and chemicals that seep into the soil from these landfills.

d) Oil spill:

The leakage of petroleum materials occurs during storage, or when transporting chemicals at gas stations, as these materials damage the soil and make it unfit for agriculture.

e) Acid rain:

produces acid rain from the mixing of pollutants in the air with rainwater and falling to the soil, which leads to melt some of the important nutrients in the soil, changing its structure.

3.2) Soil pollution solutions

There are many measures and possible solutions to reduce soil pollution, the most important of which are:

a)Reducing acid rain:

Acid rain can be reduced by installing scrubbers on power plant chimneys; To reduce sulfur dioxide emissions, encourage the development and use of alternative fuel sources, and rationalize energy use .

b)Reclamation of wetlands:

one acre of wetlands contains 5.7 million liters of water, and this amount can be polluted by running water, thus polluting the soil, so many efforts and organizations concerned with this have arisen, such as the Nature Conservancy. Where you buy land for reclamation, and you can volunteer in these organizations to participate in the reclamation process, or make donations.

c) Improving the quality of agricultural activities:

by using organic herbicides, reducing their use as much as possible, and growing local plants that can withstand environmental conditions, which makes the use of all kinds of pesticides unnecessary.

d)Reducing negative human impacts:

Reducing the quantities of waste that is thrown into landfills through several means, the most important of which are: recycling, using cloth bags instead of plastic bags when shopping,

using polycarbonate bottles instead of plastic bottles, in addition to avoiding buying products with packaging Excessive, and try to reuse it if the need arises.

e) Environmental remediation:

Environmental remediation is one of the natural solutions to soil pollution, and it includes removing pollutants from soil, groundwater and surface water through bioremediation and phytoremediation, which convert pollutants into harmless substances.

4)Noise Pollution

4.1)Causes of noise pollution

Pollution resulting from unwanted sound has become very common due to technological progress and development, and there are many different causes and sources that cause the problem of noise pollution or noise pollution , including:

a)Air transportation:

Noise pollution from air transportation has increased in recent years; Because of the widespread use of heavy, long-range jet aircraft, where the noise made by the jet plane is more annoying than the noise produced by the helicopter, and the most disturbing is when taking off; Due to the violent mixing of the gases released from the engine with the surrounding air, as well as upon landing when the aircraft approaches the surface of the Earth.

b)Construction sites:

Noise from construction sites is generally much worse than noise from manufacturing processes; Because construction operations anywhere require a list of different equipment that makes noise when erecting bridges, building buildings, and other construction work.

c)Creating deep piles:

The piling of piles and piles when constructing deep piers is a high noise civil engineering process.

d)Manufacturing Process :

Noise in the industrial sector arises from processes that cause vibration, friction, and turbulence of air and gas ducts.

e)Loudspeakers, crackers and booms:

Loudspeakers and crackers are used in many different occasions, such as festivals and celebrations, as some firecrackers produce noise up to 120 dB, and the booms used in vehicles may exceed the permissible limit and cause noise pollution.

4.2)Noise pollution solutions

There are many solutions that can control or reduce noise pollution, and here are some of them:

a)Reducing the noise resulting from air transport, trucks, cars, industrial and household machines by designing and manufacturing silencers that are placed inside the devices' motors, where the sound of the machines can be reduced by making a change to the design of the devices, and using soundproof cabins (rooms). And sound-absorbing materials.

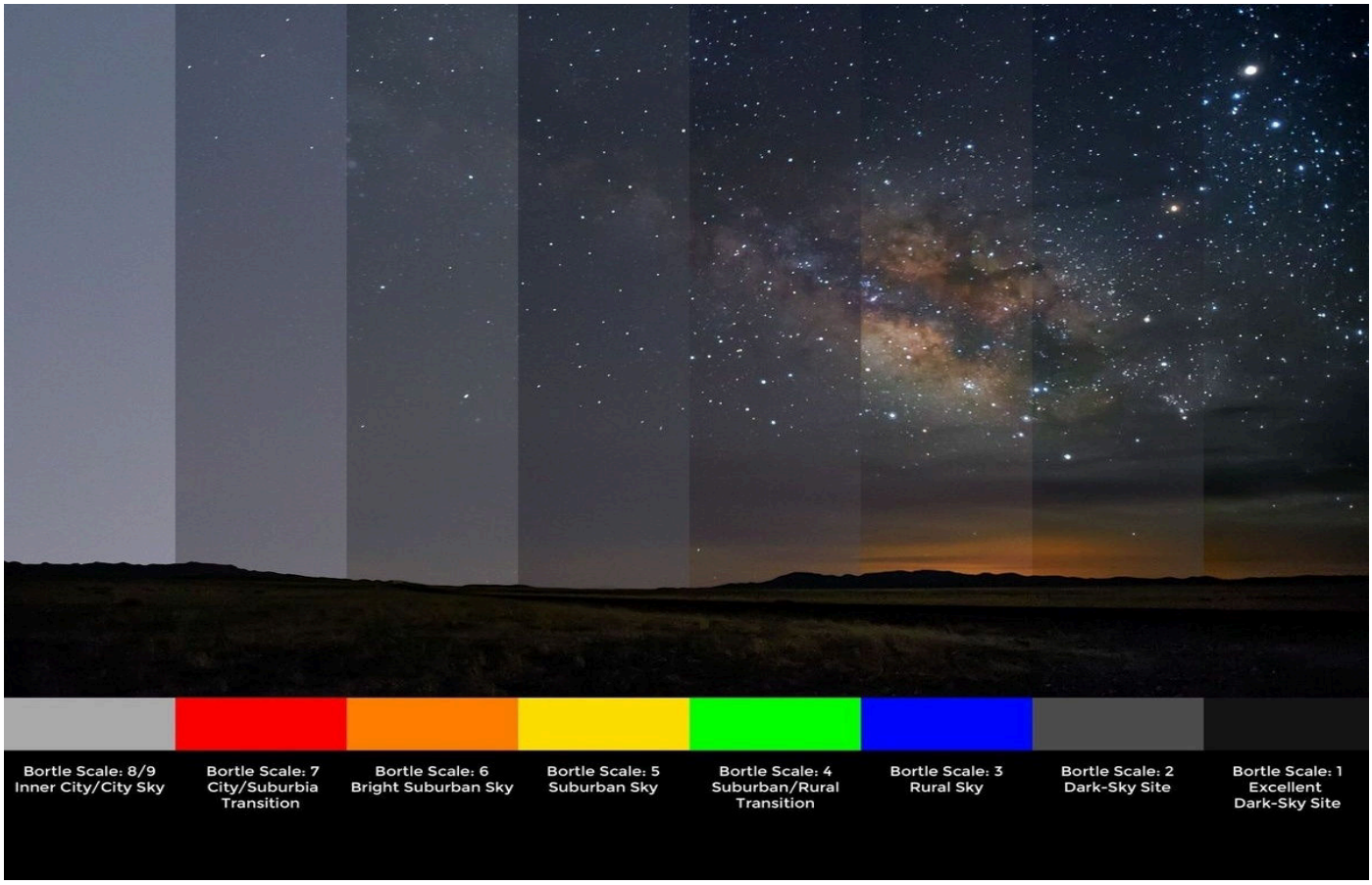
b)Setting limits to noise resulting from vehicle traffic, and prohibiting buzzers within certain areas, in addition to creating silent areas near hospitals and schools, in addition to redesigning buildings and making them noise-resistant.

c)Reducing noise penetration from the outside environment by planting trees and shrubs in front of buildings, in some areas of cities, and on roadside; Because it absorbs sound .

d) The use of walls to isolate loud sounds in the home, in addition to that, some things must be taken into account when designing homes by making corridors, kitchens, and bathrooms in noisy areas, and placing bedrooms and living rooms on the quiet side of the house.

e)Strict enforcement of laws and disciplinary measures by prohibiting the movement of trucks in old cities during certain hours, and establishing overnight stops for trucks outside the cities, in addition to restricting the entry of vehicles that cause noise.

5)Light pollution



5.1)Causes of light pollution

There are many sources that create very bright lights that can be seen from miles away, and lead to the problem of light pollution (in English: Light Pollution), and it is possible to distract drivers at night, and among the reasons leading to this type of pollution are the following:

a)Street lights at night.

b) Illuminated lights in homes.

c) The lights are turned on at night for safety reasons.

d)Corporate lights with large windows at night.

e) Shop lights lit at night to highlight the name of the store as propaganda.

f)Lights for billboards and advertisements.

g) Stadium lights and other sports sites

5.2) Light pollution solutions

Possible solutions to reduce the problem of light pollution:

a)Use of low-wattage light bulbs and install Flood Lamps over the garage for security precautions.

b) Replace lights equipped with motion sensors with unpopular lights, that is, they turn on when needed, and not illuminate unused lights.

c)Buy fixtures that cover the lamps well, which focus lighting in the place to be illuminated, and reduce light emission in every direction.

d)Turn off the lights during the day and use them only at night.

e) Install a red night light when moving around at night, to go to the refrigerator or bathroom, for example, and to make the bedroom considerably dark.

f)Encouraging individuals to follow the aforementioned things to reduce light pollution, which results in reduced cost and increased lighting efficiency.

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