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**TYPES AND GEOGRAPHICAL DIMENSIONS OF ENVIRONMENTAL PROBLEMS**

Human progression has brought many environmental problems along with it. Due to greater numbers of human beings on the planet, the level of environmental danger has risen significantly. There are countless environmental problems in today's world, but a few are more prominent than others.

Our environment is constantly changing. There is no denying that fact. However, as our environment changes, so does the need to become increasingly aware of the problems that surround it. With a massive influx of natural disasters, warming and cooling periods, different types of weather patterns and much more, people need to be aware of what types of environmental problems our planet is facing.

Global warming has become an undisputed fact about our current livelihoods; our planet is warming up and we are definitely part of the problem. However, this isn’t the only environmental problem that we should be concerned about. All across the world, people are facing a wealth of new and challenging environmental problems every day. Some of them are small and only affect a few ecosystems, but others are drastically changing the landscape of what we already know.

1. Pollution

There are 7 key types of pollution – air, water, soil, noise, radioactive, light and thermal and these are primary causes that affect our environment in many ways. All these types of pollution are interlinked and influence each other. Therefore we need to tackle all of them together.

Pollution of air, water and soil requires millions of years to recoup. Industry and motor vehicle exhaust are the number one pollutants. Heavy metals, nitrates and plastic are toxins responsible for pollution.

While water pollution is caused by oil spill, acid rain, urban runoff, air pollution is caused by various gases and toxins released by industries and factories and combustion of fossil fuels; soil pollution is majorly caused by industrial waste that deprives soil from essential nutrients.

2. Soil Degradation

Globally, food security depends on the factor whether or not soils are in good condition to produce crops. According to UN estimates, about 12 million hectares of farmland a year get seriously degraded.

Soils get damaged due to many reasons. Such reasons include erosion, overgrazing, overexposure to pollutants, monoculture planting, soil compaction, land-use conversion and many more.

Nowadays, a wide range of techniques of soil conservation and restoration exist, from no-till agriculture to crop rotation to water-retention through terrace-building.

3. Global Warming

Climate changes like global warming are the result of human practices like the emission of greenhouse gases. Global warming leads to rising temperatures of the oceans and the earth’ surface causing natural disasters that include flooding, melting of polar ice caps, rise in sea levels and also unnatural patterns of precipitation such as flash floods, hurricanes, wildfires, drought, excessive snow or desertification.

4. Overpopulation

The population of the planet is reaching unsustainable levels as it faces a shortage of resources like water, fuel and food. Population explosion in less developed and developing countries is straining the already scarce resources.

Intensive agriculture practiced to produce food damages the environment through the use of chemical fertilizer, pesticides and insecticides. Overpopulation is also one of the crucial current environmental problems.

5. Natural Resource Depletion

Another crucial current environmental problem is the depletion of Natural resources. We, humans, use so many natural resources that it would need almost 1.5 Earths to cover all our needs.

This will further increase in the future due to massive industrialization in Asian countries like India and China. Increased use of natural resources leads to a number of other environmental issues, such as industrialization, population growth and air pollution.

Over time, natural resource depletion will lead to an energy crisis. The chemicals emitted from many natural resources contribute to climate change. Fossil fuel consumption results in the emission of greenhouse gases, which is primarily responsible for global warming and climate change.

Globally, people are making efforts to shift to renewable sources of energy like solar, wind, biogas and geothermal energy. As such, the cost of installing the infrastructure and maintaining these sources has plummeted in recent years.

6. Generating Unsustainable Waste

The huge production of waste due to our hyper-consumption is a major threat to the environment. As per the study, the average person produces 4.3 pounds of waste per day, and the US alone accounting for 220 million tons a year.

This hyper-consumption results in non-biodegradable trash in the form of plastic packaging, toxic e-waste, and harmful chemicals that leach into our waterways.

When this waste ends up in landfills, it generates enormous amounts of methane, which ranks as one of the worst greenhouse gases because of its high potential for global warming. It creates severe explosion hazards.

Since modern technology allows us to access digital environments, many things that you need can be fulfilled in the cloud. Consider your purchases carefully.

7. Waste Disposal

The overconsumption of resources and the creation of plastics are creating a global crisis of waste disposal. Developed countries are notorious for producing an excessive amount of waste or garbage and dumping their waste in the oceans and less developed countries.

Nuclear waste disposal has tremendous health hazards associated with it. Plastic, fast food, packaging and cheap electronic wastes threaten the well-being of humans. Waste disposal is, therefore, one of the urgent current environmental problems.

8. Deforestation

Our forests are natural sinks of carbon dioxide and produce fresh oxygen, as well as helps in regulating temperature and rainfall. At present, forests cover 30% of the land, but every year tree cover is lost, amounting to the country of Panama due to the growing population demand for more food, shelter and cloth. Deforestation simply means clearing of green cover and make that land available for residential, industrial or commercial purposes.

9. Polar Ice Caps

The issue of the melting of polar ice caps is a contentious one. Although NASA studies have shown that the amount of ice in Antarctica is increasing, however, this increase is only one-third of what is being lost in the Arctic.

There is enough evidence that shows sea levels are rising, and the melting of Arctic ice caps is a major contributor. Over time, the melting of polar ice caps could lead to extensive flooding, contamination of drinking water and major changes in ecosystems.

10. Loss of Biodiversity

Human activity is leading to the extinction of species and habitats and loss of biodiversity. Ecosystems, which took millions of years to perfect, are in danger when any species population is decimating.

Balance of natural processes like pollination is crucial to the survival of the ecosystem, and human activity threatens the same. Another example is the destruction of coral reefs in the various oceans, which support the rich marine life.

11. Climate Change

Climate change is yet another environmental problem that has surfaced in the last couple of decades. It occurs due to the rise in global warming, which happens due to the increase in temperature of the atmosphere by burning fossil fuels and the release of harmful gases by industries.

Climate change has various harmful effects but not limited to the melting of polar ice, change in seasons, occurrence of new diseases, frequent occurrence of floods and change in overall weather scenario.

12. Ocean Acidification

It is a direct impact of excessive production of CO2. 25% of total atmospheric CO2 is produced by humans. The ocean acidity has increased by the last 250 years, but by 2100, it may shoot up by 150%. The main impact is on shellfish and plankton in the same way as human osteoporosis.

13. The Nitrogen Cycle

We often ignore the effects of the use of nitrogen by humans. Nitrogen is a crucial component of all life. Problems occur when the nitrogen cycle is not balanced.

A process through which it is converted or ‘fixed’ to a more usable form is called fixation. The fixation happens biologically and through lightning, or it can be done industrially. People have learned to convert nitrogen gas to ammonia (NH3-) and fertilizers that are nitrogen-rich to supplement the amount of nitrogen fixed naturally.

It is estimated that agriculture may be responsible for about 50% of the nitrogen fixation on earth through the cultivation of nitrogen-fixing crops and the production of human-made fertilizers. When nitrogen is used more than plant demand, it can leach from soils into waterways and contributes to eutrophication.

Excess levels of nitrogen in water can hamper marine ecosystems, through overstimulation of plant and algae growth. This blocks the light from getting into deeper waters, thus damaging the rest of the marine population.

The problem can also occur during nitrification and de-nitrification. Nitrous oxide (N2O) can be formed when the chemical process is not completed. N2O is a potent greenhouse gas contributing to global warming.

14. Ozone Layer Depletion

The ozone layer is an invisible layer of protection around the planet that protects us from the sun’s harmful rays. The depletion of the crucial Ozone layer of the atmosphere is attributed to pollution caused by Chlorine and Bromide found in Chloro-fluoro carbons (CFCs). Once these toxic gases reach the upper atmosphere, they create a hole in the ozone layer, the biggest of which is above the Antarctic.

CFCs are banned in many industries and consumer products. The ozone layer is valuable because it prevents harmful UV radiation from reaching the earth. This is one of the most important current environmental problems.

15. Acid Rain

Acid rain occurs due to the presence of certain pollutants in the atmosphere. Acid rain can be caused due to combustion of fossil fuels or erupting volcanoes or rotting vegetation which releases sulfur dioxide and nitrogen oxide into the atmosphere.

Acid rain is a known environmental problem that can have a serious effect on human health, wildlife and aquatic species.

16. Water Pollution

Clean drinking water is becoming a rare commodity. Water is becoming an economic and political issue as the human population fights for this resource.

One of the options suggested is using the process of desalinization. Industrial development is filling our rivers, seas and oceans with toxic pollutants, which are a major threat to human health.

17. Overfishing

Overfishing affects natural ecosystems severely and leads to an imbalance of ocean life. Around 63% of global fish stocks are estimated to be overfished. Overfishing caused fishing fleets to migrate to new waters that would further deplete the fish stocks.

Moreover, it has negative effects on coastal communities that rely on fishing to support their living.

18. Urban Sprawl

Urban sprawl refers to the migration of population from high-density urban areas to low-density rural areas, which results in the spreading of the city over more and more rural land.

Urban sprawl results in land degradation, increased traffic, environmental issues and health issues. The ever-growing demand for land displaces the natural environment consisting of flora and fauna, instead of being replaced.

19. Public Health Issues

The current environmental problems pose a lot of risk to the health of humans and animals. Dirty water is the biggest health risk in the world and poses a threat to the quality of life and public health.

Runoff to rivers carries with it toxins, chemicals and disease-carrying organisms. Pollutants cause respiratory diseases like Asthma and cardiac-vascular problems. High temperatures encourage the spread of infectious diseases like Dengue.

20. Genetic Engineering

Genetic modification of food using biotechnology is called genetic engineering. Genetic modification of food results in increased toxins and diseases as genes from an allergic plant can transfer to the target plant. Genetically modified crops can cause serious environmental problems as an engineered gene may prove toxic to wildlife.

Another drawback is that increased use of toxins to make insect resistant plants can cause resultant organisms to become resistant to antibiotics.

The need for change in our daily lives and the movements of our government is growing. Since so many different factors come into play, such as voting, governmental issues, the desire to stick to a routine, many people don’t consider that what they do will affect future generations.

If humans continue moving forward in such a harmful way towards the future, then there will be no future to consider. Although it’s a fact that we cannot physically stop our ozone layer from thinning (and scientists are still having trouble figuring out what is causing it exactly), there are still so many things we can do to try and put a dent in what we already know.

By raising awareness in your local community and within your families about these issues, you can help contribute to a more environmentally conscious and friendly place for you and your future generations to live.