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Knowledge for Innovation and Change

Assignment on Bangladesh Studies

ENVIRONMENT PROBLEM IN BANGLADESH

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Introduction

Environmental problems have been one of the major concerns in Bangladesh for decades. The country is located in a deltaic region, where water resources are abundant, but it is also one of the most densely populated countries in the world. As a result, Bangladesh is prone to a wide range of environmental problems that affect the health and well-being of its people, the economy, and the environment itself. In this assignment, we will discuss the environmental problems in Bangladesh, their causes, and the potential solutions.



What is Environment?

A word environment refers to all ecological units which are naturally present on earth in the form of land, water, air, soil, forest, sunlight, minerals, living organisms etc. This earth is full of natural surroundings, some are biotic and some are non-biotic. Biotic elements are those elements like human, birds, animals, plants, and microorganisms. Whereas non-biotic elements are those which have no life air, sunlight, water, land, soil, minerals etc. further it is also divided among four different spheres, biosphere, lithosphere, atmosphere and hydrosphere. In which hydrosphere is the largest part on the earth among all life on earth has become possible due to some kind of action and reactions between different kinds of resources that are present in environment.



Conditions of Bangladesh

Bangladesh is a developing country with a population of over 160 million people, making it one of the most densely populated countries in the world. The country is also located in a deltaic region, with the Bay of Bengal to its south, which makes it vulnerable to flooding, storm surges, and other natural disasters. The country is also heavily dependent on its natural resources, particularly water and fertile land, for its agricultural and economic development.

Environmental Problems in Bangladesh

Air Pollution:

Bangladesh, a country in South Asia, has long been struggling with the issue of air pollution. The country's rapid industrialization, urbanization, and population growth have all contributed to the deterioration of air quality in recent years.

One of the main sources of air pollution in Bangladesh is the transportation sector. The country's roads are congested with cars, trucks, and buses, many of which are old and emit high levels of pollutants. Additionally, the use of diesel generators for electricity generation and the burning of solid fuels for cooking and heating in rural areas contribute significantly to the country's air pollution.



The health effects of air pollution in Bangladesh are severe. According to a report by the World Health Organization, air pollution in Bangladesh is responsible for over 100,000 premature deaths every year. Respiratory diseases, heart disease, and stroke are all linked to exposure to high levels of air pollution. Children and the elderly are particularly vulnerable to the health effects of air pollution.

The Bangladeshi government has taken steps to address the issue of air pollution. The country has implemented stricter emission standards for vehicles and has launched initiatives to promote the use of clean energy sources. However, these efforts have been hampered by the country's limited resources and the lack of public awareness about the health risks of air pollution.



To tackle air pollution in Bangladesh, a comprehensive approach is needed. This includes improving public transportation infrastructure, promoting the use of electric vehicles, and increasing access to clean energy sources. It also requires the implementation of stricter regulations on industrial emissions and the enforcement of existing environmental laws.

Air pollution in Bangladesh is a major health and environmental issue that requires urgent action. The government, private sector, and civil society must work together to develop and implement effective solutions to improve air quality and protect the health of the country's citizens.

Water Pollution:

Water pollution is a significant environmental problem in Bangladesh, particularly in its major rivers, canals, and groundwater sources. Bangladesh is one of the most densely populated countries in the world, with a rapidly growing population and expanding industrialization. As a result, the country is facing severe water pollution issues that are impacting the health and well-being of its citizens.

One of the major sources of water pollution in Bangladesh is industrial waste. The country's industrial sector is rapidly expanding, and many factories do not have adequate treatment facilities for their wastewater. As a result, toxic chemicals and heavy metals are often released into the waterways, contaminating the water and threatening the health of both humans and wildlife.



Another significant source of water pollution in Bangladesh is agricultural runoff. The country is primarily an agricultural economy, and farmers frequently use pesticides and fertilizers to increase their crop yields. These chemicals often end up in nearby water sources, contaminating the water and causing health problems for those who use it for drinking or bathing.

In addition to industrial and agricultural pollution, the rapid growth of urban areas is also contributing to water pollution in Bangladesh. Many of the country's cities lack proper sanitation infrastructure, leading to the discharge of untreated sewage and waste into nearby water sources.

The impacts of water pollution in Bangladesh are severe. It has led to a range of health problems, including waterborne diseases such as cholera, typhoid, and dysentery. The

pollution has also had an impact on the country's fish stocks, which are an important source of food and income for many Bangladeshis.



Efforts are being made to address water pollution in Bangladesh. The government has implemented various policies and regulations aimed at reducing pollution levels. There are also a number of NGOs and international organizations working to improve water quality in the country, including through the implementation of better waste management practices, education and awareness-raising campaigns, and the development of cleaner technologies. However, much more needs to be done to effectively address the issue and ensure clean water for all Bangladeshis.

Deforestation:

Deforestation is a significant problem in Bangladesh, as the country has been losing its forest cover at an alarming rate due to human activities. The country's forest cover has declined from over 20% in the 1950s to less than 10% in recent years, leading to a range of environmental, social, and economic issues.

There are several reasons behind deforestation in Bangladesh, including illegal logging, slash-and-burn agriculture, urbanization, industrialization, and population growth. The conversion of forested land to agricultural land, urbanization, and infrastructure development, such as roads and highways, are major drivers of deforestation in Bangladesh.



The impacts of deforestation in Bangladesh are severe, including soil erosion, loss of biodiversity, reduced water quality, climate change, and negative impacts on the livelihoods of local communities who depend on forest resources. Deforestation also leads to the loss of

important ecosystem services, such as carbon sequestration, water regulation, and soil conservation.

The Bangladesh government has taken some measures to address the deforestation problem, such as establishing protected areas, introducing reforestation programs, and promoting sustainable forest management. However, there is a need for more concerted efforts to address the underlying causes of deforestation and ensure sustainable forest management practices in the country.

Flooding:

Bangladesh is a country that is prone to flooding, with around 80% of its land area being classified as flood-prone. The country is at the confluence of three major rivers: the Ganges, the Brahmaputra, the Jamuna and the Meghna, which makes it particularly vulnerable to flooding during monsoon season.

Floods in Bangladesh have become an almost annual occurrence, causing widespread devastation and loss of life. In recent years, the floods have been particularly severe, with many areas being submerged for weeks on end.

The causes of the flooding in Bangladesh are complex and multifaceted, but they are largely driven by climate change and deforestation. Rising global temperatures have led to more intense and prolonged rainfall, which in turn has caused the rivers to overflow their banks. Deforestation has also contributed to the problem by reducing the capacity of the land to absorb and retain water.



The effects of the flooding in Bangladesh are wide-ranging and severe. Homes, crops, and infrastructure are destroyed, leaving many people without shelter, food, or clean water. The floods also contribute to the spread of waterborne diseases, such as cholera and typhoid fever, which can be deadly.

The government and various aid organizations work to provide relief to those affected by flooding, including emergency shelter, food, and medical assistance. However, the challenges of responding to such widespread and recurring disasters are significant, and more needs to be done to help Bangladesh prepare for and mitigate the effects of future floods.

Climate Change:

Bangladesh is one of the countries most vulnerable to the impacts of climate change, as it is located in a low-lying delta region and experiences frequent flooding, cyclones, and other extreme weather events. The country is also densely populated, with over 160 million people, and many live in poverty, which exacerbates the challenges of adapting to and mitigating climate change.



Some of the impacts of climate change in Bangladesh include:

Land Degradation:

Land degradation is a serious problem in Bangladesh, as the country has limited land resources and a large population. The main causes of land degradation in Bangladesh include deforestation, erosion, overgrazing, and improper land use practices.

Deforestation has been a major problem in Bangladesh, as it has led to the loss of natural habitats and the degradation of soil quality. Erosion is also a major concern, especially in areas with high rainfall and low vegetation cover. This can lead to the loss of topsoil, which is essential for agriculture.

Overgrazing is another issue that contributes to land degradation in Bangladesh. It can lead to soil compaction, decreased soil fertility, and loss of vegetation cover. Improper land use practices such as the use of chemical fertilizers and pesticides can also contribute to soil degradation, as they can damage the soil's natural structure and reduce its ability to support plant growth.



The impacts of land degradation in Bangladesh are significant, as they can lead to reduced agricultural productivity, loss of biodiversity, and increased vulnerability to natural

disasters such as floods and landslides. To address this issue, the government of Bangladesh has implemented various policies and programs aimed at promoting sustainable land use practices and restoring degraded land. These include a forestation programs, promotion of organic farming, and the implementation of erosion control measures.

Land degradation is a significant problem in Bangladesh that requires urgent attention. The government, civil society organizations, and individuals must work together to address this issue and promote sustainable land use practices to ensure the long-term productivity and health of the country's land resources.

Effects of environmental problems in Bangladesh

Acid/Freezing Rain :

Acid rain is a form of precipitation that has a high concentration of sulfuric and nitric acid. It is caused by the release of pollutants, such as sulfur dioxide and nitrogen oxides, into the atmosphere from human activities like burning fossil fuels. Acid rain can have harmful effects on ecosystems, including the acidification of lakes and rivers, which can lead to the death of fish and other aquatic life. It can also damage forests and crops, and contribute to respiratory problems in humans. Freezing rain, on the other hand, is a type of precipitation that falls as liquid rain but freezes upon contact with the ground or other surfaces that are at or below freezing temperatures. Both acid rain and freezing rain are caused by human activities and can have negative impacts on the environment.

Several health problem :

1. **Waterborne Diseases:** Water pollution can lead to waterborne diseases such as cholera, typhoid fever, and dysentery. Exposure to contaminated water sources can cause these diseases, which can be life-threatening.
2. **Skin Problems:** Exposure to harmful chemicals and pollutants in the environment can lead to skin problems such as dermatitis, eczema, and skin cancer.
3. **Heat-related Illnesses:** Climate change and heat waves can lead to heat-related illnesses such as heat exhaustion and heat stroke, especially among vulnerable populations like the elderly and young children.
4. **Vector-borne Diseases:** Environmental problems such as deforestation and urbanization can lead to the proliferation of vector-borne diseases such as dengue fever and malaria. These diseases are transmitted by mosquitoes and can be life-threatening.

Changing the property in Agriculture :

1. Conservation Agriculture: Conservation agriculture is a farming system that promotes minimum soil disturbance, crop rotations, and cover cropping to improve soil health and reduce erosion. This can help prevent soil degradation and reduce greenhouse gas emissions from agriculture.
2. Organic Agriculture: Organic agriculture uses natural methods for pest and weed control and avoids synthetic fertilizers and pesticides. This can help reduce water pollution and soil degradation, and promote biodiversity.
3. Precision Agriculture: Precision agriculture uses technology, such as sensors and GPS, to optimize crop yields while reducing inputs like water, fertilizer, and pesticides. This can help reduce greenhouse gas emissions and water pollution from agriculture.

Rising sea levels of Cox's Bazar :

1. Saltwater Intrusion: As sea levels rise, saltwater can intrude into freshwater aquifers, contaminating drinking water sources and affecting agricultural production.
2. Flooding: Rising sea levels can also cause flooding in low-lying areas, which can lead to property damage, displacement of people, and loss of life.
3. Tourism Impacts: The tourism industry in Cox's Bazar could be negatively impacted by rising sea levels and the associated environmental problems, leading to a decline in the economy and livelihoods.

Ways to protect the environment

1. Reduce, Reuse, and Recycle: One of the most effective ways to protect the environment is to reduce waste by consuming less, reusing items when possible, and recycling materials like paper, plastics, and glass.
2. Conserve Water: We can conserve water by taking shorter showers, fixing leaks, using water-efficient appliances, and reducing water usage in landscaping.
3. Plant Trees: Trees absorb carbon dioxide from the atmosphere, which can help mitigate the impacts of climate change. Planting trees and supporting reforestation efforts can help protect the environment.
4. Reduce Chemical Usage: We can reduce chemical usage by using natural cleaning products, avoiding harmful chemicals in personal care products, and using natural pest control methods.

5. Practice Sustainable Transportation: We can reduce our carbon footprint by using public transportation, biking or walking instead of driving, and using fuel-efficient vehicles.
6. Reduce Meat Consumption: Reducing our meat consumption can reduce the environmental impact of animal agriculture, which is a significant contributor to greenhouse gas emissions and deforestation.

Conclusion

These environmental problems are exacerbated by a growing population, rapid urbanization, and industrialization. However, there are efforts underway to address these environmental problems, including promoting sustainable agriculture, conservation efforts, clean energy adoption, and reducing waste and pollution. It is important that the government, private sector, and civil society work together to prioritize environmental protection and sustainability. By implementing policies and practices that promote sustainability, investing in clean technologies, and promoting public awareness about environmental issues, Bangladesh can mitigate the impacts of environmental problems and ensure a more sustainable future for its people.