Raniganj Girls College

Subject – Environmental Pollution

Name – Twinkle Kumari

Class - 1ST Semester

Registration No. – 113211110249

Roll No – 586

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A Project Report

Submitted by Semester-I students (Academic Year 2021-22)

Name of the student	Registration Number
Fatima Khatoon	111311110216
Poonam Kumari Singh	111311110217
Suman Yadav	111311110232
Priti Mondal	111311110234
Babita Yadav	111311110238
Anjali Bishwakarma	111311110239
Twinkle Kumari	111311110249
Sangita Paswan	111311110250
Tannu shaw	111311110259
Twinkle KM Rai	111311110272
Roshni Thakur	111311110280
Guriya Kumari	111311110283
Rakhi Kumari Nahak	111311110288
Dulari Kumari	111311110025
Lakhi Marandi	111311110075
Amrita Bauri	111311110080
Riya Bagdi	111311110081
Anushree Gope	111311110096
Sarathi Mondal	111311110098
Riya Sangui	111311110099
Sanju Kumari	111311110102
Laxmi Kumari	111311110106
Monika Bhakat	111311110109
Khusboo Khatoon	111311110121
Rani Hazra	111311110124
Sangeeta Dhibar	111311110126

CERTIFICATE

This is to certify that this project titled "Air pollution" and "Water pollution" submitted by the students for the award of degree of B.A. Honours/ Program is a bonafide record of work carried out under my guidance and supervision.

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Rani Hazra	111311110124
Sangeeta Dhibar	111311110126

Place: Raniganj

Date: 21.03.2022

Assistant Professor, Department of Microbiology

Signature of the supervisor with designation and department

Contents

Pollution Introduction

Pollution is the introduction of contaminants into the natural environment that causes adverse change. Pollution can take the form of any substance (solid, liquid, or gas) or energy (such as radioactivity, heat, sound, or light). Pollutants, the components of pollution, can be either foreign substances/energies or naturally occurring contaminants. Although environmental pollution can be caused by natural events, the word pollution generally implies that the contaminants have an anthropogenic source — that is, a source created by human activities. Pollution is often classed as point source or nonpoint source pollution. In 2015, pollution killed 9 million people worldwide.

Forms of Pollution

- Air pollution: the release of chemicals and particulates into the atmosphere. Common gaseous pollutants include carbon monoxide, sulphur dioxide, chlorofluorocarbons (CFCs) and nitrogen oxides produced by industry and motor vehicles. Photochemical ozone and smog are created as nitrogen oxides and hydrocarbons react to sunlight.

- Electromagnetic pollution: the overabundance of electromagnetic radiation in their non-ionizing form, like radio waves, etc, that people are constantly exposed at, especially in large cities. It's still unknown whether or not those types of radiation have any effects on human health, though.

- Noise pollution: which encompasses roadway noise, aircraft noise, industrial noise as well as high-intensity sonar.

- Plastic pollution: involves the accumulation of plastic products and micro plastics in the environment that adversely affects wildlife, wildlife habitat, or humans.

- Thermal pollution, is a temperature change in natural water bodies caused by human influence, such as use of water as coolant in a power plant.

- Visual pollution, which can refer to the presence of overhead power lines, motorway billboards, scarred landforms (as from strip mining), open storage of trash, municipal solid waste or space debris.

- Water pollution, by the discharge of industrial wastewater from commercial and industrial waste (intentionally or through spills) into surface waters; discharges of untreated sewage, and chemical contaminants, such as chlorine, from treated sewage; release of waste and contaminants into surface runoff flowing to surface waters (including urban runoff and agricultural runoff, which may contain chemical fertilizers and pesticides; also including human faces from open defecation – still a major problem in many developing countries); groundwater pollution from waste disposal and leaching into the ground, including from pit latrines and septic tanks; eutrophication and littering.

Pollution Abstracts

Pollution abstract is an index of scholarship, research, and government policies on all types of global pollution, including air, freshwater, land, marine, and noise pollution. It also covers sewage and wastewater treatment, waste management. Radioactive material, and toxic emissions. It also includes materials on the effects of pollution on living organisms and environmental action in response to global pollution. A wide variety of material types are indexed, such as journals, conference proceedings, books, government reports, and gray literature.

Aims and Objectives:

Environmental pollution influences both soil and agriculture which are the two facets of valuable resource necessary for our sustenance. For agriculture, soil is generally assumed as an inexhaustible resource, which is used and overused continually for increasing production. The soil today has virtually become lifeless in many places with increasing development & industrialization. Soil, microflora, fauna, nutrients and associated habitat has the potential to influence the soil ecosystem, agriculture, environment and economy in one go. Soil and its living organisms are an integral part of agricultural ecosystems and environment, playing a critical role in maintaining soil health, ecosystem functions and productivity. They range from the myriad of invisible microbes, bacteria and fungi to the more familiar macro-fauna such as earthworms and termites. Plant roots can also be considered as soil organisms in view of their symbiotic relationships and interactions with other soil components. These diverse organisms interact with one another and with the various plants and animals in the ecosystem, forming a complex web of biological activity.

The rapid pace of industrialization has made this soil ecosystem, one of the worst hit victims. The development process has ushered in the challenges of soil contamination,

microbial and biodiversity loss. Current growth patterns are reflecting on the very productivity of our agricultural soils. It is time to recognize that the economic and social development depends on the protection of the environment and reduction of the human impact. Environmental problems, which may have global impacts, are complex and often interrelated with socio-economic factors. Problems of soil contamination, pollution and degradation, loss of biodiversity do not recognize political borders and pose major threats to human safety, health and productivity. The need to take actions to sustain soil and its immediate environment becomes pressing and challenging task in today's environment. One of the important dimensions of the efforts for environmental protection is raising public awareness and participation. The conference aims to provide a platform to deliberate on concerns on soil toxicology, soil contamination, soil management, technologies and impacts on human health and our approaches to answer these challenges. The deliberations are expected to provide an understanding of the complex interplay of soil, agriculture, and the environment with the underlying concept that soil is elixir of life and is one of the five components of earth, water, fire, air and space, essential to our existence.

Observing

Pollution is something we all consider as an un-natural and unfortunate component introduced since the Industrial Revolution. Urbanisation has lead to an increase in air pollution, mainly in the cities. The particles that make up the pollution form a visible haze. A thick pollution haze exists in some cities and is known as smog. It is a dark grey or brown in colour. It occurs in the lower layers of the atmosphere usually within a few hundred metres. Pollution hazes occur more often when the synoptic charts show a high pressure system directly overhead. An inversion occurs under these conditions trapping the pollution. Light winds mean the pollution will persist. During windy weather, the pollution is dispersed and cleared away. Moderate to heavy rain over few day period also can clear the pollution.

Conclusion

In a nutshell, every kind of pollution leaves a huge negative impact on our environment, human lives, animals etc. We, as responsible citizens, must take steps towards a better tomorrow. We must join hands to take various initiatives and fight against this problem. A lot of innocent lives are put in danger due to pollution every day. If we don't do anything from now on or take a stand to make the earth pollution-free, then the doomsday will be upon us very soon.

Acknowledgement

I would like to express my special thanks of gratitude to my teacher (Geetanjali) as well as our principal ( )who gave me the golden opportunity to do this wonderful project on the topic (Pollution), which also helped me in doing a lot of Research and i came to know about so many new things

I am really thankful to them.

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I am making this project not only for marks but to also increase my knowledge.

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