

RANJANG GIRLS COLLEGE



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Topic of the project: "Air pollution" and "Water pollution"

A Project Report

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

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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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Date: 21.03.2022



Assistant Professor, Department of Microbiology

Signature of the supervisor with designation and department

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INTRODUCTION

Water pollution is the contamination of water bodies, usually as a result of human activities, water bodies, include for example lakes, rivers, oceans, aquifers and groundwater. Water pollution results when contaminants are introduced into the natural environment. For example, releasing inadequately treated wastewater into natural water bodies can lead to degradation of aquatic ecosystems. In turn, this can lead to public health problems for people living downstream. They may use the same polluted river water for drinking or bathing or irrigation. Water pollution is the leading world wide cause of death and disease, e.g. due to water-borne diseases.

Such pollution is a major source of death and disease worldwide, especially in developing nations. Even in wealthier nations where piped water supplies mean that water pollution

Poses fewer direct threats to human health
many lakes and rivers are polluted.

Examples of water pollution include, chemical or oil spills, industrial waste, fertilizers and pesticides that run off agricultural land into rivers, sewage that enters rivers and seas, heavy metals that leach out of the ground, or plastics that degrade in water.

DEFINITION

Water pollution is the release of substances into bodies of water that makes water unsafe for human use and disrupts aquatic ecosystems. Water pollution can be caused by a plethora of different contaminants, including toxic waste, petroleum, and disease-causing microorganisms. Natural phenomena such as volcanoes, algae blooms, storms and earthquakes also cause major changes in water quality and the ecological status of water.

TYPES OF WATER POLLUTION

Water contamination is categorized based on the source or the nature of the water body it affects. Some of the most common pollution types are :-

A. SURFACE WATER POLLUTION

Surface water includes water that is found naturally on the earth's surface. They include lagoons, rivers, oceans and lakes. Contamination of such water features results from the dissolving or mixing of the water with pollution. It can be accidental, such as oil spills in the ocean or intentional, like industries eliminating their wastes into rivers or sea.

B. GROUNDWATER POLLUTION

It occurs when the hazardous chemicals and particles applied on the surface by humans seep into the ground by rainwater

The contaminants pollute underground water features such as underground rivers and water-beds. As a result wells and boreholes might become contaminated. The most common cause of this type of pollution is the use of pesticides and fertiliser on farms.

c. MARINE POLLUTION

Marine pollution is a combination of chemicals and trash, most of which comes from land sources and is washed or blown into the ocean. This pollution results in damage to the environment to the health of all organisms and to economic structures.

Large gyres in the oceans trap floating plastic debris. Plastic debris can absorb toxic chemicals from ocean pollution, potentially poisoning any creature that eats it. Many of these long-lasting pieces end up in

the stomachs of marine birds and animals. This results in obstruction of digestive pathways, which leads to reduced appetite or even starvation.

D. NUTRIENTS POLLUTION

Even though nutrients are essential for plant and aquatic life, an excess of it is dangerous. Wastewater and fertilizers have a high content of nutrients required for plant growth, consequently, they cause rapid and uncontrolled growth of vegetation and algae on the water surface when they end up in the water.

SOURCES OF WATER POLLUTION

Surface water and groundwater have often been studied and managed as separate resources even though they are interrelated. Surface water seeps through the soil and become groundwater. Conversely, groundwater can also feed surface water sources. Sources of surface water pollution are generally grouped into two categories based on their origin.

- i) Point sources
- ii) Non point sources

Point sources

Point source water pollution refers to contaminants that enter a waterway from a single identifiable source such as a pipe or ditch. Examples of sources in this category include

discharges from a sewage treatment plant
a factory, or a city storm drain.

Non-point sources

Nonpoint source pollution refers to diffuse contamination that does not originate from a single discrete source. This type of pollution is often the cumulative effect of small amounts of contaminants gathered from a large area. A common example is the leaching out of nitrogen compounds from fertilized agricultural lands.

CAUSES OF WATER POLLUTION

1. Industrial Waste

Industrial produce a tremendous amount of waste, which contains toxic chemicals and pollutants, causing air pollution and damage to our environment and us. They contain harmful chemicals, including lead, mercury, sulfur nitrates, asbestos, and many others.

Many industries, not having a proper waste management system, drain the waste in the freshwater which goes into canals, rivers and later into the sea.

The toxic chemicals may change the color of water, increase the number of minerals, called eutrophication change the temperature of the water, and pose a severe hazard to water organisms.

EFFECTS OF WATER POLLUTION

Pollution of water affects both humans and aquatic life. Most water sources close to cities and urban centers are polluted by garbage and dumping of chemicals, legally or illegally. Below are some of the common as well as adverse effects of polluting water bodies.

EFFECTS ON HUMAN BEINGS

Life is a cycle, and humanity's irresponsible behaviour often comes back to haunt it.

We all drink water that comes from a source this may be a lake or local river. In countries that have poor screening and purification practices, people often get water borne disease outbreaks such as cholera and Tuberculosis. Every year, there are an estimated 3-5 million cholera cases and 100,000-120,000

deaths due to cholera. (WHO estimates that only 5-10% of cases are officially reported) in developed countries, even where there are ~~brother~~ better purification methods, people still suffer from the health effects of water pollution. In 2019, it stated that 785 million people lack access to essential drinking water. Adding contaminants to water bodies has affected the human family in several ways.

Cleaning Chemicals

Similar to oils, cleaning chemicals are hazardous when they enter the water supply. If you are emptying containers of household cleaning supplies, do it in the trash can, not in the sink.

CONCLUSION

Water is an essential natural resource for the life of all living things. Any irresponsible behaviour in the part of humanity affects all the other beneficiaries consequently. there is a need to protect water bodies from deliberate pollution. Human contribution to water pollution is enormous by way of defecating, dumping of refuse, industrial wastes and washing of clothes etc. (Egilabor 1998) apparently, environmental education is of immense importance to use particularly in schools and should have a place in the school curriculum in this way they will be less inclined to pollute our waters.

Awareness is the most important things. public awareness can lead to the evolution of social life.

REFERENCE

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IMPORTANCE OF THE PROJECT

- 1) Time Management: It estimates the time required for a project to finish through the time management plan.
- 2) Achievement of Strategic goals: your time future Every successful project delivers organization and helps it to accomplish its Strategic goals.
- 3) Identifies Risk: It is always better to have an insight about the possible financial Social Physical etc.
- 4) Innovation: Project planning may encourage creativity or innovation.
- 5) Motivation: Project planning may motivate employees. Due to project planning, the company may achieve higher performance.

PLAN OF WORK

After deciding on the composition of the project. I discussed the matter with our college teacher Greetanjali ma'am then we took various plans for the implementation of the project.

For example :-

(1) With the help of the textbook she had planned various phase of the project.

(2) I have tried to gather information's about the reasons why the level of the water pollution has increased at some point.

(3) Along with the bad aspects of pollution during the implementation of the project. I have also discussed prevention.

from this project so that anyone can gain some overall knowledge.

ACKNOWLEDGEMENT

I would like to express my gratitude towards Greetanjali ma'am for guiding me throughout the project. I also feel thankful and express my kind gratitude towards our Principal for allowing me to conduct Water Pollution project.

I thank all participants for their positive Support and guidance.

I feel thankful to the college staff for giving me such a big opportunity. I believe I will enroll in more such events in the coming future. I ensure that this project was done by me and is not copied.

Date - 7/3/2022

Shrijoyee Dutta