Raniganj Girl's College

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1st Semester History Honours

EVS Project

Raniganj Girls' College

Course Name: Environment Studies

Course Code: AEE101

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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Place: Raniganj

Date: 21.03.2022

Assistant Professor, Department of Microbiology

Signature of the supervisor with designation and department

INTRODUCTION

The problem of air pollution has been in existence for quite a long time. Early references to it date

back to the Middle Ages, when smoke from burning coal was already sach a serious problem that in

1307 King Edward I burned its use in lime kilns in London. More recently, there have been major episodes of air pollution, such as the 1930 catastrophe in the Meuse Valley, Belgium, where sulfur dinside and particulate matter, combined with a high relative humidity, caused 63 excess deaths in 3 days. In 1948, similar conditions in a small industrial city in Donora. Pennsylvania, caused 20 excess deaths in 5 days Details of some ait pollution episodes are described in the literature (1.2) The problems of air pollution in Los Angles, New York City, and Chicago, d…

during the 1950s, drew attention of regulates in the United States Conventional pollutants due to auts emissions and smake stacks were the major thrusts of air pollution during the 1960s and 1970s. Invisible emissions of tode pollutants were recognized in the late 1970s. The attention also turned to acid rain as a trans-boundary problem following the observations of dying forests in Germany and lake acidification in Scandinavian countries. In the early 1980s, scientists observed a slowdown in growth of red spruce in the mountain

areas of north-eastern United States during the 1960s as a result of acid rain. Other problems such as

emissions from small sources, area sources, fugitive emissions, and carbon dioxide production from

combustion came to light as potential pollution problems

Global warming is another international issue being debated by scientistsandpoliticians.Theriseinglobalaveragetemperaturesisngrelatedin theincreaseinconcentrationofcarbondioxideandotheatmosphere.Thisisdue toburningoffossilfuels, theproductionafchlarbons, deforestation, and other forces. The US. Environmental Protections Agency

(EPA) introduced Clean Power Plan in 2015 along with other initiatives to deal with the potential

ABSTRACT

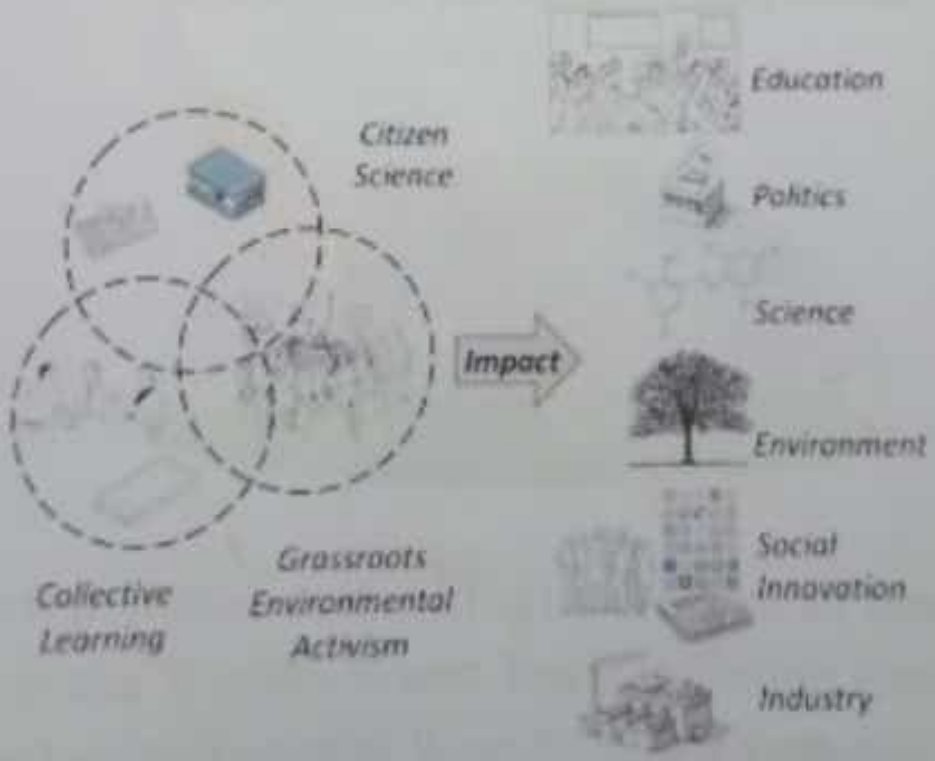
Air pollution occurs when gases, dust particles, fumes (or smoke) or odour are introduced into the atmosphere in a way that makes it harmful to humans animals and plant. Air pollution threatens the health of humans and other living beings in our planet. It creates smog and acid rain causes cancer and respiratory diseases, roduces the ozone layer atmosphere and contributes to global warming.

In this industrial age, air pollution cannot be eliminated completely, but steps can be taken to reduce it. The government has developed, and continues to develop, guidelines for air quality and ordinances to restrict emissions in an effort to control air pollution. On an individual level, we can reduce our contribution to the pollution problem by carpooling or using public transportation. Additionally, buying energy-efficient light bulbs and appliances or otherwise reducing our electricity use will reduce the pollutants released in the production of electricity, which creates the majority of industrial air pollution.

AIM OF WORK

Aim of work: To measure air pollution according to the plurality and composition of lichens' species.

Hypothesis: The level of air pollution is bigger near the objects which pollute the environment greatly (roads, factories, houses etc.).



OBSERVATIONS / RESULT

Air pollution is the introduction into the atmosphere of chemicals, particulates, or biological materials that cause discomfort, disease, or death to humans, damage other living organisms such as food crops, or damage thenatural environment or built environment. The atmosphere is a complex dynamic natural gaseous system that is essential to support life on planet Earth. Stratospheric ozone depletion due to air pollution has long been recognized as a threat to human health as well as to the Earth's ecosystems.

Indoor air pollution (see Airlog) and urban air quality arelisted as two of the World's Worst Toxic Pollution Problems in the 2008 Blacksmith Institute World's Worst Polluted Places report. Air pollution control procedures are increasingly an important part of civic administration, although their goals are far from easy to achieve. It is also noticeable that although many urban concentrations ofprimary pollutants, for example, smoke and sulfur dioxide, are on the decline in developed countries, this is not always true in developing countries.

CONCLUSION/COMMENT

The Committee reviewed the current status of epidemiologic research on air pollution in the United States. It sought to identify the types of epidemiologic activities that could feasibly be applied to determine the size and nature of the health risks of air pollution, given current magnitudes and patterns. It observed that new approaches will be needed to quantify adverse health effects associated with low concentrations of air pollutants and to separate the impacts of individual pollutants more effectively.

The Committee concluded that efforts to specify current and future research questions have been insufficient and that additional investment is needed in research on and development of appropriate investigative tools. It expects the development of new techniques and strategies to make it possible to overcome some of the barriers to the application of epidemiologic approaches. The Committee also concluded that many previous studies had generally failed to recognize the complexity of air pollution research and to integrate all the relevant sciences, including epidemiology, into coherent research plans and programs.

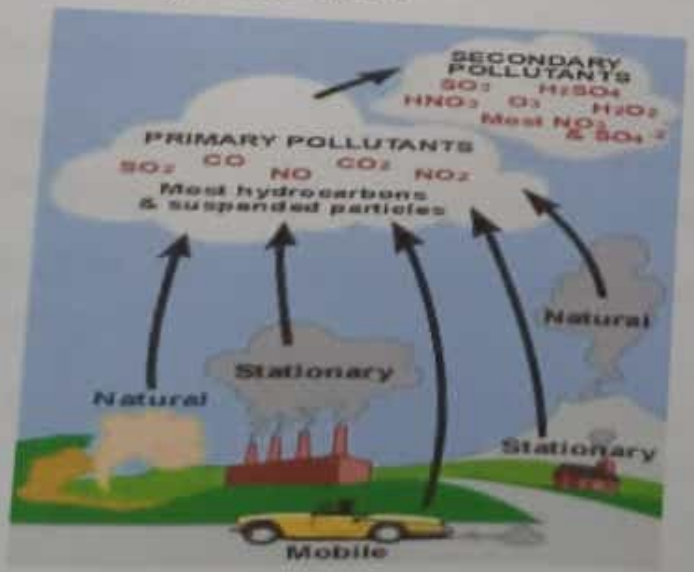
The Committee finds that current air pollution can cause acute and perhaps chronic health effects, particularly respiratory effects, in the population of the United States. Respiratory disease is a major cause of work loss a disability. Even though exposure to some major types of pollution has decreased substantially in the last 15 years, exposure to other types has persisted. Improvement has not been uniform in all parts of the country, and some new patterns of air pollution are

ACKNOWLEDGEMENTS

The rapid development of cities and consequent population explosion in urban areas has led to depletion of surface water resources. For fulfillment of daily water requirement, indiscriminate pumping of ground water is being resorted to, leading to lowering of ground water table. At the same time the rain water is not being conserved which ultimately goes waste. To avoid this imbalance, conservation of rain water in the form of rain water harvesting is the only solution.

Rain water harvesting can be effectively implemented in our office and residential complexes for conservation of rain water. The subject has assumed lot of significance in the present scenario. This has been included in Indian Railway Works Manual 2000 vide correction slip no. 10 dated 17.02.05 also. This publication is an attempt to compile all the relevant information regarding various methods commonly in use. These methods can be used by field engineers for designing and implementing Rain Water Harvesting systems.

Efforts have been made to make the book more useful for the field engineers. In this effort, the IRICEN staff and faculty have contributed immensely, notably among them are Mrs. Gayatri Nayak and Shri Sunil Pophale. I am particularly thankful to Shri N.C.Sharda, Senior Professor/Works for his valuable suggestions and proof checking and Shri Praveen Kumar, Professor/Computers for providing logistic assistance for printing of the book.



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Releasing India-specific data, the Global Burden of Disease (GBD) warned that outdoor air pollution caused 627,000 deaths and 17.7 million healthy years of life lost in 2010.A substantial rise in car- diovascular diseases, strokes and chronicobstructive pulmonary diseases in India in 2010 are directly attributed to rising levels of particulate matter pollution.Two-thirds of the rising disease graph worldwide are found in South Asia.

Dr Vinod Raina, heading the oncology wing at AIIMS, confirmed that "we are getting 10 lakh new Pollution cancer cases every year, out of which approximate-ly one lakh are lung cancer these lung cancer cases are pollution-related".Dr Aaron Cohen, princi- pal scientist, Health Effects Institute, Boston,

and chair of the Air Group at Institute for Health Metrics and Evaluation for Global Burden of Disease, smokers had shown a 60 per cent increase caused by air pollution.Prof. S.K. Chhabra, head- "Women in the Gujjar WHO and Harvard ing the department of car-dio-respiratory physiology incidence of cancer caused at the Vallabhbhai Patel by indoor air pollution." Chest Institute, warned Prof. Guleria explained. against the risk from new generation pollutants, especially ozone which is currently responsible for a four per cent increase in mortality rates.

The India-related data. was calculated from the largest global database ever assembled using India-specific levels of baseline mortality and incidence of five leading causes of death in India and was released at a Prof. Randeep Guleria, workshop organised by"Ozone has become a key ingredient of urban smog," said Prof. Chhabra.head, pulmonary unit, ICMR and CSE. AIIMS, highlighted how killer amongst women using biomass for their cooking requirements. community suffer high University.

Worldwide, outdoor air pollution caused 3.2 mil- cases. We still have to pointed out that a study of indoor air pollution had duced by a rigorous scien lion premature deaths and quantify how many of lung cancer amongst non- emerged as another major tific process involving 150 over 74 million years of healthy