

ENVIRONMENTAL POLLUTION: A THREAT FOR SOCIETY AND SURVIVABILITY OF CIVILIZATION

Nidhi Verma¹, Priyanka Singh² and
Abhishek Kumar³

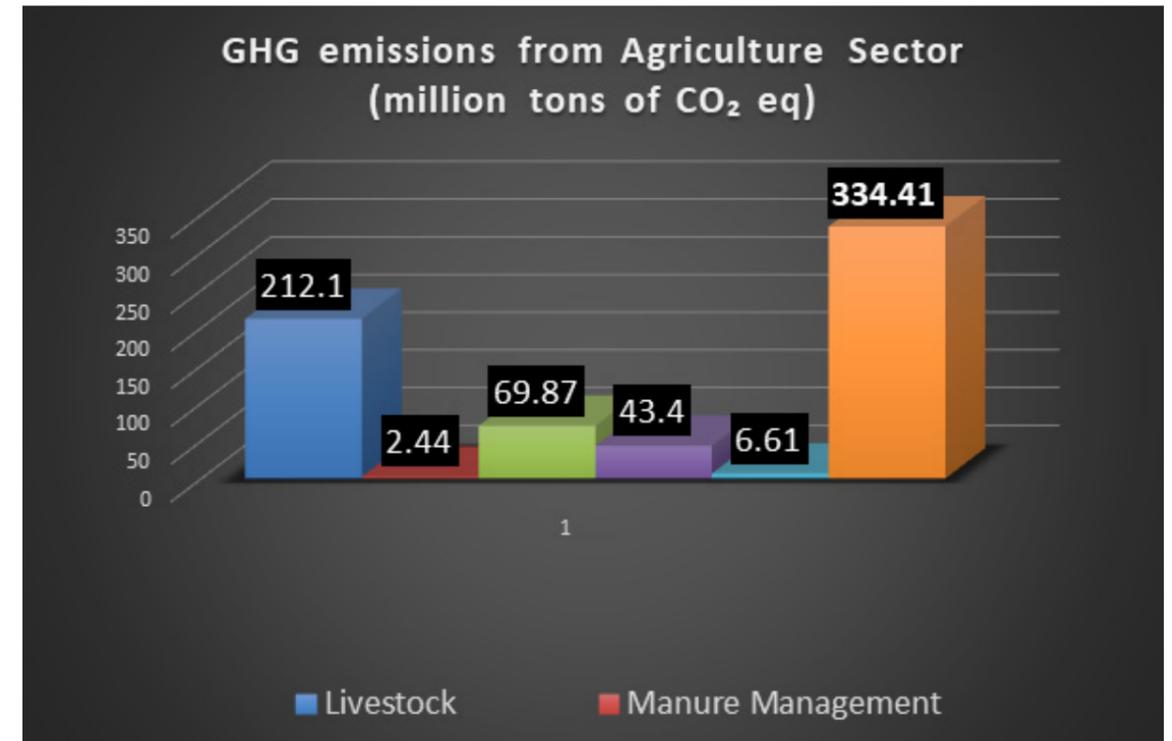
¹M.V.Sc., ANDUAT, Kumarganj- Ayodhya

²B.V.Sc., SVPUAT, Meerut

³M.V.Sc, SVPUAT, Meerut

BACKGROUND:

Health & happiness index of any society refluxed through quality of environment or ecosystem where the livestock or human being resides. Overall healthy ecosystem in the sense of water, soil, noise and air quality influences the life expectancy and productivity. Since last few decades, the overall quality parameters got deteriorated. Such drastic consequences are mainly due to urbanization, industrialization, adversely changing lifestyle. Imbalanced ecosystem, various newer etiological agents of diseases such as COVID-19 (catastrophic pandemic of sanctuary), compromised life expectancy etc are all due to adversely changing climatic scenario.



Among various categories of pollution, air pollution which can be explained as an “alteration of air quality that can be characterized by measurement of chemical, biological or physical pollutants in the air”. Man is at least partially at fault for most of the world’s major air pollutants. Carbon dioxide is one of the most highly prevalent, comes from the combustion or burning of fossil fuels and other organic materials, whose concentrate in the environment drastically influenced over the last decade.

AGENTS BEHIND AIR POLLUTION

Air pollution is caused by the presence of toxic substances in atmosphere, such toxic substance/ pollutants mainly produced by human activities, even though sometimes it can result from natural phenomena such as volcanic eruptions, dust storms, livestock and wildfire also depleting the air quality.

Major Greenhouse Gas (Air pollutant) and its contribution in atmosphere

Gas	Current Conc. (ppm)	Rate of increase (%/yr)	Half Life (yr)	GHG Contribution (%)
CO ₂	391	0.5	150	55 – 60
CH ₄	1.8	0.7	7-10	15 – 20
N ₂ O	0.32	0.2	150	5

ANTHROPOGENIC AIR POLLUTION SOURCES

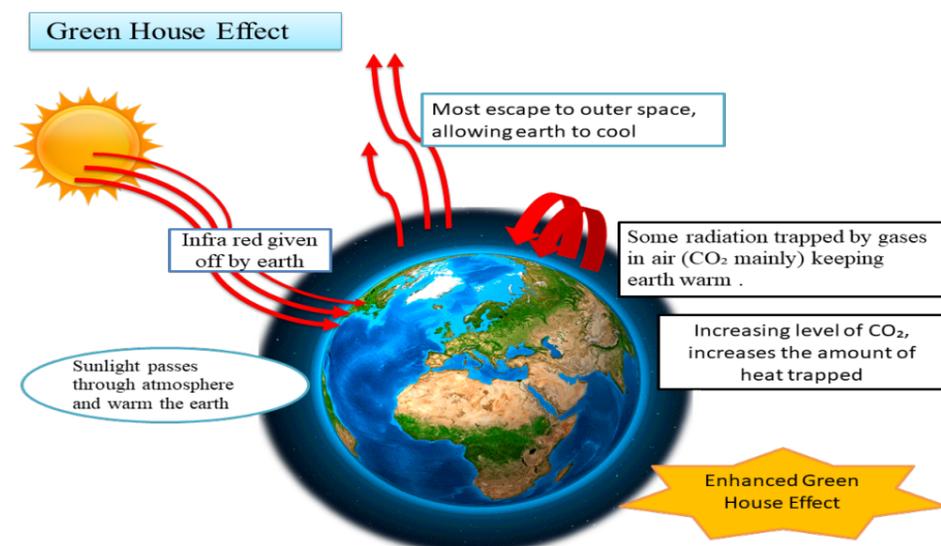
Manmade air pollutants are also witnessed as the key contributors of air pollution in below mentioned manner

- A. Combustion of fossil fuels, like coal and oil for electricity and road transport, producing hazardous air pollutants like nitrogen and sulphur dioxide etc.
- B. Emission from industries and factories, releasing large amount of carbon dioxide, hydrocarbon chemicals and organic compounds into the air.
- C. Agricultural activities such as use of pesticide and insecticides and fertilizers that emit harmful chemical.
- D. Waste production, mostly because of methane generation in landfills.

IMPACTS OF AIR POLLUTION ON ENVIRONMENT

Air pollution has a major impact on the process of plant evaluation by preventing photosynthesis in many cases, with serious consequences for the purification of the air that we breathe. It also contributes to the formation of acid rain, atmospheric precipitation in the form of rain, frost, snow, fog, which are released during the combustion of fossil fuels and transformed by contact with water stream in the atmosphere.

IMPACTS OF AIR POLLUTION ON GLOBAL WARMING



The abundance of carbon dioxide in the air is one of the causes of greenhouse effect. Normally the presence of greenhouse gases should be beneficial for the planet because they absorb the infrared radiation produced by the surface of the earth. But the excessive concentration of these gases in the atmosphere is the cause of recent climate change.

IMPACTS OF AIR POLLUTION ON HUMAN HEALTH

Our continual exposure to air pollutants is responsible for the deterioration of human health. Air pollution is indeed a significant risk factor for human health condition, causing allergies, respiratory and cardiovascular disease as well as damage.

PREVENTIVE MEASURES AGAINST AIR POLLUTION:

A. Renewable fuel and clean energy production

The most basic solution of air pollution is to move away from fossil fuels, replacing them with alternative energies like solar, wind and geothermal.

B. Energy conservation and efficiency

Producing clean energy is crucial. But equally Important is to reduce our consumption of energy by adopting responsible habits and using more efficient device.

C. Ecofriendly transportation

Shifting to electricals vehicals and hydrogen vehicles and promoting shared mobility [i.e. car pooling, and pooling transports] could reduce air pollution.

D. Green building

From planning to demolition, green building aims to create environmently responsible and resource efficient structure to reduce their carbon footprint.

CONCLUSION

Present survival and future expectancy of living creation on earth is solely depends upon healthy environment in overall considerable senses. Earlier life was slow and less adventurous. However, its expectancy, happiness index, health status was far better than us. Due to modernization, lots of options elaborated to sustain our life in better way. But side by side health and life expectancy got drastically declined. Thus, to sustain the life on earth and for well being of coming generations, its solely our responsibility to save our environment.