



## ENVIRONMENTAL POLLUTION

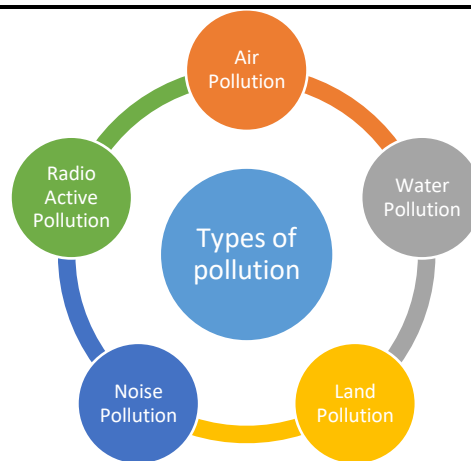
Environmental pollution is one of the most serious global challenges. Wild-type organisms have a slower degradation rate of hazardous materials. Currently, advanced molecular biology tools along with conventional approaches allow us to rapidly degrade or accumulate hazardous materials from environments. Environmental pollution is the unfavorable alteration of our surroundings, wholly or largely as a byproduct of man's actions, through direct or indirect effects of the changes in the energy pattern, radiation levels, and chemical and physical constitution and abundance of organisms. Environmental pollution is associated with adverse health effects experienced or measured in the short or long term, that clinically may be described as either acute or chronic. Usually acute effects follow sudden and severe exposure and rapid absorption of the substance. On the contrary, chronic effects may not be immediately observed and follow prolonged or repeated exposures over more or less relatively long periods.

### Pollutant:-

Pollutant is any substance already present in environment or a new substance whose concentration increases to undesirable proportions causing danger to living organisms or other materials. Pollutants are the substances which cause pollution. Pollutants can be physical or chemical. They can be waste matter that contaminates the water or air or soil.

#### Different types of pollutants include:

Nitrogen oxides (NOx), Sulfur oxides (SOx), Particulate matter (PM), Ground level ozone (O3), Volatile organic compounds (VOCs), Peroxyacyl nitrates (PANs), etc..



### AAQMS:

Ambient Air Quality Monitoring Systems or AAQMS monitors the level of pollutants. From a single analyzer to complete turnkey systems (Both Mobile and Fixed) with shelters, hard wired or wireless data transfer to the pollution boards. Air quality management refers to all the activities a regulatory authority undertakes to help protect human health and the environment from the harmful effects of air pollution. The quality of air to which we are exposed needs to be constantly evaluated in order to identify various sources of pollution as well as to control the level of exposure to these pollutants and to adopt the appropriate corrective measures according to the regulations provided.

### Photochemical smog:-

it is harmful mixture formed by gases of nitrogen and particulated matter due to photochemical reactions under influence of strong sunlight.

Ozone contributes majorly to photochemical smog.

### UAE Regulation:

#### Council of ministries Decree No.12 for 2006: Air Pollution Protection

Article 4 states that facilities (including oil and gas facilities) should comply with the emissions limit outlined in Annex 2, where the value for volatile organic compounds is set as lower than 20 mg/Nm3. In addition, all facilities should use technologies and measures to mitigate emissions in accordance with best practices.

