IBM NAAN MUDHALVAN

SKILL UP

PROJECT TITLE: ENVIRONMENTAL MONITORING

COLLEGE: PERI INSTITUTE OF TECHNOLOGY

DEPT: ELECTRONICS AND COMMUNICATION ENGINEERING

DOMAIN: INTERNET OF THINGS (IOT)

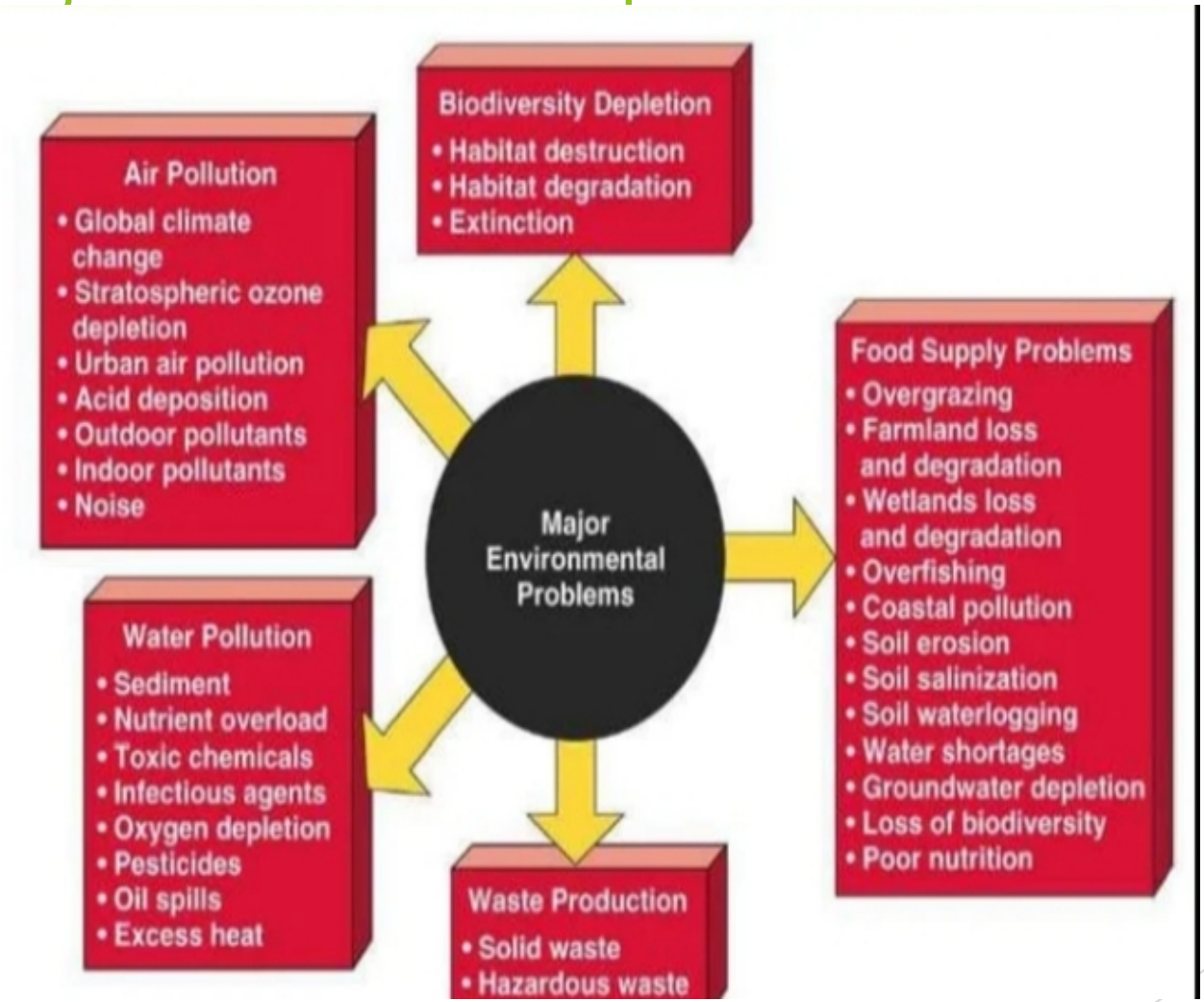
Submitted By: karpuram prathap

ENVIRONMENTAL MONITORING

What is environment ?

- ”Environmental” is an adjective that means concerned with the protection of the natural world
- The environment is the complex of physical, chemical, and biotic factors that act upon an organism or an ecological community
- Air
- Land
- Water

Major Environmental problem



ENVIRONMENTAL MONITORING

- Environmental monitoring can be defined as the systematic sampling of air, water, soil, and biota in order to observe and study the environment, as well as to derive knowledge from this process.
- Environmental monitoring describes the processes and activities that need to take place to characterize and monitor the quality of the environment.
- Environmental monitoring is used in the preparation of environmental impact assessments, as well as in many circumstances in which human activities carry a risk of harmful effects on the natural environment

OBJECTIVE OF MONITORING

- Monitoring of the environment may be undertaken for a number of reasons. In general monitoring is done in order to gain information about the present levels of harmful or potentially harmful pollutants in discharges to the environment, within the environment itself or in living creatures that may be affected by these pollutants. This definition can be expanded as follows:-
  Monitoring may be carried out to assess pollution effects on man and his environment in order to identify any possible cause and effect relationship between pollutant concentration and health effects, climatic changes etc.
  To evaluate pollution interactions and patterns To assess the need for legislative controls and emissions of pollutants and to ensure compliance with emission standards.

ENVIRONMENT MONITORING METHODS

- Ground-based Sampling and Measurements
  Model-based Monitoring
  Satellite based Monitoring

Satellite Based Environment Monitoring Areas

- Atmosphere Monitoring
  Air Quality Monitoring
  Climate Change Studies
  Resource Management
- Glaciers and Snow
  Flood and Drought Management
  Landuse / Landcover

TYPES OF MONITORING

- SOURCE MONITORING
  AMBIENT ENVIRONMENT MONITORING

SOURCE MONITORING

- This may be carried out for a number of reasons
  Identification and characterization of main sources in urban areas.
  Determination of the mass emission rates of pollutants from a particular source and assessment of how these are affected by process variations.
  Evaluation of the effectiveness of control devices for pollution abatement.

AMBIENT ENVIRONMENT MONITORING

- Monitoring the environment may be carried out for a number of reasons
  Mapping the concentration of pollutants in the environment. Identification of pollution sensitive zones.
  Identification of possible sites for the environmental monitoring stations. Tracking progress towards National Quality Standards attainment and emission reductions.
  Serve as the basis for modeling of predicted pollutant concentrations in ambient air.
  Provide input for human health risk assessment studies.