MAHENDRA INSTITUTE OF ENGINEERING AND TECHNOLOGY

***PHASE* - 2**

EXPANDING SYSTEM:

✾ *Unstainable growth of the whole world depends on several factors such as economy, quality education, agriculture, industries and many others, but environment is one of the factors that plays the most important role. Health and hygiene are key components of the sustainability of mankind and progress of any country, which comes from a clean, pollution free and hazardous free environment. Thus, its monitoring becomes essential so as to ensure that the citizens of any nation can lead a healthy life.*

✾ *Environment monitoring (EM) consists of proper planning and management of disasters, controlling*

different pollutions and effectively addressing the challenges that arise due to unhealthy external conditions. EM deals with water pollution, air pollution, hazardous radiation, weather changes, earthquake events, etc.

✾ *The sources of pollution are contributed by several factors, some of which are man-made and others due to natural causes, and the role of EM is precisely to address the challenges so that the environment is protected for a healthy society and world . With the more recent advances in science and technology, especially artificial intelligence (AI) and machine learning, EM has become a smart environment monitoring*

(*SEM*) *system*, *because the technology has enabled EM methods to monitor the factors impacting the environment more precisely*, *with an optimal control of pollution and other undesirable effects*.

✾ *The design of smart cities is taking the place of old and traditional methods to create and plan urban environments*. *Smart cities are planned using wireless networks that assist monitoring of vehicular pollution level in the city growth of the whole world depends on several factors such as economy*, *quality education*, *agriculture*, *industries and many others*, *but environment is one of the factors that plays the most important role*.

✾ *Health and hygiene are key components of the sustainability of mankind and progress of any country*, *which comes from a clean*, *pollution free and hazardous free environment*. *Thus*, *its monitoring becomes essential so as to ensure that the citizens of any nation can lead a healthy life*.

✾ *Environment monitoring* (*EM*) *consists of proper planning and management of disasters*, *controlling different pollutions and effectively addressing the challenges that arise due to unhealthy external conditions*. *EM deals with water pollution*, *air pollution*, *hazardous radiation*, *weather changes*, *earthquake events*, *etc*.

✾ *The sources of pollution are contributed by several factors*, *some of which are man-made and others due to natural causes*, *and the role of EM is precisely to address the challenges so that the environment is protected for a healthy society and world* .

✾ *With the more recent advances in science and technology*, *especially artificial intelligence* (*AI*) *and machine learning*, *EM has become a smart environment monitoring* (*SEM*) *system*, *because the technology has enabled EM methods to monitor the factors impacting the environment more precisely*, *with an optimal control of pollution and other undesirable effects*.

✾ *The design of smart cities is taking the place of old and traditional methods to create and plan urban environments. Smart cities are planned using wireless networks that assist monitoring of vehicular pollution level in the city.*

EXISTING SYSTEM:

✾ *The existing environmental monitoring system consists of various components such as sensors, data collection devices, and data analysis software. These sensors are strategically placed in different locations to measure parameters such as air quality, water quality, noise levels, temperature, and humidity. The data collected by these sensors is then transmitted to a central database or server for analysis.*

✾ *The data analysis software processes the collected data and generates reports and visualizations that provide insights into the environmental conditions. These reports help in identifying patterns, trends, and potential environmental issues.*

✾ *The system also allow time monitoring, enabling prompt action in case of any anomalies or emergencies. Additionally, the system may include features such as data logging, remote monitoring, and alert notifications. Data logging ensures that historical data is stored for future reference and analysis. Remote monitoring allows users to access the system and view real-time data from anywhere. Alert notifications can be set up to inform relevant stakeholders about any significant changes or critical events.*

✾ *The environmental monitoring system plays a crucial role in assessing the impact of human activities on the environment, identifying areas of concern, and implementing appropriate measures for environmental protection and sustainability. It aids in making informed decisions, promoting environmental awareness, and ensuring the well-being of ecosystems and communities.*

PROPOSED SYSTEM:

✾ *The system typically involves deploying various sensors and*

devices in different locations to collect data on environmental parameters like air quality, water quality, noise levels, and more. These sensors can be connected to a central monitoring station or network, where the data is collected, analyzed, and interpreted.

❃ *The collected data can provide valuable insights into the current state of the environment and help identify any potential issues or trends. For example, air quality sensors can measure pollutants like particulate matter and gases, while water quality sensors can monitor parameters like pH, temperature, and dissolved oxygen levels.*

❃ *The proposed system can also leverage advanced technologies like Internet of Things (IoT) and data analytics to enhance the monitoring process. IoT devices can enable real-time data transmission, allowing for immediate detection and response to environmental changes. Data analytics techniques can help in identifying patterns, correlations, and anomalies in the collected data, enabling better decision-*

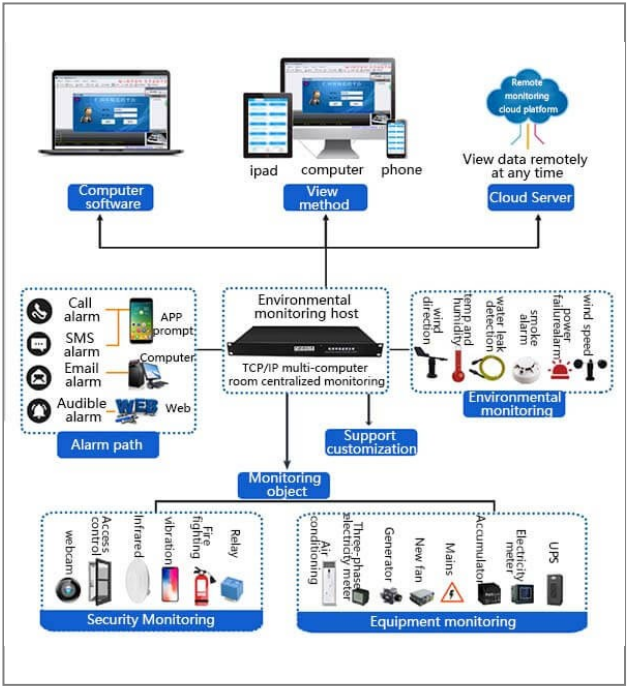
making and proactive environmental management.

✾ *Overall, the proposed system aims to provide a comprehensive and efficient approach to environmental monitoring, ensuring the well-being of our surroundings and promoting sustainable practices.*

EXISTING SYSTEM DESIGN:

✾ *Depending on the area of concern, a monitoring program can be designed to measure chemical, biological or physical impacts. Monitoring can be as simple as having someone go to the site and periodically measure water quality parameters in situ, or as elaborate as examining a series of satellite images taken over a period of time to determine watershed changes.*

OBJ



✤ *An effective environmental monitoring program should*:

Build on existing knowledge and experience. .

It should include information and results from previous studies of the environmental effects of relevant industrial effluents, and knowledge

gained regarding appropriate sampling strategies, designs, and endpoints.

Clearly state monitoring objectives

Monitoring objectives should flow explicitly from management objectives, with results of monitoring used to assess and guide management and monitoring decisions. . !!

THANK YOU..!!