

**NAAN MUDHALVAN**

# **ENVIRONMENTAL MONITORING**

***PHASE -2***

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## **PHASE - 2**

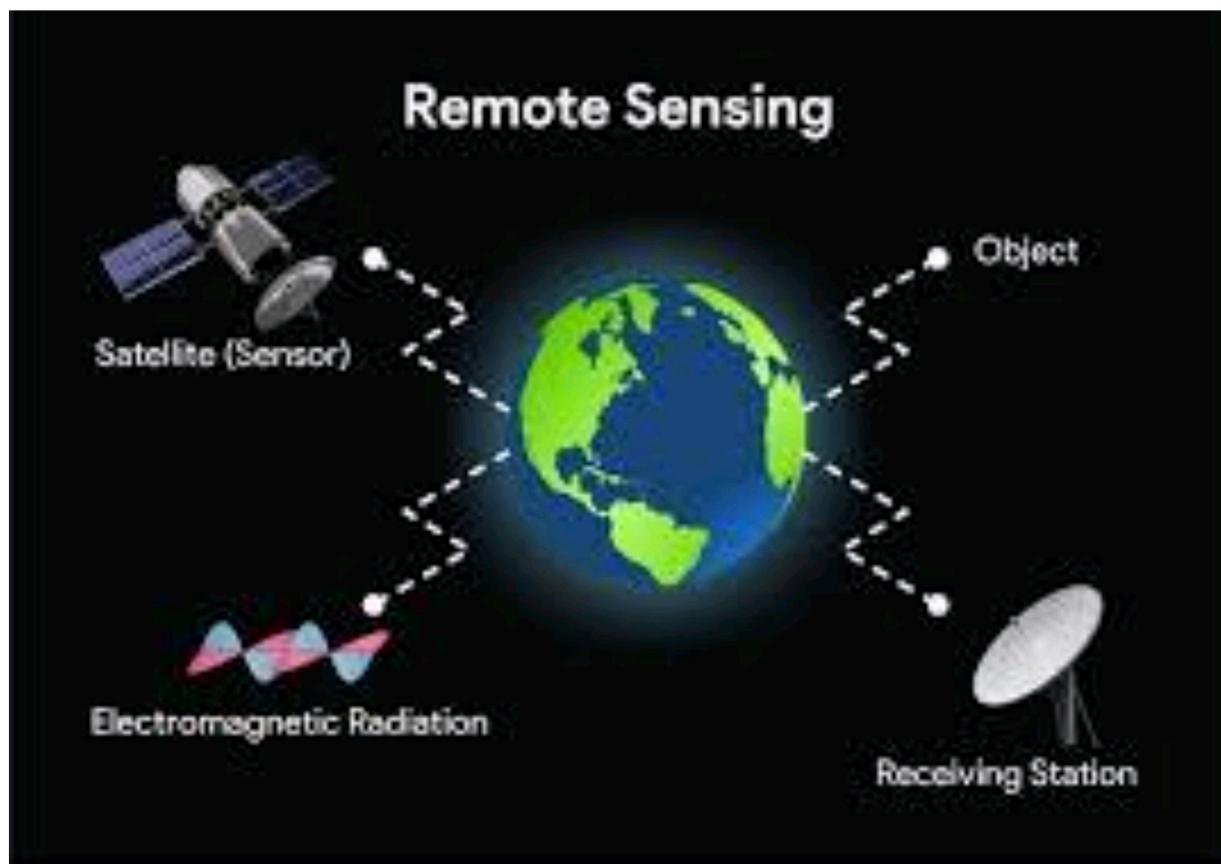
### **INNOVATIONS**

Environmental monitoring has seen significant innovations in recent years, driven by advancements in technology and the growing need to address environmental challenges. Some notable innovations in environmental monitoring include;

- *Remote Sensing,*
- *IoT (Internet of Things) Sensors,*
- *Artificial Intelligence (AI) and Machine Learning,*
- *Drones and UAVs,*
- *Environmental Data Platforms.*

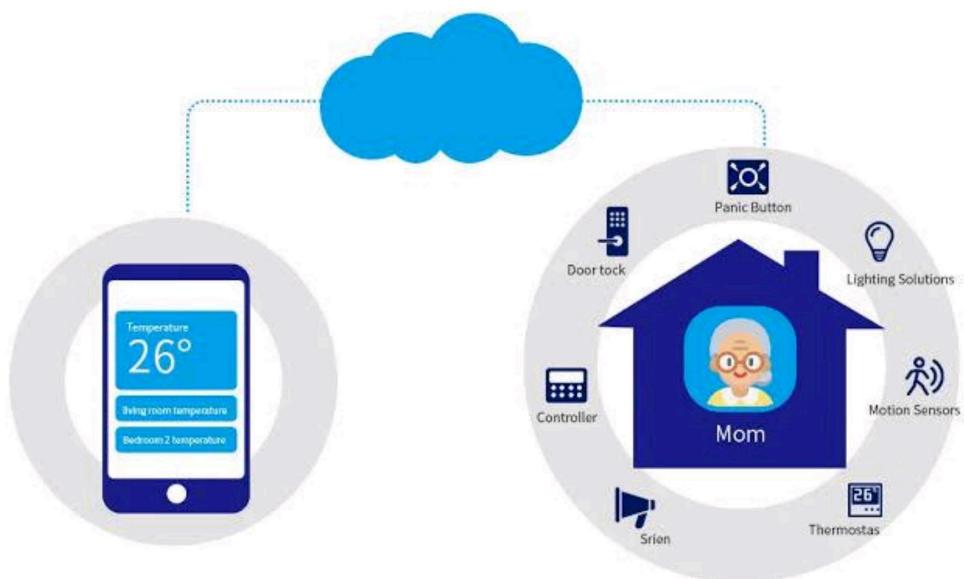
## **Remote Sensing :**

**Satellite-based remote sensing technology has revolutionized environmental monitoring by providing a comprehensive view of the Earth's surface. This technology allows us to monitor changes in land cover, deforestation, urban expansion, and natural disasters like wildfires and floods.**



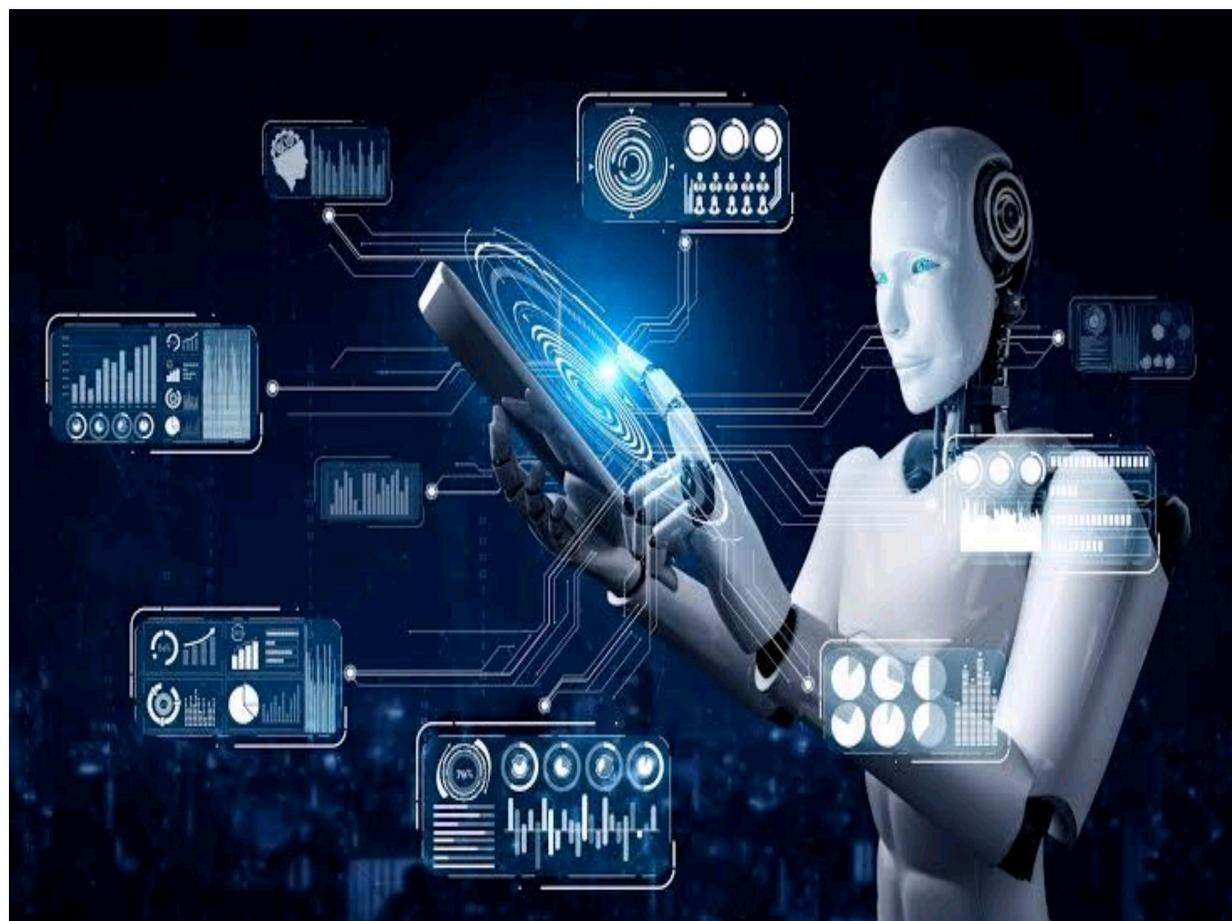
## **IoT (Internet of Things) Sensors :**

*IoT sensors are being deployed across various ecosystems to collect real-time data on environmental parameters such as air quality, temperature, humidity, water quality, and more. These sensors transmit data wirelessly, enabling researchers and authorities to monitor and respond to environmental changes promptly.*



## **Artificial Intelligence (AI) and Machine Learning :**

*AI and machine learning algorithms are employed to process large datasets from environmental monitoring. They can analyze trends, detect anomalies, and predict environmental changes, aiding in early warning systems for natural disasters and pollution events.*



## **Drones and UAVs :**

*Unmanned aerial vehicles (UAVs) and drones are used for aerial surveys and monitoring of hard-to-reach or hazardous environments. They can capture high-resolution images, collect data, and monitor ecosystems, wildlife, and pollution levels.*



## ***Environmental Data Platforms :***

*Integrated data platforms gather, store, and analyze environmental data from various sources. These platforms offer tools for data visualization, modeling, and decision support, helping policymakers and researchers make informed choices.*



## **MORAL :**

*These innovations in environmental monitoring play a crucial role in understanding, managing, and mitigating the impacts of climate change, pollution, habitat loss, and other environmental challenges. They empower governments, organizations, and individuals to take proactive measures to protect and preserve the environment.*

**THANK YOU**