UNIT III - AIR AND NOISE POLLUTION.

3.4 RECENT CASE STUDIES – WORLD WIDE

1. **Case Study: The Circular Economy in Amsterdam, Netherlands**
   - Overview: Amsterdam has committed to becoming a circular city by 2050, emphasizing recycling and waste reduction.
   - Initiatives: The city promotes the repurposing of materials in construction projects and has developed an online platform for sharing resources.
   - Outcome: Increased recycling rates and reduced waste sent to landfills by 30% since implementation.

2. **Case Study: Solar Energy in Germany**
   - Overview: Germany has implemented a national solar energy program, leading the shift to renewable energy.
   - Initiatives: Incentives for installing solar panels and feed-in tariffs for solar energy producers.
   - Outcome: As of 2023, Germany generates over 30% of its electricity from solar energy, significantly reducing carbon emissions.

3. **Case Study: Green Roofs in Toronto, Canada**
   - Overview: Toronto has adopted green roofs as part of its urban planning to manage stormwater and improve air quality.
   - Initiatives: Mandatory green roofs on new commercial buildings and financial incentives for residential installations.
   - Outcome: Improved urban biodiversity, reduced heat island effect, and better stormwater management.

4. **Case Study: Eco-Friendly Initiatives in Bhutan**
   - Overview: Bhutan's comprehensive environmental policies prioritize sustainability and preservation of natural resources.
   - Initiatives: Promotion of organic farming, banning plastic bags, and investing in renewable energy sources like hydropower.
   - Outcome: Bhutan has maintained a carbon-negative status due to its extensive forest cover and sustainable practices.

5. **Case Study: Sustainable Transportation in Copenhagen, Denmark**
   - Overview: Copenhagen aims to become the world's first carbon-neutral capital by 2025 through sustainable transportation.
   - Initiatives: Expansion of cycling infrastructure, promotion of public transport, and electric vehicle charging stations.
   - Outcome: The city has seen a significant increase in cycling rates and a substantial reduction in emissions from transportation.

RECENT CASE STUDIES – IN INDIA

1. **Swachh Bharat Abhiyan**

- o **Overview**: Launched in 2014, the Swachh Bharat Abhiyan (Clean India Mission) aims to improve sanitation and cleanliness across India.
- o **Initiatives**:
    - ▪ Construction of toilets in rural and urban areas.
    - ▪ Waste management initiatives focusing on segregation and recycling.
    - ▪ Awareness campaigns to promote cleanliness and hygiene.
- o **Outcome**: Significant reduction in open defecation and improved waste management in numerous cities, contributing to better public health.

2. **Delhi's Graded Response Action Plan (GRAP)**
   - o **Overview**: In response to severe air pollution levels, Delhi implemented the Graded Response Action Plan to address pollution based on severity.
   - o **Initiatives**:
       - ▪ Implementing measures like odd-even vehicle rotation scheme, restrictions on construction activities, and increased monitoring of industrial emissions during high pollution days.
       - ▪ Promotion of public transportation and non-motorized transport.
   - o **Outcome**: Temporary improvements in air quality during implementation phases, and increased public awareness about air pollution.

3. **Ganga River Rejuvenation**
   - o **Overview**: The National Mission for Clean Ganga (NMCG) was initiated to clean and restore the Ganga River through sustainable practices.
   - o **Initiatives**:
       - ▪ Construction of sewage treatment plants (STPs) to treat wastewater before it enters the river.
       - ▪ Riverfront development and afforestation projects along the riverbanks.
       - ▪ Community involvement through awareness programs and clean-up drives.
   - o **Outcome**: Improved water quality in certain stretches of the Ganga and increased public participation in conservation efforts.

4. **Air Quality Monitoring in Bengaluru**
   - o **Overview**: The Karnataka State Pollution Control Board has been actively monitoring air quality in Bengaluru.
   - o **Initiatives**:
       - ▪ Deployment of real-time air quality monitoring stations to track pollution levels.
       - ▪ Public apps and websites providing real-time data to residents to raise awareness and encourage behavior changes.
       - ▪ Partnerships with tech companies to analyze data and derive actionable insights.
   - o **Outcome**: Enhanced public knowledge about air quality, leading to better compliance with pollution control measures.

5. **Forest Conservation and Restoration Initiatives**
   o **Overview**: Programs focused on reforesting degraded lands and conserving existing forests to combat urban pollution and enhance biodiversity.
   o **Initiatives**:
      ▪ The Green India Mission aims to increase forest cover and restore degraded ecosystems.
      ▪ Community participation in afforestation drives, involving local communities in protecting and managing forest resources.
   o **Outcome**: Increased carbon sequestration, improved air quality, and enhanced biodiversity in various regions.

6. **Zero Waste Initiatives in Pune**
   o **Overview**: Pune has implemented a zero waste management initiative to handle solid waste sustainably.
   o **Initiatives**:
      ▪ Engaging local communities in waste segregation at source and promoting composting.
      ▪ Establishment of material recovery facilities and recycling programs.
   o **Outcome**: A significant increase in waste diversion from landfills, contributing to cleaner urban environments.

7. **Sustainable Urban Transport Initiatives**
   o **Overview**: Cities like Ahmedabad and Delhi are promoting sustainable public transport solutions.
   o **Initiatives**:
      ▪ Development of BRTS (Bus Rapid Transit System) in Ahmedabad and the Delhi Metro, which provides efficient and eco-friendly public transport options.
      ▪ Introduction of electric buses and auto rickshaws to reduce emissions.
   o **Outcome**: Improved air quality and reduced traffic congestion, encouraging more residents to use public transport.