WIFEX

Prelims: Current events of national and international importance | Science and technology

Why in News?

Recently, WiFEX has completed a remarkable ten successful years milestone stepping into next phase WiFEX-II which led to active response even during dense fog.

- **WiFEX - Wi**nter **F**og **Ex**periment, is one of the world's few long-term open-field experiments.
- **Aim -** Dedicated research into North India's dense winter fog and its impact on daily life and aviation safety.
- **Launched in -** Winter of 2015 at Indira Gandhi International Airport (IGIA), New Delhi.
- **Led by -** Indian Institute of Tropical Meteorology (IITM).
- **Supported by -** India Meteorological Department (IMD) and National Centre for Medium Range Weather Forecasting (NCMRWF).
- **Nodal ministry -** Ministry of Earth Sciences (MoES).
- **Instruments used -** Micrometeorology towers, ceilometers, and high-frequency sensors
- **Data collected on -** Temperature layers, humidity, wind, turbulence, soil heat, and aerosols.
- **Features**
  - Region's most advanced High-resolution (3 km) probabilistic fog prediction model.
  - It will predict when fog will begin, how dense it will be, how long it will last, and when it will clear.
  - Achieving more than 85% precision for very dense fog (visibility below 200 meters).
- **Advantages**
  - **Aviation safety & fog solution –** It will ensure less costly diversions, fewer delays, safer runways, and more informed travel during the challenging winter fog season.
- **WIFEX II's next phase**
  - Localized extension, runway-specific fog predictions to more airports in north India.
  - Enhancing performance through Installation of dedicated sensors at additional sites

- Airport operators will gain real-time data to help them activate response plans and ensure operations remain safe and efficient even during winter’s thickest fog.

Reference

PIB| WIFEX - A Remarkable 10-Year Milestone