



TATHASTU
Institute of Civil Services

DAILY CURRENT AFFAIRS



19th January, 2024



S.NO.	TOPIC
1.	INDIA-UK RELATION
2.	HOW SATELLITES TRACK THE WEATHER?
3.	PRELIMS POINTERS

INDIA-UK RELATION

SOURCE: [INDIAN EXPRESS](#)

TAG: GS Paper II- **INTERNATIONAL RELATIONS, BILATERAL TIES WITH UK**

Mains Practice Question:

Q. Discuss the evolving nature of India-UK defence ties in the context of the recent diplomatic engagements, particularly focusing on the visit of the Indian Defence Minister to the United Kingdom. Analyse the shared security concerns and potential areas for further collaboration between the two nations.

WHY IN NEWS?

- ❖ Defence Minister Rajnath Singh's recent visit to the United Kingdom (UK) came after a hiatus of 22 years.

ABOUT INDIA-UK RELATION

❖ India - UK Bilateral Relationship:

- **Bilateral Ties:** India and the UK maintain a robust and multi-faceted strategic partnership.
- **Economic Reforms Impact:** The Indian economic reforms in the early 1990s, leading to significant growth, marked a turning point in bilateral relations.
- **Strategic Partnership Upgrade:** The bilateral relationship was elevated to a Strategic Partnership in 2004, reflecting its multi-dimensional nature.
- **Trade and Investment Focus:** Both nations are actively working to enhance trade and investment ties.
- **Free Trade Agreement (FTA):** In January 2022, formal negotiations for a free trade agreement (FTA) were initiated to further advance economic cooperation.

❖ Economic and Commercial Relations:

- **Bilateral Trade Volume (April 2021 - March 2022):** Total trade in goods and services between the UK and India amounted to USD 32.7 billion.
- **Trade Imbalance:** India maintained a trade surplus with the UK.
- **Export and Import Breakdown:** India exported goods and services worth USD 21.5 billion to the UK. Imports from the UK to India totaled USD 10.2 billion.
- **Export Destination Ranking:** The UK holds the seventh position among India's top export destinations.
- **FDI Dynamics:** India stands as the second-largest source of Foreign Direct Investment (FDI) for the UK.
- **Key Indian Exports to the UK:** Categories include ready-made garments, textiles, gems and jewelry, engineering goods, petroleum and petrochemical products, transport equipment and parts, spices, manufactures of metals, machinery and instruments, drugs and pharmaceuticals, and marine products.
- **Services Sector Dominance:** In the services sector, the UK represents the largest market in Europe for Indian IT services.
- **Major Indian Imports from the UK:** Imports cover precious and semi-precious stones, metal lifers, ores and metal scraps, engineering goods, professional instruments (excluding electronics), non-ferrous metals, chemicals, and machinery.

❖ Indian Diaspora in the UK:

Indians constitute approximately 2.86% of the total population in the United Kingdom.

- **Census 2021 Data:** According to the UK Census 2021, the Indian population in the United Kingdom is estimated to be around 19 lakh or 1.9 million.



- **Remittances from the UK:** The United Kingdom serves as the largest source of European remittances to India.

Challenges Involved in India:

- **FTA:** FTAs involve agreements between two or more countries or trading blocs with the primary goal of reducing or eliminating customs tariffs and non-tariff barriers on substantial trade.

MAJOR ROADBLOCKS IN INDIA-UK FTA

❖ **Services & Investment:**

- The UK urges India to liberalize its highly protected services markets in telecommunications, finance, and legal services.
- Domestic opposition in India poses challenges to such liberalization.
- Both nations being significant services exporters, a meaningful FTA may require substantial services liberalization.

❖ **Temporary Movement:**

- India seeks simplification in the UK's business and temporary visas for professionals.
- A reciprocal Young Professional visa scheme was agreed upon at the G20 summit.
- Additional easing in immigration rules, especially for the IT and healthcare sectors, is being considered.

❖ **Data Policies:**

- Data protection concerns exist for UK firms operating in India under the FTA due to the absence of GDPR-like protection in India.
- Implementation of the pending Digital Personal Data Protection Bill 2023 is crucial for better data protection and meeting UK business standards.

❖ **IPR and Medicines:**

- The leaked IPR chapter of the FTA proposes the harmonization of IP regulations, potentially affecting affordable generic medicines in India.
- Concerns about the impact of relatively strict IP laws on access to life-saving medicines.

❖ **Agriculture:**

- Agriculture is a sensitive sector for both countries.
- FTA could increase India's agricultural export share in the UK.
- Revisiting concerns about British food imports, with a focus on higher-value agri-based products.
- Proposing a structural fund to compensate farmers for potential losses, with UK contributing aid-for-trade.



HOW SATELLITES TRACK THE WEATHER?

SOURCE: THE HINDU

TAG: GS I- CLIMATOLOGY, ATMOSPHERIC CIRCULATION & WEATHER SYSTEMS

GS III - SCIENCE & TECHNOLOGY, SATELLITES AND APPLICATIONS, INDIGENIZATION OF TECHNOLOGY

Mains Practice Question:

Q. Examine the pivotal role of satellites in weather forecasting and elucidate how advancements in satellite technology have revolutionized the accuracy and scope of weather predictions. Evaluate the contribution of the Indian Meteorological Department (IMD) in leveraging satellite data for enhancing the country's weather forecasting capabilities.

❖ Recent observations by the India Meteorological Department (IMD):

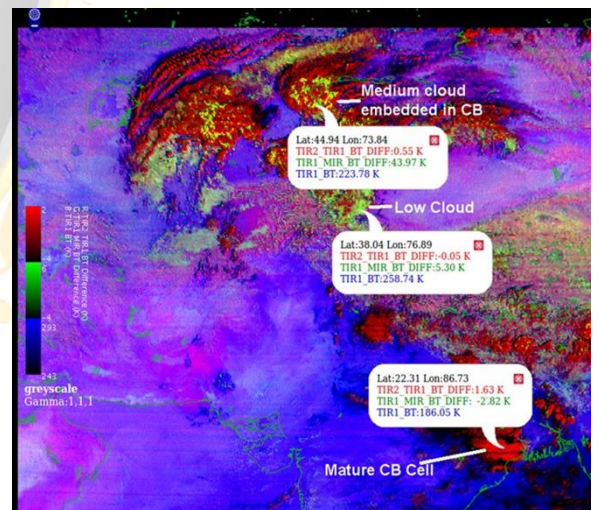
- Since December 2023, extensive parts of North India, including Bihar, Uttar Pradesh, Uttarakhand, Haryana, Delhi, and Punjab, have been contending with dense fog.
- The INSAT 3D satellite, showcases fog visibility through the "Night Microphysics" data.

❖ What is Night microphysics?

- **Night microphysics** refers to the study and analysis of atmospheric phenomena and cloud properties during nighttime using satellite observations.
- In the **context of satellite imagery**, night microphysics data is collected using sensors that are sensitive to specific wavelengths, such as thermal infrared radiation. These sensors allow scientists to observe and understand **cloud formations, moisture distribution, and other night-time atmospheric processes.**

❖ Role of Night Microphysics in Colour Analysis?

- In night microphysics, the determination of **red colour** involves the disparity between thermal infrared signals ($12\mu\text{m}$ and $10\mu\text{m}$).
- **Green colour** varies based on the difference between thermal infrared and middle infrared signals ($10.8\mu\text{m}$ and $3.9\mu\text{m}$).
- **Blue colour** is determined by the strength of a thermal infrared signal ($10.8\mu\text{m}$).
- The colour scheme proves instrumental in analysing different cloud types, thunderstorms, snow-covered areas, and fire detection.
- The amalgamation of day and night microphysics data **facilitates the study of moisture droplets, enabling the tracking of cyclones and prediction of various weather events.**



❖ How do weather Satellites Collect data?

- **INSAT 3D** and **INSAT 3DR** utilize **radiometers** to measure spectral properties and **atmospheric sounders** to study temperature, humidity, and water vapor.
- By combining radiometer and sounder measurements, scientists gain comprehensive insights into various atmospheric characteristics.

❖ What do Radiometers and Sounders do?

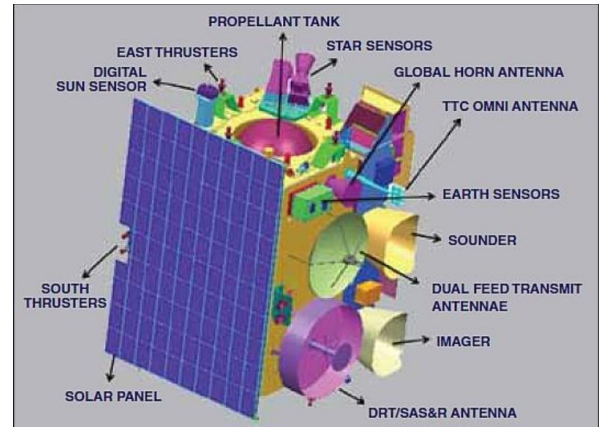
1. **Radiometers** measure various properties of radiation, typically by exploiting radiation's interaction with matter, such as temperature or electrical activity.
2. **Sounders** are devices that measure temperature, humidity, and study water vapor as a function of their heights from the ground.



- **INSAT (Indian National Satellite) System:** Commissioned with the launch of INSAT-1B in 1983, the Indian National Satellite system revolutionized television, radio, and meteorological broadcasting.
- Of the 24 satellites launched, 11 remain operational. Notable satellites include INSAT-3C, INSAT-3D, INSAT-3E, KALPANA-1, and MEGHA-TROPIQUE.

❖ INSAT-3D

- INSAT-3D is an advanced weather satellite of India configured with improved Imaging System and Atmospheric Sounder.
- INSAT-3D is designed for enhanced meteorological observations, monitoring of land and ocean surfaces, generating vertical profile of the atmosphere in terms of temperature and humidity for weather forecasting and disaster warning.
- It carries four payloads -6 channel multi-spectral Imager, 19 channel sounder, Data Relay Transponder (DRT) and a search & rescue transponder.



❖ INSAT 3DR:

- INSAT-3DR similar to INSAT-3D, is an advanced meteorological satellite of India configured with an imaging System and an Atmospheric Sounder.
- **The significant improvements incorporated in INSAT-3DR are:**
 - Imaging in Middle Infrared band to provide night time pictures of low clouds and fog.
 - Imaging in two Thermal Infrared bands for estimation of Sea Surface Temperature (SST) with better accuracy
 - Higher Spatial Resolution in the Visible and Thermal Infrared bands.
 - And, like its predecessor INSAT-3D, INSAT-3DR carries a Data Relay Transponder as well as a Search and Rescue Transponder.
 - Thus, INSAT-3DR provide service continuity to earlier meteorological missions of ISRO and further augment the capability to provide various meteorological as well as search and rescue services.
 - INSAT-3DR carries a multi spectral Imager, 19 channel Sounder, Data Relay Transponder and Search and Rescue Transponder.

❖ INSAT 3DS

- The INSAT 3DS is scheduled for launch in February 2024 and represents the latest advancement in meteorological satellites, promising further enhancements in monitoring and forecasting capabilities.
- It will be launched with the GSLV Mk II launch vehicle.
- This upcoming mission represents the seventh flight within the INSAT-3D series.

CONCLUSION:

- The INSAT 3D satellite holds a crucial position in monitoring and forecasting weather conditions, especially fog occurrences, in North India, due to its capability to capture and analyse day and night microphysics data.
- Meteorologists leverage the detailed information from these satellite images to issue timely warnings and offer valuable insights, contributing to **public safety and effective navigation through challenging weather scenarios**.
- India's weather monitoring and forecasting capabilities benefit significantly from advancements in satellite technology, allowing for more accurate predictions and in-depth analysis of atmospheric phenomena.



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TOPIC	DISCRIPTION
GRADED RESPONSE ACTION PLAN (GRAP)	<p>➤ WHY IN NEWS?</p> <p><i>The decision by the Commission for Air Quality Management in NCR and Adjoining Areas to revoke Stage-III of the Graded Response Action Plan (GRAP) in the entire National Capital Region (NCR) is in the news due to a substantial improvement in Delhi's average Air Quality Index (AQI), which currently stands at 318.</i></p> <p>➤ GRADED RESPONSE ACTION PLAN (GRAP):</p> <ul style="list-style-type: none"> ○ GRAP is a set of emergency measures triggered to prevent worsening air quality in the Delhi-NCR region. ○ Approval and Implementation: Approved by the Supreme Court in 2016 (M.C. Mehta vs. Union of India) and notified in 2017. ○ Implementation transitioned to the Commission for Air Quality Management (CAQM) in 2021, replacing the Environment Pollution (Prevention & Control) Authority (EPCA). <p>➤ CAQM's Role: CAQM, relying on forecasts from Indian Institute of Tropical Meteorology (IITM) and India Meteorological Department (IMD), oversees GRAP measures.</p> <p>➤ STAGES AND REVISIONS:</p> <ul style="list-style-type: none"> ○ Stage I (Poor Air Quality - AQI 201-300): Enforce NGT / Hon'ble SC's order on over-aged diesel/petrol vehicles. ○ Stage II (Very Poor - AQI 301-400): <ul style="list-style-type: none"> ▪ Targeted actions at identified pollution hotspots. ▪ Regulate operations of Diesel Generators (DG) across sectors in the NCR. ○ Stage III ('Severe' - AQI 401-450): <ul style="list-style-type: none"> ▪ Impose strict restrictions on certain vehicles. ▪ Potential suspension of physical classes in primary schools (up to Class 5). ○ Stage IV (Severe Plus - AQI > 450): Prohibit entry of four-wheelers registered outside Delhi (except for specific exemptions) when AQI exceeds 450.
IRAN, PAK, THE BALOCH MILITANCY	<p>➤ WHY IN NEWS?</p> <p><i>Iran and Pakistan engaged in air attacks along their 909 km-long border, claiming the strikes were aimed at "terrorist" groups taking refuge in the neighbouring country. The situation escalated when Iranian missiles targeted Jaish al-Adl (JAA) strongholds in Pakistan's Balochistan province.</i></p> <p>ABOUT JAISH AL-ADL (JAA)</p> <ul style="list-style-type: none"> ➤ Formation: Emerged in 2012 from Jundallah after the execution of leader Abdolmalek Rigi by Iran. ➤ Objective: Seeks recognition of Baluchi cultural, economic, and political rights from the Iranian government. ➤ Iran's View: Tehran considers it a terrorist group due to repeated 



deadly assaults on Iranian outposts and security forces since 2013.

BALUCH LIBERATION FRONT (BLF) AND BALUCHISTAN LIBERATION ARMY (BLA):

- **BLF: Founded in 1964**, resurfaced in **2004** under **Allah Nazar Baloch's leadership**, targets civilians, journalists, officials, and **military personnel**.
- **BLA: Founded around 2000**, began a violent struggle for Baloch self-determination in Pakistan in 2004. Targets Chinese projects in Pakistan and claimed responsibility for a 2022 attack on Chinese teachers in Karachi.
- **Targeting Chinese Interests:** Both groups are known to **target Chinese gas and infrastructure projects in Pakistan**.

SOMNATH TEMPLE

➤ **WHY IN NEWS?**

*Somnath: A brief history of the temple, and why **Nehru** opposed the President inaugurating it*

ABOUT SOMNATH TEMPLE

- Somnath temple, also known as **Deo Patan**, is located in **Veraval, Saurashtra, Gujarat, on the western coast of India**.
- It is the first among the **twelve Jyotirlinga shrines dedicated to Lord Shiva**.
- The **first Shiva temple at Somnath** was built at an unknown time in the past.
- The second temple was constructed around **649 CE by the Yadava kings of Vallabhi**.
- The **third temple**, a large red sandstone structure, was built in **815 CE by Gurjara-Pratihara king Nagabhata II**.
- The present temple, reconstructed in the **Chaulukya style of Hindu temple architecture, was completed in 1951**.
- Narendra Modi, the Prime Minister of India, **currently serves as the chairman of the Somnath Mandir Trust**.



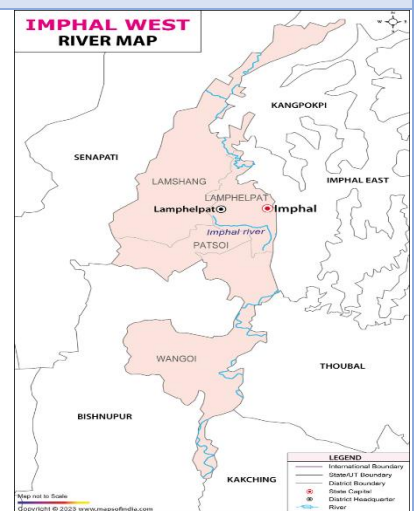
IMPHAL RIVER

➤ **WHY IN NEWS?**

*Recently the fuel leakage at **Leimakhong power station** in Imphal West district spilled into a stream which joins Imphal river.*

IMPHAL RIVER

- The **Imphal River**, locally known as **Turel Achouba**, is a significant river in **Manipur state**.
- Its **origin is in the northern side of Kangpokpi district**.
- The river serves as a **tributary to the Manipur River, confluencing in Thoubal district**.
- Enroute, it **passes by Loktak Lake and the city of Imphal**.
- The river continues its course towards Myanmar (Burma) and meets the Myittha River.





LOKTAK LAKE: A NATURAL MARVEL IN MANIPUR

- **Geographical Location:** Situated approximately 40 kilometres south of Imphal, Loktak Lake is a captivating freshwater lake in Northeast India.
- **Distinctive Feature - Phumdis:**
 - Loktak Lake is renowned for its unique floating circular swamps known as "phumdis" in the local language.
 - These phumdis resemble islands and are composed of soil, organic matter, and vegetation, adding to the lake's picturesque charm.
- **Keibul Lamjao National Park:**
 - Nestled within Loktak Lake is the Keibul Lamjao National Park, recognized as the only floating national park globally.
 - This Park serves as the last sanctuary for the endangered brow-antlered deer, locally known as sangai, which also happens to be Manipur's state animal.
- **Biodiversity:**
 - Loktak Lake is a biodiversity hotspot, boasting around 230 species of aquatic plants, 100 varieties of birds, and a diverse fauna population that includes barking deer, sambar, and the Indian python.
- **International Recognition:**
 - Acknowledging its ecological importance, Loktak Lake was initially designated as a wetland of international importance under the Ramsar Convention in 1990.
 - Furthermore, it earned a place in the Montreux Record in 1993, solidifying its global recognition as a crucial environmental site.

HUMAN PAPILOMAVIRUS

➤ WHY IN NEWS?

*In the new year, the focus on **wellness and self-care** is underscored by the **recognition of January as Cervical Cancer Awareness Month**. This initiative aims to raise awareness about cervical cancer, encouraging individuals to prioritize their health and acquire knowledge about prevention, screening, and early detection of cervical cancer.*

ABOUT HUMAN PAPILOMAVIRUS

- HPV is a common virus transmitted through **sexual contact**, with almost all sexually active individuals encountering it at some point.
- Persistent infection with high-risk HPV strains is a leading cause of cervical cancer.

STATE OF CERVICAL CANCER IN INDIA:

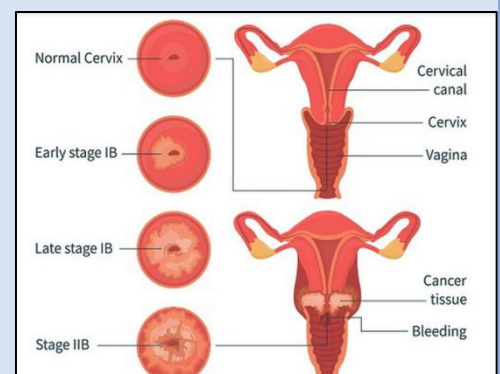
- **Second-most common cancer among women in India.**
- India accounts for **nearly a quarter of global cervical cancer deaths.**

WHO'S 2022 STRATEGY TO ELIMINATE CERVICAL CANCER WORLDWIDE:

- **Three pillars:** HPV vaccination, screening, and treatment.
- **Goal:** 90% of girls fully vaccinated by 2030, 70% of women screened, and 90% of women with cervical disease to receive treatment.

CERVICAL CANCER SCREENING:

- **Pap smear**, the traditional screening method, **recommended every three years for women aged 25-65.**





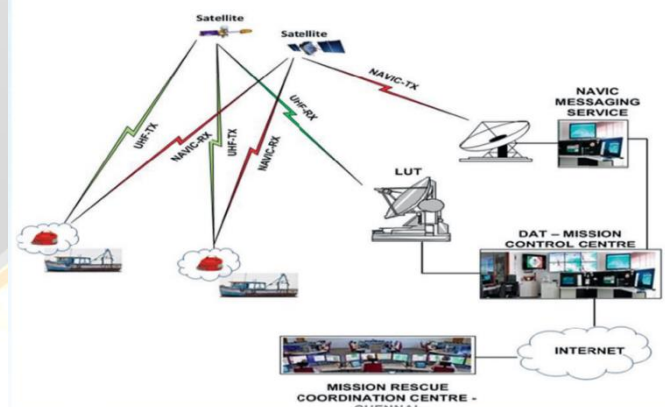
- **HPV DNA testing** is now recommended as the first-choice method for cervical cancer screening.
- THE HPV VACCINE:**
- Highly effective against **HPV serotypes 16&18**, responsible for **70% of cervical cancers**.
 - WHO's recommendation in 2022: Even a single dose provides solid protection.
 - Two vaccines available in India: **Gardasil** and **Cervavac**.
 - **Sikkim** introduced the vaccine in 2018, and the NTAGI recommended its inclusion in the **Universal Immunization Programme (UIP)**.
 - Over 100 countries have introduced the HPV vaccine into their national schedules.
 - Global coverage remains at 30% of the target population, indicating challenges in implementation.

ISRO'S Distress Alert Transmitter (DAT-SG)

- **WHY IN NEWS?**
The Indian Space Research Organisation (ISRO) has developed an improvised distress alert transmitter (DAT) with advanced capabilities for fishermen at sea to send emergency messages from boats.

About Distress Alert Transmitter (DAT-SG)-

- **Product: Distress Alert Transmitter-Second Generation (DAT-SG)**
 - Developed by ISRO.
 - UHF transmitter based on NavIC receiver module.
- **NavIC Receiver Module:** Supports position determination. Facilitates reception of broadcast messages via NavIC messaging service.
- **Users:** Primarily designed for small boat fishermen.
- **Functionality:** Allows emergency message transmission with position information. Enables reception of information like Potential Fishing Zone, weather alerts, etc.
- **NavIC Messaging Service:** Broadcasts various information services.
- **Utility for Fishermen:** Essential for reporting emergencies at sea. Enhances safety by providing relevant information.
- **Overall Purpose:** Improves communication and safety for small boat fishermen.



Features:

- Emergency message reporting from Deep Sea to Control Station.
- Processing and display of alert received at the Control Center (HUB) and dissemination of received emergency information to Maritime Rescue Coordination Centres.
- Transmission of emergency position and Distress alerts.



GULF OF ADEN

WHY IN NEWS?

GEOGRAPHIC LOCATION AND PHYSICAL CHARACTERISTICS:

- The Gulf of Aden stretches approximately 1,000 kilometers in the **Western Arabian Sea** and narrows towards the **Bab-el-Mandeb strait**.
- It is bordered by **Yemen, Somalia, Djibouti, Eritrea, and the Arabian Peninsula**.
- It stands out for its strategic location, deep waters, and diverse marine life, featuring unique flora and fauna on the **volcanic Socotra archipelago**.



SIGNIFICANCE FOR GLOBAL TRADE:

- It **links the Indian Ocean to the Red Sea**, playing a crucial role in international shipping.
- The Bab-el-Mandeb strait, situated at the southwest tip, ranks among the **world's busiest chokepoints**, facilitating the transit of global trade, notably **oil shipments from the Middle East**.

ECOLOGICAL FEATURES:

- Boasts diverse marine ecosystems, including **coral reefs, seagrasses, and an array of fish species**, with ongoing conservation initiatives.
- Faces environmental challenges such as **pollution, overfishing, and illicit fishing practices**, posing threats to marine ecosystems and the well-being of local communities.

SOCIO-POLITICAL DYNAMICS:

- Attained global prominence in the late 2000s due to **piracy incidents**, predominantly originating from **Somalia**, prompting widespread naval patrols and security measures.
- Geopolitically crucial, with nations contending for supremacy, influence, and access to key maritime trade routes.