


SANSKRITI IAS DAILY CURRENT AFFAIRS

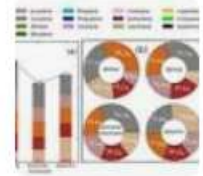
21-06-2026

Non-Methane Hydrocarbons (NMHCs)

 Department of Science & Technology (DST)

[Researchers tracking air quality risks in the Himalaya, identify shift from clean to polluted air](#)

A new study by researchers has revealed that even pristine remote Himalayan regions are no longer untouched by air pollution,...

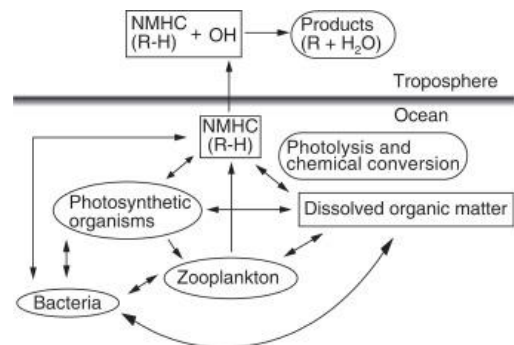


Why in News

Researchers from **Aryabhata Research Institute of Observational Sciences (ARIES)** conducted a year-long (2022–23) study on **Non-Methane Hydrocarbons (NMHCs)** in **Munsyari (Uttarakhand)** to assess their impact on air quality.

Atmospheric Significance

- **NMHCs** are trace atmospheric gases excluding methane and include **ethane, ethene, propane, propene and isoprene**.
- They are important Volatile Organic Compounds (VOCs) involved in atmospheric chemical reactions.
- They act as a major sink for **hydroxyl radicals (OH)** that regulate atmospheric cleansing.



Environmental Implications

- They are major precursors for tropospheric (ground-level) ozone formation.
- They contribute to the production of **Secondary Organic Aerosols (SOA)**.

- Their accumulation deteriorates air quality and affects human health.

Sources and Monitoring Relevance

- Major emissions originate from **fuel combustion, vehicular emissions and industrial activities**.
- Terrestrial ecosystems are the dominant natural source, with minor marine contributions.
- Monitoring NMHCs helps understand pollution transport and atmospheric chemistry.

Abhigyan App

TH The Hindu

[Police, probe agencies get app to scan fingerprints on the go](#)

Police launch 'Abhigyan' app for real-time fingerprint scanning, enhancing street-level crime identification and investigation efficiency.



Why in News

The Union Home Minister launched the **Abhigyan App** in New Delhi to strengthen data-driven policing in India.

Governance Framework

- **Abhigyan** is a centralized platform developed by the **National Crime Records Bureau (NCRB)** to improve the use of crime-related data.
- It supports evidence-based policing and faster criminal identification.

Technological Features

- It enables police personnel to access criminal records through smartphones.
- It uses **two-step authentication** and provides real-time fingerprint identification.

- The app is integrated with the **National Automated Fingerprint Identification System (NAFIS)**, which stores fingerprint records of accused persons, convicts and prison inmates.
- Fingerprints can be matched with the database in about **35 seconds**.

Institutional Facts

- **NCRB** was established in **1986** and functions under the **Ministry of Home Affairs (MHA)**.
- It was created based on recommendations of the **Tandon Committee, National Police Commission (1977–81)** and an MHA Task Force.
- Its headquarters is located in **New Delhi**.

International Tribunal for the Law of the Sea (ITLOS)

Why in News

India's **Professor Bimal N. Patel** was elected as a Judge of ITLOS for the **2026–2035** term.

International Legal Framework

- **ITLOS** is an independent judicial body established under the **1982 United Nations Convention on the Law of the Sea (UNCLOS)**.
- It derives its authority from **Part XV and Annex VI of UNCLOS**.
- Its headquarters is located in **Hamburg, Germany**.

Institutional Structure

- The Tribunal consists of **21 independent judges** elected by **States Parties**.
- Each State Party can nominate up to **two candidates**.
- Members serve a **9-year term**, with one-third retiring every three years.



Jurisdictional Scope

- It settles disputes related to maritime boundaries, navigation, marine scientific research and environmental protection.
- It is open to states, international organizations and certain private entities.

Brahmani River



Research Matters

[New study shows how microplastics are smuggling toxic metals into the Brahmani River](#)

Microscopic plastic pollution is infiltrating the pristine habitats of India's Bhitarkanika Wildlife Sanctuary, carrying a toxic cargo of...



Why in News

A study detected microplastic pollution carrying heavy metals into the **Brahmani River** near **Bhitarkanika Wildlife Sanctuary**.

Geographical Features

- The **Brahmani River** is a major river of eastern India that primarily flows through **Odisha**.
- It originates from the confluence of the **Sankh** and South Koel rivers near **Rourkela**.
- Both source rivers arise from the **Chota Nagpur Plateau**.



River Basin Characteristics

- The basin extends across **Jharkhand**, **Chhattisgarh** and **Odisha** before draining into the **Bay of Bengal**.
- It is bounded by the **Chota Nagpur Plateau** and the **Mahanadi basin**.
- Major tributaries are **Sankh**, **Tikra** and **Karo**.

Ecological Importance

- The Brahmani delta hosts **Bhitarkanika Wildlife Sanctuary**, famous for **estuarine crocodiles**.
- It is one of the few rivers that cut across the **Eastern Ghats** and forms a gorge at **Rengali**, where a dam has been built.
- The basin faces threats from industrial pollution, microplastics and heavy metals.

Development Policy Financing (DPF)

 World Bank Group

[World Bank Group Provides New Financing in Support of India's Reform Program to Boost Growth and Jobs](#)

The World Bank's Board of Executive Directors today approved \$1.5 billion in financing to support India's structural reforms to boost...



Why in News

The **World Bank** approved **\$1.5 billion financing** to India under the **Development Policy Financing (DPF)** operation.

Institutional Features

- **DPF** is a **World Bank** instrument that provides rapidly disbursing financial assistance.
- It supports poverty reduction and climate-friendly inclusive growth.
- Financing may be provided as **loans, credits, grants or guarantees**.

Governance Dimensions


- It strengthens **public financial management** systems.
- It improves the investment climate and service delivery.
- It supports economic diversification and institutional reforms.

Eligibility Conditions

- Countries must maintain an adequate macroeconomic policy framework.

- Reform programmes must be implemented satisfactorily.
- Operations must align with the goals of the **Paris Agreement**.
- In India, implementation is monitored by the **Department of Economic Affairs (DEA), Ministry of Finance**.

Bitumen

 The Indian Express

Amid West Asia conflict, bitumen woes hit India's road infrastructure push

The ongoing conflict in West Asia has hit India's push to expand road infrastructure. Bitumen, crucial for road construction,...



Why in News

The **West Asia conflict** has disrupted India's bitumen imports, exposing its **30–40% import dependency**.

Material Characteristics

- **Bitumen** is a dense, highly viscous petroleum-based hydrocarbon.
- It occurs naturally in **oil sands and pitch lakes**.
- It is also obtained as a residue from **crude oil distillation**.

Industrial Importance

- It is widely used in **road and highway construction**.
- It is popularly called "**Black Gold**" in the pavement industry.

Physical Properties

- It possesses strong waterproofing and adhesive properties.
- It is soluble in **carbon disulphide**.
- Its composition includes hydrocarbons along with **sulphur, oxygen, calcium and iron**.

Other Important News of the day

Places in News

Norway

Why in News

Norway imposed strict restrictions on the use of **Generative AI** in schools to protect learning outcomes.

Geographical Location

- Norway occupies the western half of the Scandinavian Peninsula.
- It shares land borders with **Sweden, Finland and Russia**.
- Its capital city is **Oslo**.



Maritime Boundaries

- It is bounded by the **Barents Sea** in the north.
- The **Norwegian Sea** and **North Sea** lie to its west.
- The **Skagerrak Strait** lies to its south.

Physical Geography

- About two-thirds of the country is mountainous.
- It is globally famous for its **glacial fjords**.
- Galdhøpiggen (2,469 m) is the highest peak.
- **Glama** is the longest river and **Lake Mjosa** is the largest lake.

Kalamkari Painting

📰 The Indian Express

[From Kalamkari painting to Kashmiri carpet, PM Modi's gifts showcase India's heritage](#)

From Kalamkari Mahabharata painting to Pochampally silk stole to Lakadong Turmeric to thekua — a range of Indian art, handicraft and...



Why in News

The Prime Minister gifted a **Kalamkari Mahabharata painting** to the French President.

Historical Background

- **Kalamkari** is a hand-painted or block-printed textile art form of **Andhra Pradesh**.
- It flourished under the **Qutb Shahis of Golconda** during the **16th–17th centuries**.
- The term combines '**Kalam**' (pen) and '**Kari**' (craftsmanship).
- It has a **GI tag** from Andhra Pradesh.

Artistic Features

- Natural dyes extracted from plants and minerals are used for colouring.
- Artists use bamboo or date-palm pens for drawing.
- Indigo dye, alizarin baths and wax-resist techniques are part of the process.

Regional Variants

- **Srikalahasti Kalamkari** is entirely hand-drawn and depicts mythological themes.
- Machilipatnam (Pedana) Kalamkari uses block-printing and shows strong **Persian influence**.
- Common motifs include flowers, creepers, parrots and peacocks.

Disease

Sickle Cell Anaemia

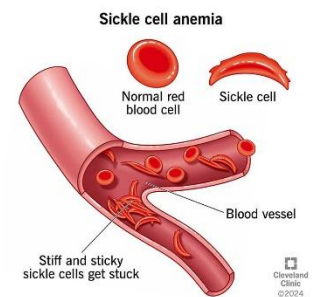
Why in News

The President of India stated that India aims to eradicate **Sickle Cell Anaemia** before the target year **2047**.



Disease Profile

- It is an inherited blood disorder affecting **haemoglobin** in red blood cells.
- It is caused by mutations in the Beta-globin (HBB) gene.
- The abnormal haemoglobin produced is called **Haemoglobin-S (HbS)**.



Physiological Impact

- Red blood cells become sickle-shaped and obstruct blood vessels.
- Reduced oxygen supply can damage multiple organs.
- People inheriting one defective gene develop **Sickle Cell Trait**, not the disease.

Clinical Management

- Early symptoms include anaemia, jaundice and swollen hands and feet.
- Later complications include severe pain, infections and organ damage.
- **Bone marrow transplantation** is curative, while **Hydroxyurea** is commonly used for management.
- **Gene therapy** is being explored as a future treatment option.

Uttar Pradesh in News

Uttar Pradesh to Emerge as Defence Drone Innovation Hub

DD India

The defence decade: How India built military strength, industrial power and global strategic influence

Over the last twelve years, India has undertaken one of the most ambitious defence transformations in its modern history.



Why in News?

The **Ministry of Defence** has approved, in principle, a **₹500 crore National Military Drone Technology Hub** at **IIT Kanpur** to develop military drone and counter-drone technologies.

Institutional Framework

- The hub will be established at IIT Kanpur with an estimated investment of **₹500 crore**.
- The proposal was prepared by **Uttar Pradesh Expressways Industrial Development Authority (UPEIDA)**, the nodal agency for the Uttar Pradesh Defence Industrial Corridor (UPDIC).
- **IIT Kanpur** already hosts a **Centre of Excellence (CoE) for Drone Technologies** for research, testing, training and startup incubation.

Strategic Significance

- The initiative supports **Atmanirbhar Bharat** by promoting indigenous unmanned systems and reducing dependence on foreign technologies.
- It will strengthen Uttar Pradesh's role in India's defence modernization and drone innovation ecosystem.
- The hub will also promote the development of **dual-use drone technologies** for civilian and defence applications.

Defence Corridor Integration

- The project will utilize the six UPDIC nodes for manufacturing and Maintenance, Repair and Overhaul (MRO) activities.
- The six nodes are Aligarh, Agra, Jhansi, Kanpur, Lucknow and Chitrakoot.
- UPDIC, launched in 2018, is one of India's two Defence Industrial Corridors, the other being in Tamil Nadu.