

DAILY CURRENT AFFAIRS (DCA)

Time: 45 Min

Date: 28-04-2025

Table of Content

India's Claim Over Continental Shelf in Arabian Sea
History and Evolution of Monsoon Forecasting in India
Bandung Conference
Govt. Brings Cybercrime Centre I4C under PMLA
NMCG Approves Annual Master Plan to Promote River-Sensitive Urban Planning Under RCA

News In Short

Pandit Chatur Lal
Raja Ravi Varma
Why does Crimea matter to Russia?
World Economic Forum
Corporate Social Responsibility (CSR)
UDAN Scheme
National Investigation Agency (NIA)
Temperature Flips
Urban Heat Island

INDIA'S CLAIM OVER CONTINENTAL SHELF IN ARABIAN SEA

Context

- India has strategically expanded its claim in the **Central Arabian Sea**, adding nearly 10,000 square kilometers to its **Extended Continental Shelf (ECS)**.

About the Continental Shelf

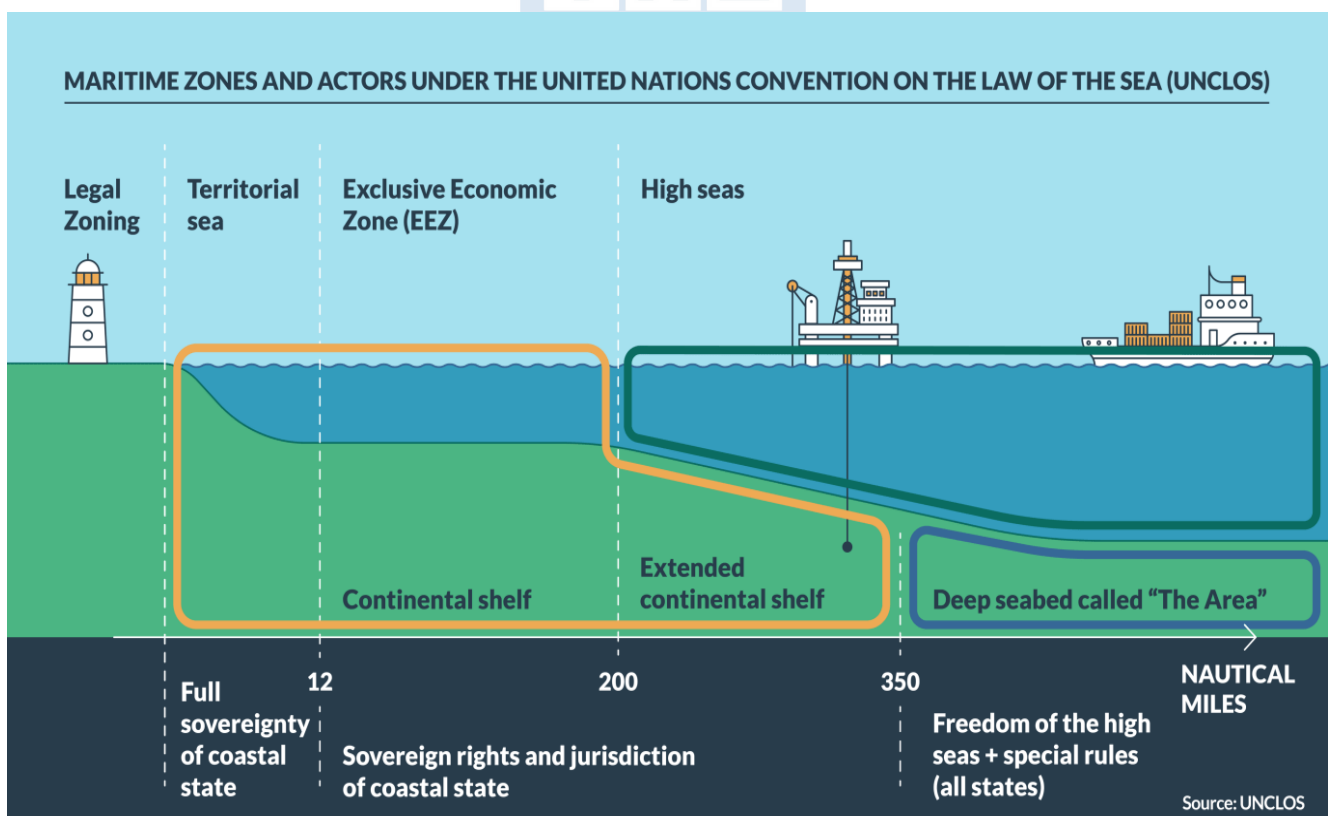
- It is a critical concept in maritime law, defined under the **United Nations Convention on the Law of the Sea (UNCLOS)**.
- It refers to the **submerged extension of a country's landmass**, stretching from the coastline to the deep ocean floor.
- Coastal nations** have sovereign rights over their continental shelf for exploring and exploiting natural resources, such as minerals, oil, and gas.

India's Expanding Claims

- Recent Addition in the Arabian Sea:** According to the **National Centre for Polar and Ocean Research (NCPOR)**, Goa, India's seabed and sub-seabed area could nearly equal its land area of 3.274 million square kilometers.
- Modified Strategy:** In response to Pakistan's objections over disputed areas in the Western Arabian Sea, the **Commission on the Limits of the Continental Shelf (CLCS)** rejected India's entire claim in the region in March 2023.
 - Recently, India restructured its claims **into partial submissions**, securing uncontested areas while leaving disputed regions for bilateral discussion.

Exclusive Economic Zone (EEZ) and Beyond

- Nations are entitled to an **EEZ extending 200 nautical miles** from their coastline, granting exclusive rights to fishing, mining of minerals, polymetallic nodules, and resource extraction like oil reserves.
 - India currently possesses **12 nautical miles of territorial sea and 200 nautical miles of EEZ**.
- Beyond the EEZ, countries can claim an **ECS** if they provide scientific evidence to the **CLCS** that the shelf is a **natural extension of their landmass**.



UNCLOS and the CLCS

- UNCLOS, adopted in 1982, provides the **legal framework** for defining and claiming the continental shelf.
- The **CLCS, established under UNCLOS**, reviews scientific data submitted by countries and makes recommendations on the outer limits of their continental shelf.

Process of Claiming a Continental Shelf Under UNCLOS

- **Scientific Evidence:** Nations must provide detailed scientific data proving that the **continental shelf is a natural extension of their landmass** to the seabed.
 - ♦ It includes geological and geophysical surveys, bathymetric mapping, and sediment analysis.
- **Submission to the CLCS:** It includes technical data and maps outlining the proposed boundaries.
- **Review and Recommendations:** The CLCS reviews the submission and may request additional data or modifications.
 - ♦ It provides recommendations on the outer limits of the continental shelf, which are binding once accepted.
- **Resolving Overlaps:** If the claimed area overlaps with another country's continental shelf, bilateral negotiations or agreements are required to resolve disputes.
- **Final Approval:** Once the CLCS recommendations are accepted, the claiming nation gains rights to explore and exploit resources in the ECS, including minerals, oil, and gas.

Navigating Geopolitical Challenges

- **Sir Creek Dispute:** Located in the marshes of the Rann of Kutch, continues to challenge India's maritime claims.
 - ♦ Pakistan raised objections to portions of India's ECS submission, citing overlaps near the maritime border.
- **Oman Overlap:** India's ECS in the Arabian Sea overlaps with Oman's claims; however, **an Agreement in 2010** ensures that this shared region is not under dispute.
- **Contests in the East:** On India's eastern and southern coastlines, ECS claims in the Bay of Bengal and Indian Ocean span 300,000 square kilometers but have faced **challenges from Myanmar and Sri Lanka**.

Source: TH

HISTORY AND EVOLUTION OF MONSOON FORECASTING IN INDIA**In News**

- The India Meteorological Department (IMD) predicted 'above normal' rainfall (105% of the long-period average) during the 2025 southwest monsoon season (June-September).
 - ♦ The monsoon is crucial for agriculture, economy, and water resources, providing around **70% of India's annual rainfall**.
 - ♦ Since 2007, the accuracy of monsoon forecasts has improved significantly, with the absolute error in rainfall reducing by 21% from 1989-2006 to 2007-2024.

Do you know?

- Meteorology in India dates back to ancient times, with early texts like the **Upanishads, Brihatsamhita, Arthashastra, and Meghdoot** showing advanced understanding of weather and rain.
- Scientific meteorology began in the 17th century, with Edmund Halley explaining the monsoon. The British established early observatories in the 18th and 19th centuries, and Captain Piddington coined the term "cyclone."

History of Monsoon Forecasting

- The IMD began forecasting the monsoon in 1877, driven by the need to understand rainfall patterns after the **devastating 1876-78 Great Famine**.
- **Henry Francis Blanford**, in the late 1800s, studied the relationship between Himalayan snow cover and monsoon rainfall.
 - ♦ He made the first long-range forecast in 1886.
- **Sir John Eliot** took **Blanford's work** forward by incorporating local weather conditions and data from the Indian Ocean and Australia, although his predictions were still limited in accuracy.
- **Sir Gilbert Walker in 1904**, introduced statistical models using 28 parameters, identifying the **Southern Oscillation (SO)** as a key influence on the Indian monsoon.
 - ♦ He divided India into three subregions for forecasting.

Scenario After Independence

- IMD continued using Walker's model until 1987, but it became less effective due to changes in climate patterns and loss of correlation with key parameters.
- In 1988, The IMD shifted to a new regression model (**Gowariker Model**) using 16 variables,

but issues persisted with the accuracy of regional forecasts.

DID YOU KNOW?



India was the first developing country in the world to have its own geostationary satellite, INSAT, for continuous weather monitoring of this part of the globe and particularly for cyclone warning.

New Models and Strategies

- In 2003, IMD introduced two new models based on 8 and 10 parameters.
 - ♦ The two-stage forecast strategy was also implemented, although it had mixed results.
- In 2007, IMD developed a **Statistical Ensemble Forecasting System**, reducing the number of parameters to improve accuracy and introduced ensemble forecasts to increase robustness.
- In 2012, the **Monsoon Mission Coupled Forecasting System (MMCFS)** was launched to combine ocean, atmospheric, and land data for better forecasts.
- In 2021, the **Multi-Model Ensemble system** further improved forecast accuracy by combining global climate models, including MMCFS.

Source :IE

BANDUNG CONFERENCE

Context

- This year marks the 70th anniversary of the historic Bandung Conference held in Indonesia in 1955.

Bandung Conference

- The **Bandung Conference** brought together **twenty-nine** newly independent Asian and African countries.
- The **objective** of the conference was to deliberate on the common challenges faced by decolonized nations and to assert their collective voice in a world order dominated by the Cold War superpowers.
- The conference marked the emergence of the **Global South** as an influential grouping in international politics.
 - ♦ It aimed to promote **Afro-Asian economic and cultural cooperation** and strongly opposed colonialism, imperialism, and neocolonialism in all forms.
- The conference served as a precursor to the **Non-Aligned Movement (NAM)**.

Bandung's Ten Principles (Dasasila Bandung)

- Respect for fundamental human rights, and for the purposes and principles of the Charter of the United Nations,
- Respect for the sovereignty and territorial integrity of all nations,
- Recognition of the equality of all races and of the equality of all nations, large and small,
- Abstention from intervention or interference into the internal affairs of another country,
- Respect for the right of each nation to defend itself, singly or collectively, in conformity with the Charter of the United Nations,
- Abstention from the use of arrangement of collective defense to serve the particular interests of any of the big powers, and abstention by any country from exerting pressures on other countries,
- Refraining from acts or threats of aggression or the use of force against the territorial integrity or political independence of any country,
- Settlement of all international disputes by peaceful means, such as negotiation, conciliation, arbitration, or judicial settlement as well as other peaceful means of the parties' own choice, in conformity with the Charter of the United Nations,
- Promotion of mutual interests and cooperation, and
- Respect for justice and international obligations.

Conclusion

- The Bandung Conference remains a powerful symbol of unity, dignity, and self-determination for the countries of the Global South.
- In an era of shifting geopolitical dynamics, the spirit of the Bandung Conference continues to hold immense relevance for efforts toward creating a more just and multipolar world order.

What is Non-Aligned Movement (NAM)?

- **NAM** is an alliance of developing nations that refuses to identify with any major superpower during the Cold War.
- **History:** It has its origins in the 1955 **Bandung conference** in Indonesia.
- **NAM was established** and held its first conference in **1961 in Belgrade**, the capital of Yugoslavia.
- **Founders:** The movement's founders are President Sukarno of Indonesia, Prime Minister Jawaharlal Nehru of India, Gamal Abdel Nasser of Egypt, Kwame Nkrumah of Ghana, and President Josip Tito of Yugoslavia.

- **Secretariat:** NAM does **not have a permanent secretariat** or a formal founding charter, act, or treaty. After the United Nations, NAM is the second-largest grouping of nations.
- **Members:** Currently, NAM membership consists of **120 countries**: 53 from Africa, 39 from Asia, 26 from Latin America and the Caribbean, and two from Europe. It also includes the non-UN member state of Palestine, and 17 other observer countries.

Source: IE

GOVT. BRINGS CYBERCRIME CENTRE I4C UNDER PMLA

Context

- The government has authorised **Indian Cyber Crime Coordination Centre (I4C)** to **share and receive information from the Enforcement Directorate** under the **anti-money laundering law**.

About

- It is aimed at **detecting money trails and combating cyber frauds**.
- The Revenue Department under the Finance Ministry included **I4C under Section 66 of the Prevention of Money Laundering Act**.
- **Need:** This information sharing would help identify the masterminds behind such frauds which are mostly trans-national.

About Directorate of Enforcement (ED)

- **Established:** It was established in **1956** with the formation of an **'Enforcement Unit'** under the aegis of the **Department of Economic Affairs** and handles Exchange Control Laws violations under **Foreign Exchange Regulation Act, 1947 (FERA 1947)**.
 - ♦ A year later, the Enforcement Unit was renamed the Enforcement Directorate.
- It is a **multi-disciplinary organization** mandated with **investigation of the offence of money laundering and violations of foreign exchange laws**.

The statutory functions of the Directorate include enforcement of following Acts:

- **The Foreign Exchange Management Act, 1999 (FEMA):** It is a **civil law** enacted to consolidate and amend the laws relating to facilitate **external trade and payments**.

- **The Prevention of Money Laundering Act, 2002 (PMLA):** It is a **criminal law** enacted to prevent money, ED has been given the responsibility to enforce the provisions of the PMLA.
- **The Fugitive Economic Offenders Act, 2018 (FEOA):** This law was enacted to **deter economic offenders from evading the process of Indian law** by remaining outside the jurisdiction of Indian courts.

What is Cybercrime?

- Cybercrime refers to criminal activities that involve the **use of computers, networks, and digital technologies**.
- It encompasses a **wide range of illicit activities** conducted in the virtual space, often with the intent to compromise, damage, or gain unauthorized access to computer systems, networks, and data.
- Cybercriminals employ **various techniques and tools** to exploit vulnerabilities in networks, and they may target individuals, organizations, or even governments.

Common types of cybercrime include:

- **Hacking:** Unauthorized access to computer systems or networks to steal, alter, or destroy data.
- **Phishing:** Deceptive attempts to acquire sensitive information, such as usernames, passwords, and financial details, by posing as a trustworthy entity.
- **Malware:** Malicious software designed to disrupt, damage, or gain unauthorized access to computer systems.
- **Identity Theft:** Stealing and using someone's personal information, such as social security numbers or credit card details, for fraudulent purposes.
- **Cyber Espionage:** Covert activities aimed at gaining unauthorized access to sensitive information for political, economic, or military purposes.
- **Cyberbullying:** Using digital platforms to harass, threaten, or intimidate individuals.

Impact of Cyber Crimes

- **National Security Threats:** Cyber crimes pose a threat to national security when state-sponsored actors or criminal organizations target critical infrastructure, government institutions, or military systems.
- **Data Breaches:** Data breaches lead to the exposure of personal information, trade secrets, intellectual property, and other confidential data, causing severe damage to the affected entities.

- **Disruption of Services:** Cyber attacks disrupt essential services such as power grids, communication networks, and transportation systems.
- **Reputational Damage:** Organizations that fall victim to cyber attacks often suffer reputational damage.

Initiatives by Government of India to Prevent Cybercrimes

- **Indian Computer Emergency Response Team (CERT-In):** CERT-In is the **national nodal agency** for responding to cybersecurity incidents.
 - ♦ It provides proactive and reactive cybersecurity support and plays a crucial role in ensuring the security and resilience of the country's cyber infrastructure.
- **National Critical Information Infrastructure Protection Centre (NCIIPC):** NCIIPC is responsible for protecting critical information infrastructure from cyber threats.
 - ♦ It identifies and designates critical sectors and advises organizations in these sectors on enhancing their cybersecurity measures.
- **Cyber Crime Prevention against Women & Children (CCPWC) scheme:** The Ministry of Home Affairs has provided financial assistance to all the States & UTs under the scheme to support their efforts for setting up of cyber forensic-cum-training laboratories, training, and hiring of junior cyber consultants.
- **Indian Cyber Crime Coordination Centre (I4C):** It provides a framework and ecosystem for Law Enforcement Agencies (LEAs) to deal with cyber crimes in a comprehensive and coordinated manner.
 - ♦ 'Joint Cyber Coordination Teams' have been constituted for seven regions at Mewat, Jamtara, Ahmedabad, Hyderabad, Chandigarh, Visakhapatnam and Guwahati under the I4C.
- **National Cyber Crime Reporting Portal:** It is launched to enable the public to report incidents pertaining to all types of cyber crimes.
 - ♦ A **toll-free number 1930** has been operationalized to get assistance in lodging online cyber complaints.
 - ♦ The **Citizen Financial Cyber Fraud Reporting and Management System** module has also been launched for immediate reporting of financial frauds and to stop siphoning off funds by the fraudsters.
- **Cyber Swachhta Kendra (Botnet Cleaning and Malware Analysis Centre):** This initiative is aimed at creating awareness about **botnet and**

malware infections and providing **tools for detection and cleaning**.

International Conventions on Cyber Crimes

- **Budapest Convention on Cybercrime (Council of Europe Convention on Cybercrime):** It is the **first** international treaty specifically addressing crimes committed via the internet and other computer networks.
 - ♦ It includes provisions on offenses such as illegal access, data interference, system interference, and content-related crimes.
- **Internet Governance Forum:** The United Nations Internet Governance Forum (IGF) serves to bring people together from various stakeholder groups, as equals, in discussions on digital public policy.
- **African Union Convention on Cyber Security and Personal Data Protection (Malabo Convention):** This convention focuses on cybersecurity and personal data protection on the African continent.
 - ♦ It outlines principles for preventing cyber threats, protecting critical information infrastructure, and facilitating international cooperation.

Source: TH

NMCG APPROVES ANNUAL MASTER PLAN TO PROMOTE RIVER-SENSITIVE URBAN PLANNING UNDER RCA

Context

- **The National Mission for Clean Ganga (NMCG)** has approved the annual master plan under the **River Cities Alliance (RCA)** to chart a **roadmap of initiatives to be undertaken across the year**.

About

- As per the Jal Shakti Ministry, the plan focuses on **integrating river-sensitive urban planning within India's growing cities**.
- It encompasses a series of capacity-building programs, knowledge exchange platforms, development of technical tools, expert guidance, and thematic case studies.

Urban River Management Plans (URMPs)

- It was launched in **2020** by **National Institute of Urban Affairs (NIUA)** and **NMCG**.

- It represents a **first-of-its-kind approach** to ensure that environmental, economic, and social dimensions are considered in the urban management of rivers.
- **Five cities**—Kanpur, Ayodhya, Chhatrapati Sambhaji Nagar, Moradabad, and Bareilly—have already developed their URMPs.
- The year ahead will also see the development of **25 more URMPs as part of the first phase** of a larger mission to create **60 such plans across India over the next two to three years**.
- **Steering Committees** have already been constituted in states like **Uttarakhand, Uttar Pradesh, Bihar, and West Bengal** to facilitate plan formulation and guide implementation.
- **Supported by the World Bank**, this initiative marks a bold step in deepening river-sensitive urban governance.

River City Alliance

- RCA was initiated by NMCG under the **Ministry of Jal Shakti**, in association with National Institute of Urban Affairs (NIUA) under **Ministry of Housing and Urban Affairs (MoHUA)** in 2021.
- **It is a dedicated platform** for river cities across India to discuss & exchange information for sustainable management of urban rivers.
- The Alliance focuses on **three broad themes**—Networking, Capacity Building and Technical Support.
- **The alliance began with 30 member cities** and has since expanded to include **over 145 cities across India**, encompassing both Ganga basin and non-Ganga basin urban areas.
 - ♦ The city of Aarhus, Denmark, has also joined, marking the alliance's growing international engagement.

Global River Cities Alliance (GRCA)

- Building on RCA's success, the Global River Cities Alliance (GRCA) was launched at **COP28 in 2024**.
- **This international coalition** includes **over 275 river cities** from **11 countries**, such as Egypt, the Netherlands, Denmark, Ghana, Australia, Bhutan, Cambodia, and Japan.
- The GRCA aims to foster global collaboration on river conservation and sustainable water management, with support from international funding agencies like the **World Bank, Asian Development Bank (ADB), and Asian Infrastructure Investment Bank (AIIB)**.

National Mission for Clean Ganga (NMCG)

- **NMCG** is a registered society under the **Societies Registration Act 1860**.
- **Objective:** To ensure effective abatement of pollution and rejuvenation of the river Ganga and maintain minimum ecological flows in the river while ensuring environmentally sustainable development.
- NMCG has a two tier management structure and comprises **Governing Council and Executive Committee**.
 - ♦ **Head:** Both of them are headed by Director General, **NMCG**.
 - ♦ **The Executive Committee** has been authorized to accord approval for all projects up to **Rs.1000 crore**.
- It implements Centre's flagship **Namami Gange scheme Programme**, which integrates the efforts to clean and protect the Ganga River in a comprehensive manner.

Source: AIR

NEWS IN SHORT

PANDIT CHATUR LAL

In News

- The Department of Posts will release a stamp to honor centenary celebrations of tabla exponent **Pandit Chatur Lal**.

Pandit Chatur Lal

- He was a pioneer who introduced tabla to Western audiences and contributed to the first-ever LP of Indian classical music recorded for the West in 1955.
- **Early Life:** He was Born in Udaipur and came from a family of court musicians and learned tabla under Ustad Abdul Hafiz Ahmed Khan.
 - ♦ He joined All India Radio in 1947, where he met Pandit Ravi Shankar, leading to collaborations that significantly impacted his career.
- **Global exposure:** Yehudi Menuhin was inspired by Chatur Lal's performance in 1952 and later invited him to perform in New York, marking an important milestone in Tabla's global exposure.
 - ♦ He performed with Ustad Ali Akbar Khan at prestigious venues, introducing Indian classical music to Western audiences.

- ♦ He performed in a fusion concert with jazz drummer Papa Jo Jones, one of the first Indo-jazz collaborations, which influenced later groups like Shakti.
- **Oscar Nomination:** He was nominated for an Oscar in 1957 for his role in the Canadian short film A Chairy Tale.
- **Royal Performance:** In 1962, Chatur Lal performed for Queen Elizabeth at Rashtrapati Bhawan in India.
- **Death:** He died in October 1965 at the age of 40 due to complications from jaundice, cutting short his promising career.

Source :IE

RAJA RAVI VARMA

Context

- April 29 marks the birth anniversary of Raja Ravi Varma, one of India's pioneering modern artists.

About: Raja Ravi Varma (1848-1906)

- Born on **April 29, 1848, in Kerala** into an aristocratic family, Raja Ravi Varma revolutionized Indian art by **blending Indian themes with European techniques**, particularly **oil painting**, introduced to India by the British.
- He is renowned for his realistic depictions of **Indian gods and mythological characters**, set against natural, earthy backgrounds with European realism. His distinctive style profoundly influenced **Indian calendar art** as well as the **film and television industry**.
- In addition to his artistic contributions, Varma used his work as a tool for **social reform, advocating for women's education** and speaking out against practices such as **child marriage**.
- He also supported the growing nationalist movement by painting portraits of prominent leaders, including **Dadabhai Naoroji and Bal Gangadhar Tilak**.

Awards and Legacy

- He was a member of the **Royal Academy of Arts** in London, making him the **first Indian artist** to receive this honor.
- His painting "Hamsa Damayanti," which depicts the story of King Nala and Damayanti from the Mahabharata, won the **first prize at the Vienna Exhibition** in 1873.

- He was awarded the **Kaiser-i-Hind** gold medal by the British government in **1904** for his contributions to art.
- In 2013, **a crater on the planet Mercury** was named in his honour.

Source: TH

WHY DOES CRIMEA MATTER TO RUSSIA?

Context

- The US President Donald Trump has said that the Crimean peninsula should remain with Russia.

Strategic Military Access

- Russia's extensive coastline is mostly along the frozen Arctic, making many ports unusable during winters.
- **The Black Sea** offers the warmest marine access for Russia.
 - ♦ It serves as a gateway to the Mediterranean Sea (via the **Bosphorus and Dardanelles Straits** controlled by Turkey) and onwards to Europe, Africa, and West Asia.
- However the Black Sea ports like **Sochi and Novorossiysk** are shallow and less ideal for major naval operations.
- **Sevastopol**, located in Crimea, is a deepwater port and has historically been the home of Russia's Black Sea Fleet.



Post-Soviet disintegration

- **Kharkiv Pact, 1997:** Crimea remained part of Ukraine but Russia leased Sevastopol until 2017 (later extended to 2042).
- Russia unilaterally annulled these agreements after **annexing Crimea in 2014** to retain permanent control over **Sevastopol**.

Source: IE

WORLD ECONOMIC FORUM

In News

- The World Economic Forum is investigating allegations against its founder and former Chairman, Klaus Schwab, following a whistleblower letter accusing him of ethical misconduct.

About World Economic Forum (WEF)

- Founded in:** 1971 as the European Management Forum.
- Renamed:** Became the World Economic Forum (WEF) in 1987 to reflect a broader global focus.
- Founder:** Klaus Schwab, a German economist, who also pioneered the concept of “stakeholder capitalism” — the idea that companies should serve all stakeholders, not just shareholders.
- HQ:** Switzerland
- Aims and Objectives:** To improve the state of the world through public-private cooperation.
 - Address global economic, social, and environmental challenges.
 - Foster collaboration among governments, businesses, and civil society.

Major Functions and Activities

- Global Dialogues:** Hosts the prestigious Annual Meeting in Davos, where world leaders, CEOs, economists, activists, and academics gather to discuss urgent global issues.
- Publications and Rankings:** Produces influential reports and indices, including:
 - Global Competitiveness Report
 - Global Gender Gap Report
 - Future of Jobs Report
 - Energy Transition Index

Source: IE

CORPORATE SOCIAL RESPONSIBILITY (CSR)

In News

- Corporate Social Responsibility (CSR) spending by listed companies rose by 16% to Rs 17,967 crore in FY 2023-24, driven by an 18% increase in average net profits.

Corporate Social Responsibility (CSR)

- Definition:** CSR refers to corporate initiatives aimed at societal, environmental, and economic development, allowing companies to create a positive impact on communities.

- Legal Basis:** CSR in India has traditionally been seen as a philanthropic activity. However, with the introduction of **Section 135 in the Companies Act 2013**, India became the first country to have statutorily mandated CSR for specified companies.
- Eligibility Criteria:** India's CSR policy established through the 2014 and 2021 amendments to the Companies Act of 2013, mandates companies with a net worth of **₹500 crore**, **turnover of ₹1,000 crore**, or a **net profit of ₹5 crore** to spend **at least 2% of their average net profit over the last three years on CSR activities**.
- 2019 Amendment:** Unspent funds must be transferred to a Schedule VII Fund (e.g., PM CARES, Clean Ganga Fund) by the fiscal year-end.
 - Unspent CSR funds could be carried forward.

Category	Key Benefits
Social	Community welfare, environmental sustainability
Economic	Profitability, investment appeal, risk reduction
Corporate	Reputation boost, employee satisfaction, differentiation
Compliance	Adherence to laws, governance standards
Innovation	Sustainable product innovation, new market access
Stakeholder Relations	Trust building, influence on policy

Source :IE

UDAN SCHEME

Context

- Recently, the Prime Minister appreciated the **UDAN Scheme**, mentioning strengthening India's Aviation sector.

About

- Regional Connectivity Scheme (RCS) – UDAN (“Ude Desh ka Aam Nagrik”)** was launched in 2016.
- The first UDAN flight operated between **Shimla and Delhi in 2017**.

- **625 UDAN routes** have been **operationalized, connecting 90 airports** (including 2 water aerodromes, and 15 heliports) across India.
- **More than 1.49 crore passengers** have benefited from affordable regional air travel under UDAN.
- **India's airport network** expanded from 74 airports in 2014 to 159 airports in 2024, more than doubling in a decade.
- **₹4,023.37 crore disbursed as Viability Gap Funding (VGF)** to promote connectivity to underserved and remote regions.
- **UDAN strengthened regional tourism, healthcare access, and trade,** catalyzing economic growth in Tier-2 and Tier-3 cities.

Source: PIB

NATIONAL INVESTIGATION AGENCY (NIA)

Context

- The National Investigation Agency (NIA) began investigating the Pahalgam terror attack.

National Investigation Agency (NIA)

- National Investigation Agency (NIA) is working as the **Central Counter Terrorism Law Enforcement Agency in India.**
- It was established in 2008, following recommendations from expert committees to create a specialized agency for investigating terrorism-related cases, which often involve complex inter-State and international links, including activities like arms and drug smuggling, fake currency circulation, and border infiltration.
 - ♦ This was prompted by the **26/11 Mumbai terror attacks.**
- NIA cases are tried in Special Courts, which are designated by the Central Government, in consultation with the Chief Justice of the High Court, through an Official Gazette notification.

Jurisdiction

- The NIA Act empowers the agency to investigate offenses that threaten India's sovereignty, security, and foreign relations.
 - ♦ The law under which the agency operates extends to the whole of India and also applies to Indian citizens outside the country; persons in the service of the government wherever they are posted; persons on ships and aircraft registered in India wherever they may be; persons who commit a scheduled offence beyond India against the Indian citizen or affecting the interest of India.

- The NIA Act, amended in 2019, outlines the offences the NIA can investigate, including crimes under various laws like the Criminal Code, Information Technology Act, and Arms Act.

Powers of NIA

- **Investigation:** The Central Government can direct the NIA to investigate any case when it is of the opinion that a **Scheduled Offence** (listed under the NIA Act) has been committed.
 - ♦ The NIA can suo motu (on its own) register and investigate cases in any state with central approval.
- **Prosecution:** The NIA is empowered to prosecute cases in Special NIA Courts that are established under the NIA Act.
 - ♦ These courts ensure fast-track trials for cases investigated by the NIA.
- **Coordination with State Police:** The NIA collaborates with State Police forces during investigations. It can take over investigations from the State Police, ensuring centralized handling of serious offences like terrorism, organized crime, etc.

What are the scheduled offences?

- The list includes the Explosive Substances Act, Atomic Energy Act, Unlawful Activities (Prevention) Act, Anti-Hijacking Act, Suppression of Unlawful Acts against Safety of Civil Aviation Act, SAARC Convention (Suppression of Terrorism) Act, Suppression of Unlawful Acts Against Safety of Maritime Navigation and Fixed Platforms on Continental Shelf Act, Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Act and relevant offences under the Indian Penal Code, Arms Act and the Information Technology Act.
- In September 2020, the Centre empowered the NIA to also probe offences under the Narcotic Drugs and Psychotropic Substances Act that are connected to terror cases.

Source :IE

TEMPERATURE FLIPS

Context

- According to a new study, Over 60 per cent of the world has likely experienced sudden swings between extreme heat and cold over the past six decades.

About

- **Temperature flips** refer to abrupt and rapid transitions from extreme warmth to cold, or vice versa, within a very short time span.
- **Impact:** Such swift changes can lead to severe and potentially irreversible impacts on;
 - ♦ Human health (heatstroke, respiratory illnesses),
 - ♦ Agriculture (crop failures),
 - ♦ Infrastructure (road and bridge damages due to thermal stress),
 - ♦ Air quality (increased pollution during heat events),
 - ♦ Plant and animal ecosystems.
- **Geographical Spread:** Temperature flips occurred less frequently in the tropics and polar regions and are widespread in mid-latitudes, including East Asia, eastern North America and parts of South America, Africa and Australia.
- **In April 2021, Europe** experienced a temperature flip where temperatures dropped sharply from unusually warm conditions, causing widespread frost damage to crops.

Source: DTE

URBAN HEAT ISLAND**Context**

- A recent study assessed the **temperature-related deaths in urban heat islands**.

What is an Urban Heat Island?

- An Urban Heat Island (UHI) is an area in which the **temperature is higher than in surrounding rural areas** due to human activities and infrastructure.
- UHI could lead to temperature differences of **up to six degrees centigrade** within a given area or neighbourhood.

Factors Responsible for Urban Heat Islands

- **Built Environment:** The materials used in urban construction, such as concrete and asphalt, absorb and retain heat, raising local temperatures.
- **Reduced Vegetation:** Urban areas typically have fewer trees and green spaces compared to rural areas, which reduces the cooling effect of shade and transpiration.
- **Human Activities:** Activities like transportation, industry, and energy consumption release heat into the environment, further elevating temperatures.
- **Altered Surface Characteristics:** Urbanization often involves replacing natural surfaces with artificial ones, which alters the surface reflectivity (albedo) and thermal properties, contributing to increased heat absorption.

Concerns

- **Heat exhaustion and heatstroke**, particularly among vulnerable populations.
- **Energy Consumption:** Increased demand for cooling, which escalates energy consumption and associated greenhouse gas emissions.
- **Water Management:** UHIs disrupt local water cycles by altering evaporation rates and reducing groundwater recharge.

Source: TH