

DAILY CURRENT AFFAIRS (DCA)

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News in Short

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INDIA ANNOUNCES USD680 MN SPECIAL ECONOMIC PACKAGE FOR MAURITIUS

Context

- India announced a **USD 680 million Special Economic Package for Mauritius** during the visit of **Mauritius Prime Minister Navinchandra Ramgoolam to Varanasi in 2025**, aimed at deepening strategic and development cooperation between the two countries.

Key Points

- Under the special economic package**, India will assist Mauritius in implementing at least 10 projects, including upgrading key infrastructure such as ports, airports, and roads, as well as establishing new schools and hospitals.
- Approximately **USD 440 million (grant-cum-Line of Credit)** will be used for large infrastructure projects such as completion of a new Air Traffic Control (ATC) tower at SSR International Airport and development of Motorway M4.
- The both sides will work towards **enabling bilateral trade in local currencies** following successful launch of **UPI and RuPay cards in Mauritius**.
- The package reflects strong **people-to-people ties, with over 68% of Mauritius's population** being of Indian origin, strengthening bilateral goodwill.
- Joint redevelopment and restructuring of the **Port Louis port to make Mauritius** a stronger regional maritime hub.

India-Mauritius Bilateral Relations

- Diplomatic Relations:** India and Mauritius established diplomatic relations in **1948** and have become key trading partners in the Asian continent.
- Commercial Relations:** For the FY 2022-2023, Indian exports to Mauritius was USD 462.69 mn, Mauritian exports to India was USD 91.50 mn and Total trade was USD 554.19 mn.
 - Double Taxation Avoidance Agreement:** Signed in **1982** to help non-resident investors avoid double taxes.
 - CECPA Agreement:** India and Mauritius signed the Comprehensive Economic Cooperation and Partnership Agreement (CECPA) in 2021, India's first trade agreement with an African country.
 - FDI Source:** Mauritius is the **second-largest source** of Foreign Direct Investment (FDI) into India for FY 2023-24, after Singapore.

- Defence Relations:** India is Mauritius' preferred defence partner for acquiring platforms, capacity building, joint patrolling, hydrological services, etc.
 - First Agreement:** Transfer of a Dornier aircraft and an Advanced Light Helicopter (Dhruv) to Mauritius on lease.
 - Second Agreement:** A \$100 million Line of Credit (LoC) for Mauritius to procure defence equipment.
- Space Cooperation:** India and Mauritius are exploring space research opportunities and signed an MoU in 2023 for developing a joint satellite.
- Indian Migration: French Rule (1700s):** Indians from Puducherry were brought to Mauritius as artisans and masons.
 - British Rule (1834 - early 1900s):** About half a million Indian indentured workers arrived in Mauritius. The majority of these workers settled in Mauritius, influencing its culture and demographics.
- Development Partnership:** India has been contributing to projects like the Metro Express, new hospitals, and infrastructure in Agaléga Island.
- Humanitarian Assistance:** India assisted Mauritius during Cyclone Chido in 2023, showcasing India's role as a "First Responder."
- SAGAR:** The term SAGAR – 'Security and Growth for All in the Region' was coined by the PM in **2015** during his visit with a focus on the blue economy.

Significance of Mauritius for India:

- Strategic Location:** Mauritius is strategically located in the Indian Ocean, crucial for India's maritime security and trade routes.
- Agaléga island:** It is located 1,100 km north of Mauritius, has strategic importance due to its **proximity to the Indian southern coast**.
 - In 2024, India and Mauritius jointly inaugurated the air strip and jetty projects on the island, strengthening their bilateral cooperation.
- Countering China's Influence:** Strengthening ties with Mauritius is crucial for India to counter China's growing presence in the Indian Ocean region.
- Geopolitical Competition:** The Indian Ocean region is a hotspot for geopolitical rivalry, with countries like Europe, the Gulf, Russia, Iran, and Turkey expanding their influence.

- **Cultural and Historical Ties:** With nearly 70% of its population of Indian origin, Mauritius shares deep cultural, historical, and familial ties with India.
- **Blue Economy:** Mauritius is key to India's interests in the Indian Ocean's blue economy, especially for maritime resources, fisheries, and offshore energy exploration.
- **Indian Ocean Cooperation:** Mauritius plays a key role in regional organizations like the Indian Ocean Rim Association (IORA), contributing to regional stability and economic cooperation.

Areas of Concern:

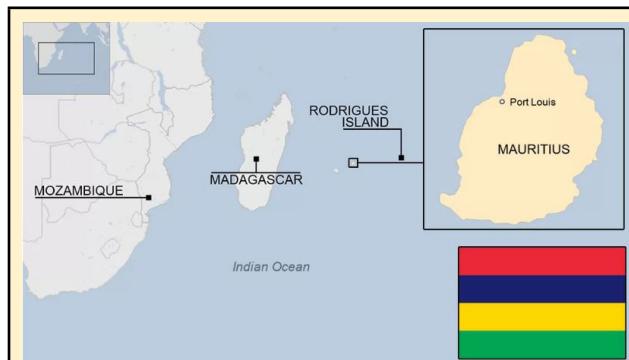
- **Tax Treaty Misuse:** The Double Taxation Avoidance Agreement (DTAA) between India and Mauritius had been a point of concern due to its potential misuse for **illicit activities** like money laundering and round-tripping of funds.
- **Security Concerns:** Mauritius is a key maritime entity in the Indo-Pacific, making security issues critical.
 - ♦ India and Mauritius have a strong defence partnership, but evolving regional dynamics pose challenges to maintaining and enhancing this relationship.
- **Presence of China:** In 2021, China's Free Trade Agreement (FTA) with Mauritius came into effect.
 - ♦ This agreement will help China expand the Belt and Road strategy in Africa.
 - ♦ China's increasing presence in the region will pose concerns for India.

Way Ahead

- The relationship between India and Mauritius is multifaceted and has grown stronger over the years.
- Both nations can work towards expanding defense and security collaboration, including joint training, counterterrorism efforts, and maritime security.
- This multi-faceted approach can further solidify the longstanding relationship between India and Mauritius, contributing to mutual growth and regional stability.

About Mauritius

- **Location:** Mauritius, island country in the Indian Ocean, located off the eastern coast of Africa.
 - ♦ Mauritius lies about 500 miles (800 km) east of Madagascar in the Indian Ocean.



- **Population:** Nearly 70% of the population (1.2 million) is of Indian origin, strengthening ties with India.
- **Colonial History:** Mauritius was initially a French colony before becoming a British possession.
- **National Day:** Mauritius celebrates National Day on March 12, in honor of the date of Mahatma Gandhi's Dandi March.

Source: TOI

FRANCE'S NEW PRIME MINISTER ASSUMES OFFICE AMIDST POLITICAL UNCERTAINTY

Context

- President Emmanuel Macron named close ally Sébastien Lecornu as the new French Prime Minister, a day after a confidence vote in parliament removed François Bayrou from the post.

Background

- **The French Constitution (1958):** France operates under the Constitution of the Fifth Republic, drafted in 1958. It establishes a **semi-presidential system**, with power shared between the directly elected President and the appointed Prime Minister.
- **French Parliament:** France has a bicameral legislature, consisting of:
 - ♦ **National Assembly (Assemblée Nationale),** the directly elected lower house, with members (deputies) chosen through a two-round electoral system for **five years**. It holds primary law-making power and can bring down the government through no-confidence motions.
 - ♦ **Senate (Sénat),** the upper house, indirectly elected by local officials. It reviews legislation but does not control the government.

Selection Procedure of Prime Minister of France

- **Presidential Appointment (Article 8):** The President of France has the power to appoint the Prime Minister.
- **Support from the National Assembly:** Even though the President chooses the PM, the PM must have support in the National Assembly (the lower house of Parliament).
 - ♦ **If the President's party has a majority,** he/she usually appoints a PM from his own party.
 - ♦ **If the opposition controls the Assembly,** the President must appoint a PM from that group (this is called cohabitation).
- **No-Confidence Motion (Article 49):** The National Assembly can remove the PM through a vote of no-confidence. If this happens, the PM must resign.
- **Tenure:** The PM does not have a fixed term. He continues in office as long as he has both the President's support and the confidence of the National Assembly.

Comparative Analysis with India

- **Direct vs. Indirect Legitimacy:** In India, the PM's authority flows directly from legislative majority. In France, legitimacy rests on presidential appointment balanced by legislative acceptance.
- **Stability vs. Flexibility:** India's parliamentary system generally provides stability, though critics warn of excessive concentration of power under majority governments.
 - ♦ France's semi-presidential design balances power but can produce frequent PM changes when no party secures a stable majority.
- **Role of Head of State:** The Indian President acts on convention, while the French President wields real discretion in selecting and dismissing PMs.

Appointment of Prime Minister of India

- **Article 75 of the Constitution of India** stipulates that the Prime Minister shall be appointed by the President.
- By convention of the parliamentary system, the President is required to appoint the **leader of the majority party** in the Lok Sabha as the Prime Minister.
 - ♦ In the absence of a clear majority, the President may exercise limited discretion.
- In such circumstances, it is customary for the President to **invite the leader of the largest party or coalition** in the Lok Sabha to form the government, subject to securing a **vote of confidence in the House** within **one month**.

Source: IE

FIVE YEARS OF BLUE REVOLUTION

In News

- The Pradhan Mantri Matsya Sampada Yojana (PMMSY) has significantly advanced the **fisheries sector** by making it ecologically sustainable, economically viable, and socially inclusive five years since its launch.

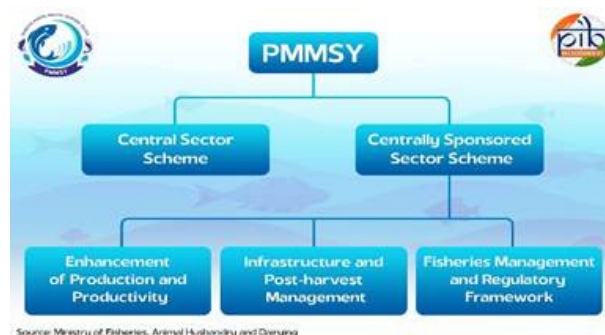
Background

- The **Blue Revolution, launched in 2015**, aimed to boost fish production and modernize the fisheries value chain.
- While it improved productivity and infrastructure, gaps remained in areas like post-harvest handling, traceability, fisher welfare, and market access.
- To address these, **the government launched the Pradhan Mantri Matsya Sampada Yojana (PMMSY) in 2020**, building on the Blue Revolution's progress with a more comprehensive and integrated approach.

About Pradhan Mantri Matsya Sampada Yojana (PMMSY)

- It was announced in the Union Budget 2019–20 to unlock growth in the fisheries sector by addressing critical gaps in production, technology, infrastructure, value chains, traceability, and fishers' welfare.
- It was launched in September 2020 and aimed to drive a **"Blue Revolution"**.
- It has addressed key gaps in production, quality, technology, and infrastructure, while continuing to inspire impactful success stories across India.

Structure and Components



Aims and objectives

- Harnessing of fisheries potential in a sustainable, responsible, inclusive and equitable manner.
- Enhancing fish production and productivity through expansion, intensification, diversification and productive utilization of land and water.

- Modernizing and strengthening of value chain - post-harvest management and quality improvement.
- Doubling fishers and fish farmers' incomes and generation of employment.
- Enhancing contribution to Agriculture GVA and exports.
- Social, physical and economic security for fishers and fish farmers.
- Robust fisheries management and regulatory framework.

Milestones and Achievements

- India achieved a record fish production of 195 lakh tonnes in 2024–25, a sharp rise from 141.64 lakh tonnes in 2019–20.
- The country has emerged as the **second-largest fish producer in the world, contributing nearly 8% of global fish production.**
- Fisheries exports have shown robust growth, increasing from 46,662.85 crore in 2019–20 to 60,524.89 crore in 2023–24, strengthening India's position in the global seafood market.
- PMMSY promotes women's participation in fisheries by providing up to 60% of total project cost as financial assistance (up to 1.5 crore/project) under beneficiary-oriented activities and the Entrepreneur Model



Challenges

- Coastal ecosystems face **rising threats from warming seas** and extreme weather.
- **Inadequate cold storage** and transport infrastructure in remote areas.
- Overfishing & Resource Depletion are major areas of concerns.
- **Limited Awareness & Access** because many small-scale fishers remain outside formal schemes.

Conclusion and Way Forward

- In five years, the Pradhan Mantri Matsya Sampada Yojana (PMMSY) has delivered record fish production of 195 lakh tonnes, created 58 lakh livelihoods, empowered over 99,000 women, and built climate-smart value chains, strengthening India's global fisheries position.
- Building on the Blue Revolution, which transformed the sector through growth, sustainability, and inclusion, PMMSY continues to drive progress.
- Looking ahead, strategic investments, community empowerment, and ecological stewardship will be vital to realizing the sector's full potential.

Source :PIB

INDIA SHOWS RISE IN DEATHS FROM NON-COMMUNICABLE DISEASES: LANCET STUDY

In News

- India experienced an increase in mortality risk from **non-communicable diseases (NCDs)** from 2010–2019.

Key Findings

- In India, overall **NCD mortality between 2010 and 2019** increased by 2.1% for females and 0.1% for males compared to 2000–2010.
- The percentage of newborns dying from a chronic disease before they turn 80 years old was 46.7 per cent in females in 2001, 46.6 per cent in 2010 and in 2019 it was 48.7 per cent.
- Among men in 2001 it was 56 per cent, in 2010–it was 57.8 per cent and in 2019 it was 57.9 per cent.

What are Non-Communicable Diseases (NCDs)?

- **About:** They are chronic diseases that are not transmissible from person to person.
- **Types:** Heart attacks, stroke, cancers and diabetes.
- **Causes of NCDs in India:**
 - ♦ **Lifestyle Factors:** Poor diet, lack of physical activity, tobacco and substance abuse drive up NCD rates.
 - ♦ **Environmental Factors:** Urbanization, ageing population, poverty, and changing food habits play a major role.
 - ♦ **Other contributors:** Pollution (ambient and indoor), chronic stress.

Major National Initiatives to Combat NCDs

- **National Programme for Prevention and Control of Non-Communicable Diseases (NP-NCD):** Launched in 2010, expanded in 2023, and focuses on early detection, management, and referral for NCDs like diabetes, heart disease, cancer, chronic respiratory disease, kidney disease, and more.
- **75/25 Initiative:** Launched in 2023, aims to provide standardized care to 75 million people with hypertension and diabetes by 2025.
- **Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY):** Provides coverage for tertiary NCD treatment and supports upgrading PHCs/ Sub-Centres as Ayushman Arogya Mandirs.
- **Eat Right India Movement:** Led by FSSAI, this campaign promotes healthy eating to reduce NCD risk, focusing on food quality, balanced nutrition, and curbing trans fats.
- **Fit India Movement:** National campaign to promote physical fitness and active living, encouraging regular exercise for NCD prevention.

Source: IE

EXEMPTION FOR ATOMIC AND CRITICAL MINERAL MINING FROM PUBLIC CONSULTATION

Context

- The environment ministry has **exempted mining of atomic, critical, and strategic minerals** from public consultations, **citing national defence, security, and strategic requirements.**

About

- **Provisions under the Environment Impact Assessment (EIA), 2006,** already allow exemptions for projects connected to **national defence and security or other strategic concerns.**
 - ♦ By invoking these provisions, the government has **removed the requirement for public consultation** in cases of mining proposals concerning minerals listed under the **Mines and Minerals (Development and Regulation) Act, 1957, as amended in 2023.**
 - ♦ This covers **atomic minerals** notified in Part B and **critical and strategic minerals** in Part D of the Act's First Schedule.

- The move comes after requests from the **Ministry of Defence and the Department of Atomic Energy (DAE)**, now all such projects will be assessed directly at the central level through **sectoral expert appraisal committees.**

What are Critical Minerals?

- Critical minerals are elements that are the **building blocks of essential modern-day technologies**, and are at risk of supply chain disruptions.
 - ♦ The lack of availability of these minerals or the concentration of extraction or processing in a few geographical locations could potentially lead to **"supply chain vulnerabilities and even disruption of supplies"**.

Applications of Critical Minerals

- **Clean technologies initiatives** such as zero-emission vehicles, wind turbines, solar panels etc.
 - ♦ Critical minerals such as Cadmium, Cobalt, Gallium, Indium, Selenium and Vanadium and have uses in **batteries, semiconductors, solar panels**, etc.
- **Advanced manufacturing inputs and materials** such as defense applications, permanent magnets, ceramics.
 - ♦ Minerals like Beryllium, Titanium, Tungsten, Tantalum, etc. have usage in new technologies, electronics and defense equipment.
- **Platinum Group Metals (PGMs)** are used in medical devices, cancer treatment drugs, and dental materials.

List of Critical Minerals

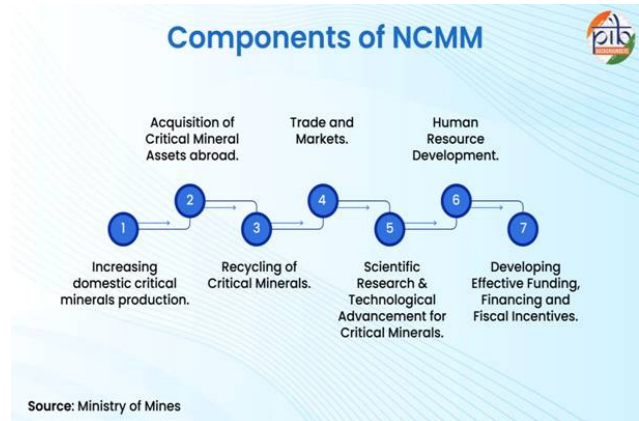
- **Different countries have their own unique lists** of critical minerals based on their specific circumstances and priorities.
- **A total of 30 minerals were found to be most critical for India:** Antimony, Beryllium, Bismuth, Cobalt, Copper, Gallium, Germanium, Graphite, Hafnium, Indium, Lithium, Molybdenum, Niobium, Nickel, PGE, Phosphorous, Potash, REE, Rhenium, Silicon, Strontium, Tantalum, Tellurium, Tin, Titanium, Tungsten, Vanadium, Zirconium, Selenium and Cadmium.

Why has Critical Minerals Mining been Exempted?

- **Rare earth elements** are used in a wide range of equipment, including radars, sonar systems, communication and display tools, vehicle mounting systems, and precision-guided weapons.
 - ♦ India faces a high supply risk as resources of rare earths are scarce domestically and are concentrated in limited regions globally.
 - ♦ Ensuring a steady domestic supply was crucial for defence preparedness.
- **Strategic role of thorium and uranium:** Thorium extracted from beach sand minerals such as monazite is a key fuel for the country's third-stage atomic energy programme.
 - ♦ There was a need to enhance production of these minerals through the development of new deposits.
- The exemption is also a part of a wider set of measures introduced **to speed up the appraisal and approval of mining projects** for critical and strategic minerals.
 - ♦ The environment ministry has already created a separate category for such projects on its online clearance system, **Parivesh**, at the request of the Ministry of Mines.

Recent Initiatives by Government

- **Recently, the government had amended the Van (Sanrakshan Evam Samvardhan) Rules, 2023**, inserting a clause for processing forest approvals related to these minerals.
- **The Mines and Minerals (Development and Regulation) Amendment Act, 2023**, also added atomic, critical, and strategic minerals to its schedules to promote exploration and mining.
- **National Critical Mineral Mission:** The legal and policy framework for NCMM is grounded in the amendment of the Mines and Minerals (Development and Regulation) Act (MMDR Act), under which the central government has the exclusive power to auction **24 out of the 30 identified critical minerals**.
 - ♦ The NCMM has been designed with the primary objectives of **securing domestic and international supply sources** and strengthening mineral value chains.



Source: BS

OPPORTUNITY COST OF EXCESSIVE MILITARISATION

Context

- With Military expenditures **reaching \$2.7 trillion in 2024**, the UN warns that a small fraction could eradicate extreme poverty, hunger, and finance climate adaptation in developing countries, highlighting the opportunity cost of excessive militarisation.

Global trend in Militarization

- **Concentration of Power:** The top five spenders (**US, China, Russia, India, Germany**) together account for nearly **60%** of total global military expenditure, reflecting a highly asymmetrical global security order.
- **The 9 nuclear-armed countries** (US, Russia, UK, France, China, India, Pakistan, North Korea, Israel) possess approximately 12,241 warheads as of January 2025.
- **Regional Militarisation:**
 - ♦ **Europe** witnessed the sharpest increase, **17% in 2024**, due to the Ukraine conflict, making it the fastest-growing region in terms of military expenditure.
 - ♦ **Asia-Pacific** is witnessing a prolonged arms build-up, especially driven by US-China rivalry in the Indo-Pacific and India's rising security commitments.
 - ♦ **The Middle East** remains one of the world's highest per-capita spenders on defence due to protracted conflicts.

Opportunity cost of Militarisation

- **Developmental Trade-Offs:** The UNDP estimates that 4% of global defence budgets could eradicate hunger by **2030**, and 10% could provide universal primary education and healthcare.

- ♦ **Redirecting 15%** of military expenditure (about \$387 billion) could fully **fund climate adaptation costs** in vulnerable nations.
- **Arms Race and Insecurity:** High spending by major powers (US, China, Russia, India, Germany) fuels regional rivalries and global mistrust.
- ♦ Militarisation often creates a “**security dilemma**” where one nation’s defence build-up triggers counter-spending by rivals, leading to spiralling expenditures without real peace.
- **Humanitarian and Ethical Concerns:** Funds diverted to arms mean continued poverty, hunger, and lack of basic services for millions.
 - ♦ Militarisation sustains conflicts and proxy wars, increasing displacement and humanitarian crises.
- **Environmental Costs:** The global military-industrial complex contributes nearly 5% of global carbon emissions, higher than civil aviation.
 - ♦ Rich countries spend about 30 times more on defence than on climate finance for developing nations. This undermines collective climate security.

Impact of Ongoing Armed Conflicts

- **Ukraine-Russia Conflict:** The **2022 Russian invasion of Ukraine** led to the emission of **175 million tonnes of CO₂**, primarily from military operations and subsequent reconstruction efforts.
- **Gaza Reconstruction:** Rebuilding Gaza post-conflict is projected to release approximately **60 million tonnes of CO₂ equivalent**, comparable to the annual emissions of countries like **Portugal or Sweden**.

Way Ahead

- **Rebalance Budgets toward People:** Governments could earmark the **peace dividend** from arms cuts for universal schooling, universal healthcare, renewable energy and disaster preparedness.
- High-income countries should redouble their commitments to **Official Development Assistance (ODA)** and climate funds. The UN report emphasizes that development is the first line of defense against conflict
- **Prioritize Diplomacy:** Invest in dialogue, mediation, preventive diplomacy.

Source: DTE

NEWS IN SHORT

ACHARYA VINOBA BHAVE

In News

- The Prime Minister paid homage to **Acharya Vinoba Bhave** on the occasion of his birth anniversary.

Acharya Vinoba Bhave

- He was born on September 11, 1895 and was a renowned spiritual leader, freedom fighter, and social reformer.
- He was deeply influenced by Mahatma Gandhi after reading about his speech in 1916 and abandoned formal education and joined Gandhi at the Kochrab Ashram.
- He was often regarded as **Gandhi’s spiritual successor and the National Teacher of India**.

Contributions

- He founded the **Gramseva Mandal** in 1934 to organize village service activities.
- He is best known for leading the **Bhoodan Movement (1951)**, a voluntary and non-violent movement aimed at redistributing land to landless peasants.
- He became a key figure at Sabarmati Ashram, contributing to Khadi, village industries, Nai Talim, and sanitation initiatives.
- He also translated the Bhagavad Gita into Marathi, naming it **Geetai**.

About Bhoodan Movement

- It is also called the ‘**Bloodless Revolution**’, was a voluntary land reform movement initiated by **Vinoba Bhave in 1951**.
- He launched the movement in Telangana, when a landlord offered 100 acres of land to landless villagers.
 - ♦ This sparked a wider campaign encouraging voluntary land donations to the poor.
- It also promoted concepts like Sampattidan (Wealth-gift) and Shramdan (Labour-gift), aimed at uplifting marginalized communities.
 - ♦ It gained international recognition, especially in Britain, influencing various social policies.

Source :PIB

COMMONWEALTH PARLIAMENTARY ASSOCIATION (CPA)

In News

- Lok Sabha Speaker Om Birla inaugurated the 11th Commonwealth Parliamentary Association (CPA) India Region Conference at Bengaluru.

About Commonwealth Parliamentary Association (CPA)

- **Founded:** In 1911 as the Empire Parliamentary Association and renamed in 1948 as CPA.
- **Objectives:** Voluntary association of national, state, provincial and territorial parliaments in the Commonwealth of Nations.
 - ♦ Promote parliamentary democracy within the Commonwealth.
 - ♦ Foster good governance, transparency and accountability.
- **Headquarters:** London, UK.
- **Membership:** 180+ legislatures across 55 Commonwealth countries.
 - ♦ India has been an active member since independence.

Source: TH

FAST TRACK IMMIGRATION-TRUSTED TRAVELLER PROGRAMME (FTI-TTP)

In News

- Recently, the Union Home Minister launched the **Fast Track Immigration-Trusted Traveller Programme (FTI-TTP)** at five additional airports—Lucknow, Thiruvananthapuram, Tiruchirappalli, Kozhikode, and Amritsar.

The Fast Track Immigration - Trusted Travellers' Programme (FTI-TTP)

- It was originally launched in July 2024 at Delhi's Indira Gandhi International Airport and later extended to more airports.
 - ♦ It is inspired by the U.S. Global Entry Program.
- It aims to speed up immigration clearance for **Indian nationals and OCI cardholders.**
- **Process:** Eligible applicants must submit biometric data (fingerprints and facial image) along with required information.
 - ♦ Enrolment is subject to verification, and participants may be suspended if required by law enforcement or courts for investigations.

- **Features:** The programme allows travellers to complete immigration in just 30 seconds through biometric verification at e-Gates, reducing queues and manual checks. Aligned with Prime Minister Modi's vision of "speed, scale, and scope."
- ♦ The FTI-TTP enhances convenience and national security, with plans to integrate it into upcoming airports like Navi Mumbai and Jewar.
- **Relevance:** FTI-TTP will eventually be available at 21 major airports, supporting India's growing international travel demand and facilitating smoother, faster immigration.

Source :TH

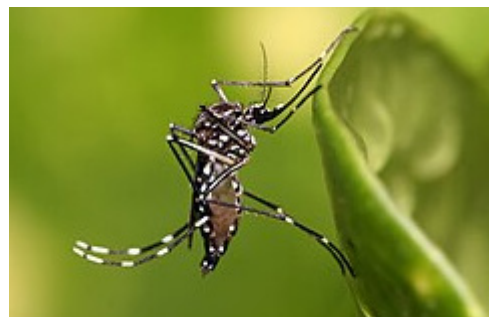
AEDES-BORNE VIRAL DISEASES (ABVD)

Context

- **Aedes-borne viral diseases (ABVD)** have emerged as major public health concerns in India, not only causing severe illness but also reducing national productivity.

Aedes aegypti

- Aedes aegypti is a known **vector of** several viruses including **yellow fever virus, dengue virus, chikungunya virus and Zika virus.**
- The mosquito is **native to north Africa**, but is now a common invasive species that has spread to tropical, subtropical, and temperate regions throughout the world.



Wolbachia Method For Mosquito Control

- Mosquitoes with Wolbachia can be used to reduce numbers of target mosquito species, for example, **Aedes Aegypti mosquitoes.**
 - ♦ **Wolbachia bacteria** blocks proliferation of harmful viruses but doesn't harm the mosquitoes themselves.
- Mosquito control professionals release male Aedes Aegypti with Wolbachia into an area with wild Aedes Aegypti.

- When male *Aedes Aegypti* mosquitoes with *Wolbachia* mate with wild female mosquitoes that do not have *Wolbachia*, the eggs will not hatch.
- Because the eggs don't hatch, the number of *Aedes Aegypti* mosquitoes decreases.

Source: TH

ASPERGILLUS

In News

- Researchers have identified two novel species of ***Aspergillus section Nigri*** (commonly known as **black aspergillus**).

About Aspergillus

- *Aspergillus* refers to a group of **filamentous fungi found worldwide**. These fungi can act as **saprophytes (decomposing organic matter)**, endophytes (living inside plants without causing harm), and opportunistic pathogens (capable of causing disease under certain conditions).
- Black *Aspergilli* are known as workhorses of **industrial application** especially in citric acid production, food mycology, fermentation technology, and agriculture.

Source: DD News

INNOVATIVE WOUND-HEALING PAD USING EXTRACTS FROM THE RED IVY PLANT

In News

- Researchers at the Jawaharlal Nehru Tropical Botanic Garden & Research Institute (JNTBGRI) in Thiruvananthapuram have developed a **multifunctional wound-healing pad using red ivy plant**.

Red ivy plant

- It is locally known as **murikooti pacha** (*Strobilanthes alternata*, belonging to the *Acanthaceae* family).
- It grows abundantly across tropical regions, including India, and traditional practitioners have long been using it to treat cuts and wounds.

Latest Developments

- Researchers used nanotechnology and the medicinal properties of the red ivy plant to develop wound-healing pads.
- The team isolated **acteoside**—a bioactive compound newly linked to red ivy—for its potent healing effects.

- The pad features an ultra-thin electro-spun nanofiber layer made from biodegradable, non-toxic polymers, incorporating both acteoside and the antibiotic neomycin sulfate.

- Its porous design promotes optimal gas exchange, enabling the wound to “breathe” and accelerating recovery.

Source :TH

BLENDING OF ISOBUTANOL WITH DIESEL

Context

- The Union Minister for Transport Nitin Gadkari said that the **Automotive Research Association of India (ARAI)** is working to explore the **possibility of blending 10% isobutanol with diesel**.

About

- The trials of blending **one-tenth ethanol** with diesel was not successful, **other than the isobutanol blend** so, Diesel in India will soon be blended with isobutanol instead of ethanol.
- Trials with isobutanol are in progress and blending levels will be increased in the coming months.
- **Isobutanol** is an **alcoholic compound** with flammable properties, and is commonly used as a **solvent** in varied industries including paints and coating.

Ethanol Blending

- **Ethanol blending** refers to the **practice of mixing ethanol with gasoline** to create a fuel mixture that can be used in internal combustion engines.
- **Ethanol feedstocks comprise** sugary raw materials (sugarcane, molasses, sweet sorghum, sugar beet, amongst others) or starchy (broken rice, corn, and cassava).
- The **‘National Policy on Biofuels’** notified by the government in 2018 envisaged an indicative target of **20% ethanol blending in petrol by 2030**.
- Given the encouraging performance and various interventions made by the government since 2014, **the 20% target was advanced to 2025-26**.
- **Ethanol blending in petrol has already touched the 20% mark**, and the next frontier will be using ethanol to produce sustainable aviation fuel.

Source: TH

SAMUDRA PRADAKSHINA

Context

- Defence virtually flagged off **Samudra Pradakshina** - a historic **tri-service all-women** circumnavigation sailing expedition.

About

- The initiative is a first of its kind**, a symbol of nari shakti (women power), the jointness of the armed forces, self-reliant India (Aatmanirbhar Bharat) and India's global vision.
- Over the next nine months**, 10 women officers from the **Army, Navy and Air Force** will sail onboard the **indigenously-built Indian Army Sailing Vessel (IASV) Triveni**.
 - They will follow an easterly route **covering nearly 26,000 nautical miles, crossing the Equator twice and rounding the three great Capes** — Leeuwin, Horn and Good Hope.
- During the expedition, the crew will also carry out **scientific research** in collaboration with the **National Institute of Oceanography**, which includes the study of micro-plastics, documentation of ocean life and raising awareness about marine health.
- They will return to Mumbai in May 2026.

Source: TH

CHINA BORDER

Context

- The Union Ministry of Home Affairs (MHA) is contemplating a plan to raise **Border Wing**

Home Guards (BWHG) along the border with China, similar to the guards on the India-Pakistan border.

About

- BWHGs are **recruited from the civilian population** living in border areas. They act as ancillaries to the Army and border guarding forces during emergencies.
 - They are **voluntary** in nature, enlisted typically for **3–4 years**.
 - 25%** of training and financial support is borne by the Government of India.
- Fifteen Border Wing Home Guards (BWHG) Battalions** have been raised in the border States viz. **Punjab** (6 Bns.), **Rajasthan** (4 Bns.), **Gujarat** (2 Bns.) and one each for **Meghalaya, Tripura and West Bengal**.

Need of BWHG along China border

- The China border has **difficult terrain, sparse population, and remote regions**. Local civilians could help supplement manpower.
- There are concerns about **incursions, transgressions, or infiltration**, especially in **less accessible border areas**. A civilian guard force can help augment surveillance and reduce response times.

Source: TH

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