

DAILY CURRENT AFFAIRS (DCA)

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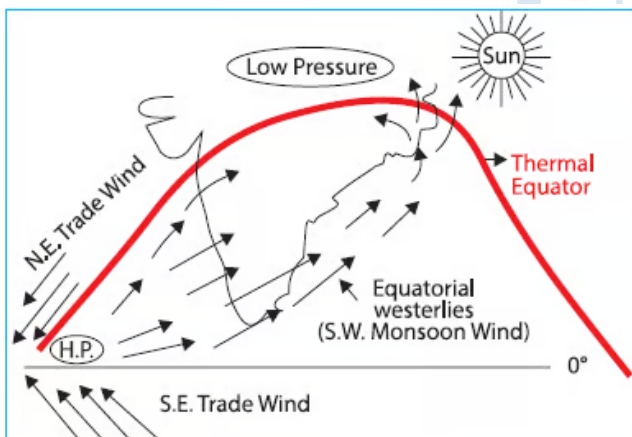
SOUTHWEST MONSOON

Context

- The India Meteorological Department (IMD) confirmed the arrival of the southwest monsoon in Kerala (**June 4, 2026**). This marks the **official start of the rainy season in India**.

Southwest Monsoon

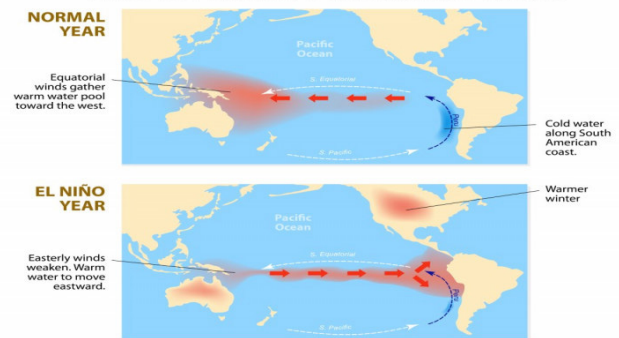
- Onset and Retreat:** The monsoon season in India generally **starts in early June and lasts until September**.
 - The onset of the monsoon is marked by the arrival of the **southwest monsoon winds**, which bring moisture-laden air from the Indian Ocean.
 - The withdrawal or retreat of the monsoon typically **begins in October**.
 - The northeast monsoon**, occurring from October to December, brings rainfall to parts of southern India.
- Monsoon Dynamics:** Factors such as the El Niño and La Niña phenomena can influence the strength and distribution of the monsoon.
- Agricultural Impact:** The success of the monsoon directly influences crop yields and, consequently, the overall economy of the country.



What is El Niño?

- El Niño means **Little Boy** in Spanish. It is a climate phenomenon characterized by the periodic warming of sea surface temperatures in the central and eastern equatorial Pacific Ocean.
 - During El Niño, **trade winds weaken**.
 - Warm water is pushed back east, toward the west coast of the Americas and as a result **cold water is pushed towards Asia**.

THE EL NIÑO PHENOMENON



Impact of El Niño on weather patterns:

- Global Temperature Rise:** El Niño causes a rise in global temperatures, often leading to warmer-than-average conditions worldwide.
- Disruption of Monsoon:** In India, El Niño typically weakens the monsoon, leading to reduced rainfall and drought conditions.
- Increased Risk of Wildfires:** El Niño increases the likelihood of wildfires, especially in regions like Australia, southern Africa, and parts of the Americas.
- Extreme Weather Events:** El Niño can trigger extreme weather events, including more intense storms, hurricanes, and cyclones, particularly in the Pacific Ocean and Atlantic.

Source: TH

NEW IIP SERIES REFLECTING INDIA'S CHANGING INDUSTRIAL STRUCTURE

Context

- The Ministry of Statistics and Programme Implementation (MoSPI) has launched a revised All India **Index of Industrial Production (IIP)** series with **2022–23** as the base year, replacing the earlier **2011–12 series**.
 - The first release** under the new series showed India's industrial production growing by **4.9%** in April 2026, led by strong manufacturing activity.

Need for Revising the Base Year

- The IIP is a key **short-term indicator** of industrial activity, used by the government, RBI, and researchers for policymaking, forecasting, and national accounts.
- The last IIP base year revision was 2011–12 and since then, major **technological changes, product diversification, and digitalization** have reshaped industrial production.

- ♦ India's economic structure has transformed: services contribute **62.5% of GVA**, agriculture **15%**, and industry **22%**, indicating scope for growth.
- **MoSPI's Technical Advisory Committee for Base Year Revision of IIP (TAC-IIP)** has recommended aligning the IIP base year with **2022-23**, to capture these structural and technological shifts.
- **The United Nations** has recommended that the base period of the index number should be revised **quinquennially (every five years)**.

Index of Industrial Production (IIP)

- The Index of Industrial Production (IIP) **measures the changes in the volume of production** across various industrial sectors of the economy.
 - ♦ The index serves as an important indicator of industrial performance and overall economic activity.
- **Released by: National Statistical Office (NSO)**, Ministry of Statistics and Programme Implementation.
- **Periodicity:** Monthly basis

Key Features of the Revised IIP Series

- **Expanded Sectoral Coverage:** For the first time, the IIP has expanded beyond the traditional sectors of mining, manufacturing and electricity to include **Gas Supply as well as Water Supply, Sewerage and Waste Management activities**.
- **Updated Product Basket:** The new series covers 1,042 products grouped into 463 item groups, compared with **839 products** and 407 item groups in the previous series.
 - ♦ **New-age products** such as CCTV cameras, aircraft and spacecraft parts, non-woven textile products, stents and vaccines have been added.
 - ♦ **Obsolete items** including kerosene, fluorescent tubes and compact fluorescent lamps (CFLs) have been removed.
- **Revised Sectoral Classification:** Mining data are now separately compiled for **fuel minerals, metallic minerals including rare earth minerals, and non-metallic minerals** including minor minerals.
 - ♦ Similarly, electricity generation is now tracked separately for renewable and non-renewable sources.

- **Weights used in the revised index** have been updated using Gross Value Added estimates from the **National Accounts Statistics and the Annual Survey of Industries for 2022-23**.
 - ♦ **Electricity weights** are based on revenue shares of renewable and non-renewable sources, while mining weights reflect the contribution of individual minerals to sectoral GVA.
- The new IIP series also incorporates the **National Industrial Classification (NIC) 2025** and includes provisions for replacing factories that have become **non-operational during the life** of the series to maintain representativeness.
- **MoSPI released linking factors** to facilitate comparison between the old and new series at the aggregate level.
 - ♦ **The linking factors** are 1.1890 for Mining and Quarrying, 1.3700 for Manufacturing, 1.8495 for Electricity and 1.3834 for the General Index.
- **Strengthened Data Collection Framework:** Four new data source agencies have been added to improve data coverage and accuracy.
 - ♦ These include **IREL (India) Limited** for rare earth minerals, **State Directorates of Economics and Statistics for minor minerals**, the **Ministry of Housing and Urban Affairs**, and the **Department of Drinking Water and Sanitation**.
- The new IIP series also incorporates the **National Industrial Classification (NIC) 2025** and includes provisions for replacing factories that have become non-operational during the life of the series to maintain representativeness.

Significance of the Revised IIP Series

- The inclusion of new sectors and products improves the **comprehensiveness of industrial measurement**.
- The revised methodology enhances the **reliability and quality** of industrial statistics.
- The updated product basket **captures technological advancements** and emerging industries.
- The revised series aligns India's industrial statistics more closely with **international best practices**.
- The improved measurement of capital goods provides a **better assessment of investment trends in the economy**.

Concluding remarks

- The new IIP series provides a more representative, reliable and methodologically robust measure of industrial growth, reflecting changes in India's economic structure and industrial landscape.
- It also captures emerging sectors, technological advancements, and evolving production patterns more effectively, thereby strengthening the evidence base for economic policymaking and industrial planning.

Source: [DD News](#)

INDIA'S EMERGENCE AS A GLOBAL STARTUP HUB

Context

- The Startup India initiative, launched in 2016, has significantly transformed India's entrepreneurial ecosystem by fostering innovation, expanding access to finance, and creating a supportive policy environment.

Startup Ecosystem of India

- India is the world's **third-largest startup ecosystem** (after the US and China), featuring over **120 unicorns** (valued >\$1 billion) and over 157,000 government-recognized startups.
- **The startup ecosystem is growing** at ~12–15% annually, with some years witnessing even higher growth (~30%). The number of startups rose from about 10,000 in 2016 to nearly **2.5 lakh in 2025**.
- **Key Sectors:** Dominant sectors include **Fintech, E-commerce, Supply Chain, and Health-tech**.
- **Regional Hubs:** Bengaluru, Mumbai, Hyderabad, and Delhi-NCR.
- **Job Creation Engine:** Startups have generated over **21 lakh jobs**, making them a major employment driver.
- **Funding Landscape:** Startups raised around **\$10–11 billion in 2025**, maintaining India's position as a top funded ecosystem.

Eligibility Criteria for a Startup

- **Company Age:** The period of existence and operations should not exceed 10 years from the date of incorporation.
- **Company Type:** Incorporated as a Private Limited Company, a Registered Partnership Firm, or a Limited Liability Partnership.
- **Annual Turnover:** Should have an annual turnover not exceeding **Rs. 100 crore** for any of the financial years since its incorporation.

- ♦ **A deep tech company** can consider itself a start-up for as long as **20 years** and has a turnover of up to **₹300 crore**.
- **Original Entity:** An entity should not have been formed by splitting up or reconstructing an already existing business.

Key Trends in India's Startup Ecosystem

- **Geographical Diversification:** In 2016, Tier-1 cities accounted for nearly **65%** of newly established startups, while **Tier-3** towns contributed only **15%**.
 - ♦ **By 2025**, the trend had reversed, with Tier-3 towns accounting for about **71%** of new startups and Tier-1 cities contributing only 18%.
- **Demographic Trends:** A majority of startup founders are **below 40 years of age**. Around **66% of male founders** and **59% of female founders** belong to this age group.
 - ♦ Women account for about 21% of founders in the under-30 age group and around 33% in the 50-plus age group.

Key Drivers Behind India's Startup Growth

- **Government Support:** The Startup India Initiative (2016) provided policy support, tax incentives, regulatory easing, and startup recognition.
 - ♦ **The Fund of Funds for Startups (₹10,000 crore), Startup India Seed Fund Scheme, and Credit Guarantee Scheme for Startups (CGSS)** improved access to finance.
- **Digital Public Infrastructure (DPI):** Platforms such as Aadhaar, UPI, DigiLocker, and ONDC reduced transaction costs and enabled rapid scaling.
 - ♦ DPI accelerated the growth of **fintech, e-commerce, logistics, healthtech**, and other digital sectors.
- **Expansion Beyond Metros:** Startup activity increasingly shifted to **Tier-II and Tier-III** cities through initiatives such as **GENESIS (Generating Entrepreneurship and Startup Ecosystem)**.
 - ♦ Smaller-city startups addressed local challenges in agritech, rural commerce, tourism, and service delivery.
- **Expansion of Venture and Risk Capital:** India witnessed a significant increase in domestic and foreign venture capital investments.

- **Entrepreneurial aspirations among youth:** A majority of startup founders are below 40 years of age, reflecting the growing preference for entrepreneurship as a career and a shift from job-seeking to job creation.

Challenges in India's Startup Ecosystem

- **Funding Constraints:** Early-stage startups often struggle with insufficient capital, affecting hiring, marketing, and operations.
- **Misreading Market Demand:** A major reason for startup failure is the lack of real market need, with nearly 42% startups failing due to poor demand assessment.
- **Talent Retention:** Startups face difficulty in attracting and retaining skilled talent due to competition from established firms.
- **Concentration in Few Sectors:** Majority of funding is concentrated in fintech, e-commerce, and edtech.
 - ♦ **Critical sectors like manufacturing, agritech, and deep-tech** remain underfunded.

Schemes Strengthening India's Startup Ecosystem

Scheme	Ministry	Objective
Atal Innovation Mission (AIM) (2016)	NITI Aayog	Foster nationwide innovation culture
GENESIS (Gen-Next Support for Innovative Startups) (2022)	Ministry of Electronics & IT (MeitY)	Deep-tech startups in Tier II/III cities
Technology Incubation and Development of Entrepreneurs (TIDE) 2.0 (2019)	Ministry of Electronics & IT (MeitY)	ICT startup incubation & scale-up
MeitY Startup Hub (MSH) (2016)	Ministry of Electronics & IT (MeitY)	Integrate tech startup ecosystem
NIDHI (National Initiative for Developing and Harnessing Innovations) (2015)	Department of Science & Technology (DST)	Support S&T startups from idea to market
Startup Village Entrepreneurship Programme (SVEP) (2015)	Ministry of Rural Development (DAY-NRLM)	Promote rural entrepreneurship
ASPIRE (Scheme for Promotion of Innovation, Rural Industries and Entrepreneurship) (2015)	Ministry of MSME	Strengthen rural enterprise incubators
Prime Minister's Employment Generation Programme (PMEGP) (2008)	Ministry of MSME (KVIC)	Subsidised credit for self-employment

Way Ahead

- **Shift from "Valuation-led" to "Value-led" Growth:** There is a need to Move beyond the unicorn obsession towards sustainable, profitable business models.
- **Deep-Tech Priority:** Treat sectors like AI, semiconductors, space tech, biotech as part of economic and national security.
- **Decentralised Innovation Clusters:** Move beyond metro-centric growth to cluster-based innovation ecosystems such as;
 - ♦ Agri-tech clusters in rural belts,
 - ♦ Manufacturing clusters in industrial corridors,
 - ♦ Deep-tech hubs near research institutions.

Concluding remarks

- The decade from 2016 to 2025 has witnessed the emergence of a **vibrant and geographically diverse startup ecosystem** in India.

- Supported by **favourable policies, growing investor confidence, and widespread entrepreneurial participation**, India has established itself among the world's leading startup nations and strengthened its position as a global innovation hub.

Source: [TH](#)

THE MIDDLE CLASS JOURNEY: PROGRESS POWERED BY POLICY

Context

- **India's middle class** is undergoing a **significant transformation**, driven by a combination of **rising incomes, expanding opportunities, and a series of government-led reforms**.

Who is the Middle Class?

- The middle class is shaped by factors like **purchasing power, education levels, social services, perceptions of wealth**.
- A widely used benchmark from the World Bank classifies economies **annually**, based on **Gross National Income (GNI) per capita, the value of primary incomes for all sectors**.
- The updated country income classifications in **US dollars for FY26** are:
 - ♦ Low income: ≤ \$1,135;
 - ♦ Lower-middle income: \$1,136 – \$4,495;
 - ♦ Upper-middle income: \$4,496 – \$13,935;
 - ♦ High income: > \$13,935.

Middle Class in India

- In 2010, most of the world's middle-class lived in OECD economies, but this has shifted rapidly.
- **Between 2009 and 2017**, the global middle-class population **grew from 1.8 billion to 3.5 billion people**, with Asia accounting for around **40% of this segment**.
- **India's GDP per capita** grew by **53% between 2011 and 2019**, while the country's middle class expanded at an **annual rate of 6.3% between 1995 and 2021**.
 - ♦ Today, the middle class accounts for **roughly 31% of India's population**.
- According to OECD forecasts, **India is expected to surpass China** in absolute **middle-class population between 2030 and 2035**.

- **The World Economic Forum (WEF) projects** that by 2036, India's middle class and affluent consumers will account for **93% of total consumer spending**, up from 80% in 2026.
- The WEF also estimates that nearly **500 new "consumer cities"** will emerge, with 93% of urban consumption growth expected to come from locations outside the country's five largest metros.
- **Limited Social Security:** Many middle-class households lack adequate pension coverage, unemployment benefits, and income protection.
- **Housing Affordability Issues:** Rapid urbanization and soaring real-estate prices make home ownership difficult, especially in metropolitan cities.
- **Debt and Financial Vulnerability:** Increasing reliance on home, education, and personal loans makes households vulnerable to economic shocks and interest-rate fluctuations.

Significance of rising Middle Class in India

- **Engine of Economic Growth:** Drives domestic consumption, boosting demand for goods and services across sectors.
- **Expansion of Tax Base:** Contributes significantly to government revenues through direct and indirect taxes.
- **Human Capital Development:** Invests in education, healthcare, and skill development, enhancing workforce productivity.
- **Promotion of Entrepreneurship and Innovation:** Supports startups, MSMEs, and technological innovation through investment and market demand.
- **Strengthening Democracy and Governance:** Demands greater transparency, accountability, and better public service delivery.
- **Accelerating Urbanization and Digitalization:** Fuels growth of cities, digital payments, e-commerce, and the digital economy.
- **Facilitating Social Mobility and Poverty Reduction:** Creates opportunities for upward mobility and helps expand the aspirational class, reducing poverty over time.
- **Tax reforms have increased disposable income:** Under the new tax regime, introduced in 2023 and strengthened through the Income Tax Act, 2025, individuals earning up to ₹12 lakh annually pay no income tax.
 - ◆ GST has reduced the tax burden on several essential goods, simplified compliance, and improved affordability.
- **Stronger pensions, insurance and banking support:** India has also emerged as the world's 10th-largest insurance market by premium volume. Household investments in insurance and pension funds increased from 28.6% in FY19 to 29.6% in FY25.
- **Lower interest rates have improved affordability:** Interest rates that ranged between 9.5% and 10.5% in 2015 declined to approximately 7.35% to 8.75% by 2025.
 - ◆ Personal loan rates declined from 14.25% in 2014 to 12.5% in 2026, while education loan rates dropped from 14.25% to 9.4%.
- **MUDRA loans fuel entrepreneurship:** Since its launch in 2015, the Pradhan Mantri MUDRA Yojana (PMMY) has emerged as a major source of collateral-free financing for small businesses.
- **Access to basic amenities improves sharply:** Access to tap water has expanded significantly, with connections rising from 3.23 crore in 2019 to 15.85 crore by May 2026.
- **Reliable electricity reaches more households:** India's energy shortage has fallen from 4.2% in FY14 to just 0.03% in FY26.
- **Startup ecosystem creates jobs:** India's startup ecosystem has expanded dramatically. Recognised startups increased from just 502 in 2016 to over 2.23 lakh by March 2026.

Challenges faced by Middle class

- **Stagnant Wage Growth and Job Insecurity:** Rising prevalence of contractual employment, automation, and limited creation of high-quality jobs.
- **High Cost of Living:** Inflation in housing, healthcare, education, and essential commodities erodes disposable income.
- **Tax Burden:** The middle class bears a significant share of direct taxes while receiving relatively limited welfare benefits.
- **Rising Healthcare and Education Expenses:** Dependence on private institutions due to gaps in public services increases financial stress.

- ◆ These startups have generated approximately 23.3 lakh direct jobs. Nearly 48% of recognised startups have at least one woman director or partner.

Conclusion

- Over the past years, a series of reforms spanning taxation, social security, housing, healthcare, education, infrastructure and digital governance have helped improve living standards for India's middle class.
- With rising incomes and expanding opportunities, this segment is emerging as a major force behind consumption, entrepreneurship and economic growth, while contributing to the country's vision of becoming a developed nation by 2047.

Source: [PIB](#)

NEWS IN SHORT

NATIONAL PANCHAYAT AWARDS 2025

Context

- The Ministry of Panchayati Raj has announced the winners of the National Panchayat Awards (NPA) 2025, with 42 Panchayats from across India.

National Panchayat Awards

- **About:** The National Panchayat Awards are administered by the **Ministry of Panchayati Raj** to recognize and incentivize high-performing Panchayats.
- **Objective:** The National Panchayat Awards drive **competitive federalism** by incentivizing local self-government institutions to compete in achieving the good governance & Sustainable Development Goals (SDGs).
- **Implementation Framework:** The awards are conferred under the **Incentivization of Panchayats (IoP) scheme**, a component of the **Rashtriya Gram Swaraj Abhiyan (RGSA)**.
- **Financial Incentives:** Winning Panchayats receive financial incentives ranging from **₹50 lakh to ₹5 crore**, depending on the category and tier.
- **Karnataka** secured the highest number of awards (6 awards), followed by Andhra Pradesh and Odisha with 5 awards each for 2025.

Categories of Awards

- **Deen Dayal Upadhyay Panchayat Satat Vikas Puraskar (DDUPSVP):** Recognizes outstanding Gram Panchayats based on performance across the nine themes of Localization of Sustainable Development Goals (LSDGs).
- **Nanaji Deshmukh Sarvottam Panchayat Satat Vikas Puraskar (NDSPSVP):** Conferred on the best-performing Panchayats on an overall basis. Awards are given at;
 - ◆ District Panchayat level
 - ◆ Block Panchayat level
 - ◆ Gram Panchayat level.

Source: [PIB](#)

BLUE HELMET

Context

- A total of 565 Indian Blue Helmets, serving with the UN Mission in South Sudan (UNMISS) have been honoured with the UN Medal of Honour.
- ◆ Blue Helmets are military personnel, police officers, and civilian experts serving under United Nations peacekeeping operations.

About

- The peacekeepers were recognised for their efforts in:
 - ◆ Protecting civilians through patrols,
 - ◆ Community engagement,
 - ◆ Veterinary camps,
 - ◆ Women's self-defence training,
 - ◆ Combating gender-based violence, and
 - ◆ Improving humanitarian access.
- India is the **second-largest contributor of uniformed personnel** to UN peacekeeping operations after **Nepal**.
- It currently contributes more than **4,200 military and police personnel**, including **155 women**, across missions in Abyei, the Central African Republic, Cyprus, Congo, Lebanon, the Middle East, Somalia, South Sudan and Western Sahara.
- Nearly **180 Indian peacekeepers** have lost their lives in the line of duty, the highest among all troop-contributing countries.

Source: [TOI](#)

NAVACHAR MANTRA INITIATIVE

In News

- Navachar Mantra is a national initiative launched by the Union Minister at IIT Delhi.

About

- The **Navachar Mantra Initiative** is a flagship national program launched by the Ministry of Skill Development and Entrepreneurship (MSDE) and implemented through the National Institute for Entrepreneurship and Small Business Development (NIESBUD).
- It is strategically designed to **identify, mentor, and scale grassroots innovations originating from Tier-2, Tier-3, and rural India**, bridging the gap between local creators and the national entrepreneurial ecosystem.

Key Features

- Target Demographic:** Open to Indian citizens aged 18 to 55 residing in aspirational districts and underserved rural or semi-urban geographies.
- Eligibility:** Flexible criteria allow individuals with ideas in the validation or early prototype stages to apply; a registered corporate entity or finished market product is not required.
- Focus Sectors:** Prioritizes high-impact verticals including Agritech, HealthTech & Wellness, EdTech, Climate Action, Rural Commerce, and MSME Enablement.
- Support Ecosystem:** Selected participants enter a structured 1-year incubation cycle providing mentorship, regulatory compliance support, IP structuring, and fundraising roadmaps.

Source: [DD News](#)

₹10,000 CRORE ATF PRICE STABILISATION FUND

Context

- The Union Cabinet has approved a one-time budgetary support of up to **₹10,000 crore** for Oil Marketing Companies (OMCs) to provide **Aviation Turbine Fuel (ATF)** price stabilisation support to Scheduled Indian Airlines.

About

- The ongoing **West Asia crisis** has led to a sharp increase in global crude oil and jet fuel prices.

- ATF constitutes around **35–40%** of airline operating costs, making airlines highly vulnerable to fuel price shocks.
- The objective is to ensure **greater predictability and stability in aviation fuel prices** during periods of exceptional global fuel market volatility.
- The scheme covers **both domestic and international operations** of Indian airlines.

Source: [AIR](#)

E85 FUEL ADOPTION IN INDIA

Context

- The Union Government is considering a policy framework to support the affordable adoption of E85 fuel in India.

What is E85 Fuel?

- E85 is a fuel blend containing **85% ethanol and 15% petrol**.
- It can be used in specially **designed flex-fuel vehicles (FFVs)** that can operate on varying ethanol-petrol blends.
 - These vehicles are equipped with **modified engines and fuel systems** that can automatically adjust to different fuel compositions.

Why is India Promoting E85?

- Enhancing Energy Security:** Greater ethanol use can reduce India's dependence on imported crude oil.
- Reducing Import Bill:** If just **1%** of annual petrol vehicle sales shift to E85 during the 2026–27 ethanol supply year, India could save around **₹195 crore** in foreign exchange.
 - The shift could reduce crude oil imports by approximately **0.28 lakh metric tonnes (LMT)**.
- Supporting Farmers and Rural Economy:** Increased adoption of E85 could generate demand for more than **4 crore litres of ethanol**.
 - Around **₹266 crore** is estimated to be paid to ethanol distillers.
 - Nearly ₹160 crore** could flow directly to farmers through increased demand for ethanol feedstocks such as sugarcane and maize.

- **Environmental Benefits:** E85 adoption at the projected level could result in a net reduction of nearly **0.86 LMT of CO₂ emissions**.

What is Ethanol?

- Ethanol is **99.9%** pure alcohol that can be blended with petrol. It can be produced from **sugarcane, maize, wheat, etc** which are having high starch content.
- Alcohol production involves **fermentation of sugar** using yeast. In cane juice or molasses, sugar is present in the form of **sucrose** that is **broken down into glucose and fructose**.
- Also grains contain starch, a carbohydrate that has to **first be extracted and converted** into sucrose and simpler sugars, before their further fermentation, distillation and dehydration to ethanol.

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.
- **There are a few common blends:**
 - ♦ **E10:** This is a mixture of 10% ethanol and 90% gasoline. It is the most common blend and is used widely in many countries.
 - ♦ **E15:** This blend contains 15% ethanol and 85% gasoline.
 - ♦ **E85:** This is a high-ethanol blend, consisting of 85% ethanol and 15% gasoline. It's used in flex-fuel vehicles designed to run on higher ethanol content.

Source: [TH](#)

S-400 AIR DEFENCE SYSTEM

In News

- India has received the fourth squadron of the Russia-made S-400 air defence system, further strengthening its long-range air defence capabilities.

More about the News

- The delivery is part of the **\$5.43 billion agreement** signed between India and Russia in 2018 for the procurement of **five S-400 regimental systems**.
- The fifth and final squadron under the original contract is expected to be delivered in **2027**.

About S-400

- Known in Indian service as the “**Sudarshan Chakra**”, the S-400 is among the world's most advanced air defence systems.
- It is capable of tracking and engaging multiple targets simultaneously, including fighter aircraft, ballistic missiles, cruise missiles, drones, and airborne surveillance platforms at **ranges of up to 400 km** and **altitudes of up to 30 km**.
- The system forms a key component of India's **layered air defence architecture** along both the western and northern fronts.
- It operates alongside systems such as **Akash** and **MRSAM**, providing a multi-tiered shield against a wide range of aerial threats.

Do you know?

- The **S-400** drew significant attention during **Operation Sindoor (2025)**, where it played a key role in intercepting hostile aerial threats.
- Following its performance, the government approved the acquisition of **five additional S-400 squadrons**, which would increase India's planned inventory from five to ten squadrons.

Source: [TH](#)

NEWLY RECORDED LAKSHADWEEP 'POTATO PATCH' CORAL

Context

- **Giant potato coral patch**, coral colony found on southeastern side of **Kadmat Island** in **Lakshadweep**.

What are Corals?

- Corals are **invertebrates** that belong to a large group of animals called **Cnidaria**.
 - ♦ Corals are formed by **multiple small, soft organisms known as polyps**.
 - ♦ They secrete a **rocky chalk-like (calcium carbonate) exoskeleton** around themselves for protection.
 - ♦ **Coral reefs** are therefore created by **millions of tiny polyps forming large carbonate structures**.

- **Appearance:** Corals range in colour from **red to purple and even blue**, but are most commonly shades of **brown and green**.
 - ♦ Coral are bright and colorful because of microscopic algae called **zooxanthellae**.
- **There are three types of coral reefs** – fringing reefs, barrier reefs and atolls.
 - ♦ Fringing reefs **form along shorelines**, **barrier reefs form in open water** and **atolls are circular reefs** that have formed around **sunken volcanoes**.
- **Coral reefs in India:** Gulf of Kutch, Gulf of Mannar, Andaman & Nicobar, Lakshadweep Island and Malvan.
- **Significance:** They provide food, shelter, resting and breeding grounds to a quarter of all marine life, acting as nurseries and refuges to protect critical biodiversity.
 - ♦ They also support more than 1 billion people living in coastal regions around the world by providing food, livelihoods and recreation.

Coral Bleaching

- Coral bleaching occurs when **corals expel the colourful algae** living in their tissues.
- Without these helpful algae, the **corals become pale** and are vulnerable to **starvation and disease**.
- A bleached coral is not dead, but **ocean temperatures need to cool off for any hope of recovery**.

Source: DTE

KAZIRANGA RECORDS FIRST YELLOW-THROATED MARTEN

Context

- **Kaziranga National Park** has confirmed the presence of a **yellow-throated marten for the first time**.

About Yellow-throated Marten

- **Scientific name:** *Martes flavigula*.
- It belongs to the **weasel family (Mustelidae)**, which also **includes otters, badgers, and wolverines**.

- It is a **smaller carnivore** that sits below apex predators, such as tigers and bears, in food chains.
- It is a **diurnal (active during the day), tree-climbing mustelid that assists seed dispersal**, a role that supports healthy forest regeneration and ecosystem balance.



- It is found across the **Himalayas, South Asia, Southeast Asia, China, Korea, and parts of Russia**.
- **In India**, the yellow-throated marten is found across the Himalayan region and in other parts of the northeastern region, including Assam.
- **IUCN Status:** Least Concern.
 - ♦ It is protected as a Schedule II animal under India's Wildlife Protection Act.

About Kaziranga National Park

- It is located in the northeastern state of Assam.
- It was established in **1908** as a reserve forest and became a **national park in 1974**.
- It was declared a UNESCO world **heritage site in 1985**.
- It is the largest habitat of the **Indian rhinoceros (Rhinoceros unicornis)**.

Source: TH

PADMA BARRAGE

Context

- Bangladesh has approved a large river engineering project called the **Padma barrage**, on the **Padma river**, which is Bangladesh's stretch of the Ganga, in Rajbari district.

About

- It is Bangladesh's attempt to **partially re-engineer the hydrology of its southwest region**, which has become prone to drought after decades of reduced seasonal flows.
- The barrage will be **2.1-km-long and have 78 spillway gates**, undersluices, navigation locks, fish passages, and associated embankments.
- According to Bangladesh, the project will affect roughly **37% of the country's land area and irrigate around 2.88 million ha of farmland**.

About Padma River

- The Padma River is one of the **largest and most important rivers in Bangladesh**.
- It is the **main distributary of the Ganges River** after the Ganges enters Bangladesh from India.
- The Padma flows **southeast**, joins the Jamuna River (the lower Brahmaputra), and later merges with the **Meghna River before emptying into the Bay of Bengal**.
- It is a major part of the world's largest delta system, the **Ganges–Brahmaputra–Meghna Delta**.

Source: [TH](#)

