

NEWS TODAY

Government Allocates Additional Rice from FCI Buffer Stock for Ethanol Production

Under the **Ethanol Blended Petrol (EBP)** programme an additional **2.8 million tonnes of rice** is to be provided at **subsidised rates**, aimed at **reducing excess stockpiles** of Food Corporation of India (FCI).

Significance

- **Energy security:** Being a **renewable sustainable fuel**, it will **reduce dependence on imported fossil fuels**.
- **Optimal utilization of excess buffer stocks:** FCI has projected **economic cost of rice** (including minimum support price (MSP), storage, transportation etc.) at Rs 4173/quintal for 2025-26.
 - ⊖ Currently, FCI holds **61 MT of rice** against a buffer of only **13.58 MT**.
- **Economic:** It promotes the **"Make in India"** initiative, contributing to **doubling farmers' incomes** and generating **employment**.

Challenges Regarding Ethanol Production from Food Staples

- **Food Security vs. Energy Security:** Use of **food staples** like sugarcane, corn and rice for **ethanol production** threatens **food and livestock feed security** due to threat of **over-diversion**.
 - ⊖ Rice, along with sugarcane and maize, forms the backbone of India's food and livestock feed systems, yet all three are being used as feedstocks for ethanol.
- **Inflation:** The **increased demand** of food crops for ethanol production **increases the prices for consumers** and may result in **reduced availability**.

About Ethanol

- Ethanol is a **primary biofuel**, **naturally** produced through the **fermentation of sugars** by yeasts or through **petrochemical processes** like ethylene hydration.
- **Uses:** **Biofuel** (blended ethanol), **chemical solvent** in industries, **medical use** as an antiseptic and disinfectant.

EBP Programme

- **Objective:** **Blending of ethanol in petrol** with multiple objectives including **reducing import dependence**, savings in **foreign exchange** etc.
- **Target:** **20% ethanol blending by 2025-2026**.
- **Progress of Ethanol Blending:** Increased from 1.53% in 2014 to 15% in 2024.

India assumed the role of a Country Champion at the World Bank Land Conference 2025

During the conference, global attention was drawn towards **India's flagship land management initiatives** like SVAMITVA Scheme and Gram Manchitra platform, as models of **inclusive, technology-driven rural governance**.

- With 68,000 sq. km surveyed and Rs.1.16 trillion worth of land monetized, **SVAMITVA stood out as a scalable model** for inclusive economic transformation at the global level.
 - ⊖ SVAMITVA aims at **establishment of clear ownership of property** in rural areas by mapping of land parcels using drone technology.
- **Gram Manchitra's** role in promoting climate resilience, infrastructure planning, and convergence of schemes drew appreciation for its applicability in global south context.
 - ⊖ Gram Manchitra is a **geospatial planning platform** that empowers Gram Panchayats to prepare data-driven, localized development plans.



Efficient Land Management Systems and Economic Growth

- **Jobs and Growth:** Streamlined access to property facilitate **entrepreneurship, expansion, wealth reinvestment and alternate livelihoods**.
- **Private Capital:** Registered property rights provide landowners with collateral access, **boosting private credit and investment opportunities**.
- **Infrastructure Funding:** Generate **stable government revenue for essential public services** and infrastructure.
 - ⊖ Land and property taxes generate just 0.6% of GDP in low-income countries, compared to 2.2% in industrialized nations.
- **Urban Management:** Help cities plan for **growth, protecting public spaces, identify development opportunities**, and manage disaster risks.
- **Food Security:** Improving women's access to land can increase agricultural outputs by 4%.

For the first time, a study estimates the scale of global river contamination from human antibiotic use

Study calculated that about 8,500 tons of antibiotics—nearly **one-third of what people consume annually**—end up in river systems each year and 11% reach the world’s oceans or inland sinks.

Pathways for Antibiotic Pollution

- **Incomplete metabolism** in human body and incomplete removal in wastewater systems.
- **Extensive use** of antibiotics in **animal husbandry and aquaculture**.
- Losses during **pharmaceutical manufacturing**.
- **Climate Change** drives the proliferation of bacteria, making horizontal gene transfer possible and increasing chances of developing resistance.

Key Findings of the Study

- **10% of the global population** is exposed to the **top 1%** of surface waters with the **highest cumulative concentrations of antibiotics**.
- **Untreated domestic wastewaters** contribute the **greatest share of emissions** into rivers.
 - ⊖ Only **43%** of the load of antibiotics from domestic sources is **processed** in wastewater systems.
- **6 million km of rivers (25%)** exceed the threshold of **high risk from antibiotic pollution**.
 - ⊖ **India** has more than **80%** of its rivers in **high or very high risk categories**.
- **Main Antibiotics** contributing to antibiotic pollution are **amoxicillin, ceftriaxone and cefixime**.

Antibiotic Pollution

➤ Impact:

- ⊖ **Human Health:** Antibiotic pollution worsens **Antimicrobial Resistance (AMR)** which could become leading cause of global deaths by 2050 (WHO).
- ⊖ **Environment:** It may **reduce microbial diversity** and impact the health of **fish and algae**.

➤ Initiatives:

- ⊖ **India’s National Action Plan on AMR (NAP-AMR) (2017):** Targets improvement in regulation, education, and surveillance.
- ⊖ **WHO Global Action Plan on Antimicrobial Resistance (2015).**
- ⊖ **WHO Guidance on Antibiotic Pollution from Manufacturing**

The Prime Minister (PM) Unveils Bold New Security Doctrine

Addressing the Nation after successful **Operation Sindoor**, PM outlined India’s new security doctrine (refer to table), reflecting India’s **zero tolerance policy towards terrorism**.

- The recent **Operation Sindoor**, resulted in the **neutralization of over 100 terrorists** including key commanders and strategists who have orchestrated violence against India for decades.

Three key pillars of India's security doctrine

Pillars	Details	Significance
<p>Decisive Retaliation</p>	<ul style="list-style-type: none"> • Any terrorist attack on India will be met with a strong and resolute response. India will retaliate on its own terms, directly targeting the roots of terror infrastructure. 	<ul style="list-style-type: none"> • Strategic Shift: It formalizes military retaliation as part of India’s anti-terrorism doctrine, signaling a stronger and more decisive response to terrorism.
<p>No Tolerance for Nuclear Blackmail</p>	<ul style="list-style-type: none"> • India will not be intimidated by nuclear threats. Any terrorist safe haven operating under this pretext will face precise and decisive strikes. 	<ul style="list-style-type: none"> • It clearly states that nuclear threats won’t deter India’s right to self-defense, a sharp shift from past restraint, signaling readiness for decisive action despite strategic risks.
<p>No Distinction between Terror Sponsors and Terrorists</p>	<ul style="list-style-type: none"> • India will treat terrorist leaders and the governments that shelter them as one and the same. <ul style="list-style-type: none"> → Earlier, India reiterated that any future terrorist attack will be considered an act of war, signaling a significant elevation in India’s response framework 	<ul style="list-style-type: none"> • Aims to dismantle the state-sponsored nature of terrorism that poses a significant threat to global peace and security.

US President signed Executive Order to implement access to Most-Favoured Nation (MFN) price for pharmaceutical products

President Trump signed an executive order, aiming to reduce **US prescription drug prices under most favoured nation (MFN) prescription drug pricing**, which can have potential repercussions for India's pharmaceutical sector. Presently, US pays about **three times more for the same drugs** compared to other high-income nations

About MFN

- MFN principle is a cornerstone of multilateral trading system, which seeks to implement rules-based framework where **trading rights do not depend on individual participants' economic or political clout**.
- It implies that the best access conditions that have been conceded to one country must **automatically be extended to all other participants** in the system.
- Under **Article 1 of General Agreement on Tariffs and Trade (GATT), 1994**, every member country of World Trade Organization (WTO) must accord MFN status to all other member countries.
 - ⊖ Under WTO agreements, countries following MFN status **cannot discriminate among their trading partners**.

Potential Impact on Indian Pharma sector

- **Export Concerns:** USA accounts for nearly one-third of India's pharmaceutical exports (approximately \$10 billion annually), the order could **disproportionately affect India's trade**.
- **Impact on Research:** Proposed price cuts would reduce the **profits of pharma companies, which in turn would reduce funds for research on new medicines**.
- **Increased Prices in Domestic Market:** Pharmaceutical companies may intensify efforts to offset reduced profits in the **U.S. by seeking higher prices in markets like India**.



Also in News



Total Fertility Rate

According to Sample Registration System (SRS) Report 2021 released by Registrar General of India, **Total Fertility Rate (TFR) remains constant at 2.0 in 2021**.

- TFR is the **average number of children a woman would have** at the end of their reproductive period.
 - ⊖ A TFR of 2.1 is known as the **Replacement Rate**, which if sustained over long period, each generation will exactly replace itself in the absence of migration.
- **Bihar** has reported the **highest TFR at 3.0**, while **Delhi and West Bengal** reported the **lowest TFR of 1.4**.



CERN Large Hadron Collider

Scientists report transmutation of **Lead into Gold** in CERN's Large Hadron Collider (LHC) albeit for only a fraction of second.

- CERN's LHC revealed creation of some 86 billion gold nuclei – all from **smashing together lead atoms** at 99.99% the speed of light.

About CERN's LHC

- It is the **world's largest and most powerful particle accelerator**.
- LHC consists of a **27-kilometre ring of superconducting magnets** with a number of **accelerating structures** to boost the energy of the particles along the way.
- Inside the accelerator, **two high-energy particle beams** travel at close to the **speed of light** before they are **made to collide**.



LICOMK++ Ocean Simulator

Chinese researchers have developed a high-resolution ocean simulation system, named LICOMK++, **that offers enhanced capabilities for modelling ocean dynamics and climate patterns**.

About LICOMK++

- LICOMK++ is being hailed as an ocean "microscope" owing to its **ultra-high-resolution capabilities**.
- The system enables scientists to **analyze complex processes such as eddies and heat transport with unprecedented clarity**.
- It can significantly **improve predictions for extreme weather events like typhoons, marine heatwaves, and floods**.



Germanium

India engages China over Germanium export curbs: Embassy.

About Germanium

- **Germanium** is a silvery-white semi metal (**Metalloid**); it has properties of both metals and non-metals.
- **Primary Ores:** Germanite and Argyrodite. **Germanium ores are rare** and most germanium is a by-product of zinc production and from coal fly ash.
- **Other Properties:** **Brittle**; Transparent to infrared radiation; High index of refraction.
- **Production:** China accounted for **68% of global germanium production in 2023**, making it the world's dominant supplier.
 - ⊖ India is 100% dependent on **germanium** import.
- **Applications:** Semiconductors, Fiber Optics, Infrared Optics, solar cells etc.



Basket sneaking and Confirm Shaming

The Central Consumer Protection Authority (CCPA) has served notices to various online platforms over using dark patterns like Basket sneaking & Confirm Shaming.

- Dark patterns are deceptive design techniques that manipulate user interfaces to trick people into making **unintended choices**, **undermining their autonomy & violating consumer rights**.

Basket Sneaking

- Sneaking unwanted items/donations into **shopping carts during checkout without user consent to increase the final payment amount**.

Confirm Shaming

- It means using fear, shame, guilt, or **ridicule to pressure users into making purchases or continuing subscriptions**.
- Example:** "No thanks, I don't care about saving money" as a button to decline an offer.



PL-15 and Byker YIHA III

The Indian Armed Forces intercepted and neutralised a range of high-tech foreign weapons of Pakistan including PL-15 missiles & Byker YIHA III Kamikaze drones.

About PL-15

- It is a **Chinese-origin air-to-air missile** employing active radar guidance, satellite and inertial navigation systems.

About Byker YIHA III

- Turkish Kamikaze-style (single-use missions) loitering drones**, capable of carrying **high-explosive warheads**.



Kosmos 482

The **Kosmos 482 lander probe** re-entered Earth's atmosphere and splashed into the Indian Ocean.

About Kosmos 482

It was part of **Soviet Union's Venera Program**, which sent a fleet of probes to Venus.

Venus is the second planet from the Sun, and is the hottest planet in our solar system.

It was **launched in 1972** but could not leave the Earth's orbit.

It consisted of a **carrier bus and lander probe**.



National Defence Fund (NDF)

The Telangana Chief Minister, along with several others, has donated to the NDF as a gesture of solidarity with the armed forces.

National Defence Fund (NDF)

- Established in 1962.**
- Objective:** To take charge of voluntary donations in cash and kind received **for promotion of the national defence effort, and to decide on their utilisation**.
- Utilization:** For the welfare of the **members of the Armed Forces (including Para Military Forces) and their dependents**.
- Administered by:** An **Executive Committee**, with **PM as Chairperson**, and Defence, Finance and Home Ministers as Members.
 - Finance Minister** is the **Treasurer** of the Fund.
- Tax Benefits:** All contributions towards NDF **are exempt from Income Tax under section 80(G)**.

Places in News



Maldives (Capital: Male)

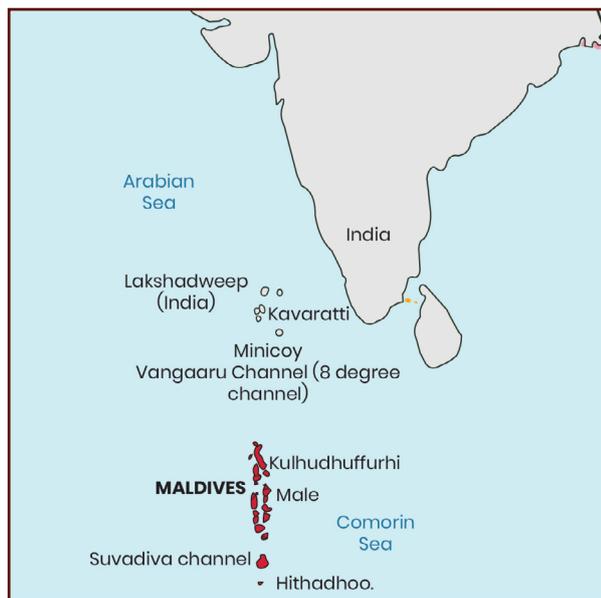
India extends **financial support to Maldives** through rollover of \$50 million Treasury Bill (T-bills) for a year.

Political Features

- It is an **island nation** consisting of a group of **Atolls** (consisting of **coral islands**) in the **Indian Ocean**.
- It is the **smallest Asian country, strategically located** astride and along major sea lanes in the Indian Ocean.
- Located to the **south-southwest of India**, it is separated from **India (Lakshadweep)** by the **Eight Degree Channel**.

Geographical Features

- Climate:** Tropical hot and humid; dry, northeast monsoon (November to March); rainy, southwest monsoon (June to August)
- Coral Reefs:** Maldives has the **world's 7th largest coral reef system**, making up about **3.14% of global reef area**.
- There are **no rivers or streams** in the Maldives.



AHMEDABAD



BHOPAL



CHANDIGARH



DELHI



JAIPUR



JODHPUR



GUWAHATI



HYDERABAD



LUCKNOW



PRAYAGRAJ



PUNE



RANCHI



SIKAR