

NEWS TODAY

SUGAR MILLS ON COURSE TO MEET 12% ETHANOL BLENDING TARGET

Oil marketing companies (OMCs) receive 45% of contracted 514 crore litres of ethanol for the ethanol supply year (ESY) 2022-23 ending October.

➤ It will help them to increase blending to 11.65% against 10% during the same period a year ago.

➤ Target for ethanol blending with petrol is 12% in current ESY.

An ethanol blend is a blended motor fuel containing ethyl alcohol that is at least 99% pure, derived from agricultural products, and blended exclusively with gasoline.

➤ Apart from sugarcane-based raw materials, ethanol production from surplus rice with Food Corporation of India and Maize is also allowed.

Government has been implementing Ethanol Blended Petrol Programme wherein OMCs sell petrol blended with ethanol.

➤ Target of achieving average 10% blending was achieved in June, 2022 and target of 20% ethanol blending was advanced to 2025 (from 2030).

▪ Recently, PM launched a pilot project for E20 fuel, a blend of 20% ethanol and 80% petrol, 2 years ahead of target.

• Significance

➤ Less polluting fuel and offers equivalent efficiency at lower cost than petrol.

➤ Achieving energy security, lowering crude oil import bill and transitioning to a low carbon economy.

➤ Enable local enterprises and farmers to participate in energy economy.

MEASURES TAKEN TO IMPROVE ETHANOL BLENDING

Union Budget 2022-23 announced an additional differential excise duty on unblended fuel

Interest subvention scheme extended to grain-based distilleries

Amendments to National Policy on Biofuels

Flexi-fuel engine & components included under PLI scheme

GLOBAL POLYCRISIS SLOW THE PROGRESS TO END CHILD MARRIAGE: UNICEF

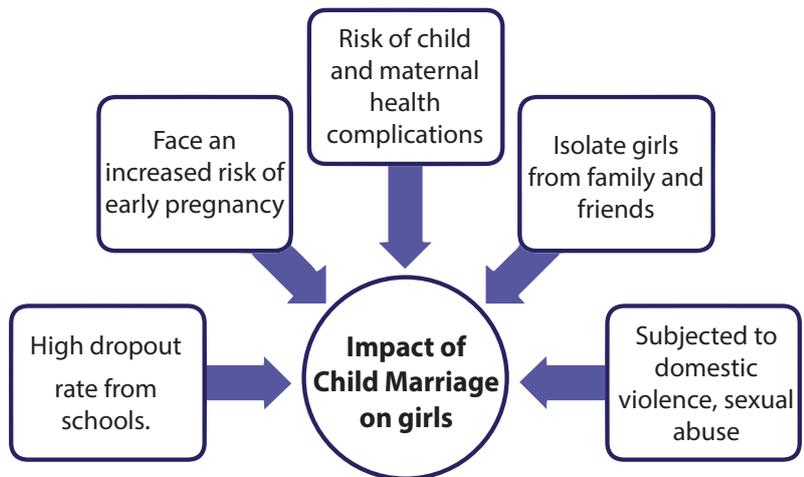
As per the new analysis by UNICEF, multiple crises including conflict, climate shocks, and the ongoing fallout from COVID-19 are threatening to reverse progress made in decline in child marriage in the last decade.

• Key highlights

➤ Approx. 640 million girls and women alive today were married in childhood.

➤ Global child marriage rates decreased slightly to 19%, but progress is insufficient to meet SDG target of ending child marriage by 2030.

➤ While India has recorded significant progress in recent decades, it still accounts for one-third of world's child brides.



• Reasons for Child Marriages: Gender inequality, social norms, poverty, lack of education, safety concerns about girl children, control over sexuality etc.

• Initiatives taken

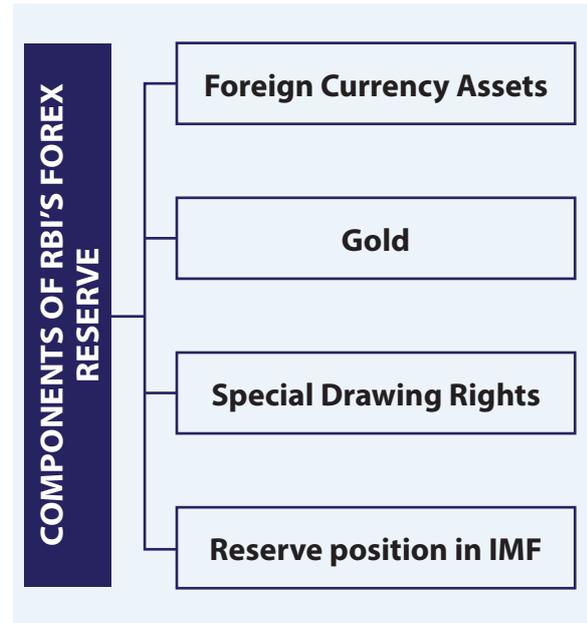
➤ Prohibition of Child Marriage Act of 2006 that provides legal age for marriage.

➤ Beti Bachao Beti Padhao (BBBP) scheme and similar schemes by state governments to improve the factors linked to child marriage

➤ A parliamentary standing committee is weighing the pros and cons of raising the age of marriage for women to 21.

RBI AND OTHER CENTRAL BANKS ARE RAMPING UP GOLD HOLDINGS

- Since 2010, central banks have been **net buyers of gold on an annual basis.**
 - India is among **10 largest official buyers** of gold from 1999 to end of 2021.
 - RBI's gold reserves touched **794.64 metric tonnes in fiscal 2023**, an increase of nearly 5% over fiscal 2022.
- **Reasons for increase in holding:**
 - **To Balance Foreign Exchange reserves:** Gold is used to manage risk from currency holdings and to promote stability during economic turmoil.
 - **Hedging against fiat currencies:** Gold offers a hedge against the eroding value of currencies due to inflation.
 - **Diversifying Portfolios:** It protects Central banks from volatility as Gold's price has an inverse correlation with U.S. dollar.
- This increase in holding trend is **different from the 1990s and early 2000s, when central banks were net sellers** of gold because of reasons like **good macroeconomic conditions and a downward trend in gold prices.**
 - Due to strong economic growth, **gold's safe-haven properties were less valuable, and low returns made it unattractive** as an investment.
- **Central bank attitudes toward gold** started **changing following 1997 Asian financial crisis and 2007–08 financial crisis.**



INDIA EXTENDS \$1 BILLION CREDIT LINE FOR SRI LANKA BY A YEAR

- Credit line was **part of about \$4 billion in emergency assistance extended by India** during the **peak of Sri Lanka's financial crisis early last year.**
 - **Earlier India, Japan and China** — Sri Lanka's top three bilateral creditors — **played a crucial role in unlocking IMF assistance** to it by providing financing assurances.
- **India-Sri Lanka relations**

Commercial	<ul style="list-style-type: none"> ● India-SL Free trade agreement (ISFTA) was signed in 2000 and the bilateral trade grew many fold. ● India was Sri Lanka's largest trading partner in 2021. ● SL is the major trade partner for India in the SAARC region.
Development	<ul style="list-style-type: none"> ● Indian Housing Project to build houses in war affected areas and estate workers in the plantation areas. ● Several Lines of credit (LOC) for Railway, transport, connectivity, defence, solar projects.
Culture	<ul style="list-style-type: none"> ● Cultural Cooperation Agreement, deep people-to-people connect and shared Buddhist heritage, Swami Vivekananda Cultural Centre at Colombo. ➢ Ashoka sent his children ArhatMahinda and TheriSangamitta to spread the teachings of Lord Buddha at the request of King DevanampiyaTissa of Sri Lanka.
Defence	<ul style="list-style-type: none"> ● Combined military exercise including 'MITRA shakti', 'SLINEX etc.

- **Areas of concerns** include **Fishermen issues** (about traditional fishing rights), **Stalled infrastructure projects, Increased Chinese influence** etc.

DEPARTMENT OF FERTILIZERS TAKES MULTI-PRONGED MEASURES TO STOP DIVERSION AND BLACK MARKETING OF FERTILIZERS

- **Fertilizer Flying Squads (FFS) have been formed** to check diversion, black marketing, hoarding and supply of sub-standard quality of fertilizers.
 - **Only agricultural urea is subsidised** in India- which creates **incentives to divert subsidised urea to industry and across the border.**
 - **Urea is used as a raw material** in multiple industries such as **resin, plywood, crockery making and moulding-powder units.**
- Government is making available **fertilisers to farmers at subsidized prices** through fertilizer manufacturers/importers.
 - **While urea** is being provided at a **statutorily notified maximum retail price (MRP)**, for **phosphatic and potassic (P&K) fertiliser** there is a **nutrient-based subsidy scheme.**
- **Other initiatives taken for efficient fertiliser use**
 - **Integrated Fertilize Management System (iFMS)** for spreading awareness amongst farmers about quality of fertilizers.
 - **Mandatory Neem Coated Urea** to prevents illegal diversion for non-agricultural uses.
 - **One Nation, One Fertilizer (ONOF) Scheme.**
 - **Soil Health Card for wise Fertilizer use.**

JAMES WEBB SPACE TELESCOPE (JWST) SPOTS NEW BELTS OF ASTEROID NEAR STAR FOMALHAUT

- Observations from JWST revealed **two additional dusty rings or belts nearer Fomalhaut** – a bright inner one and a narrow intermediate one.
 - **Dust around stars** contains elements such as **carbon and iron** which **can help form planetary systems**.
- Fomalhaut is the **brightest star in southern constellation of Piscis Austrinus**. It is almost **twice the mass and size of sun** and **radiates over 16 times the sun's energy**.
 - **A single belt of debris** around Fomalhaut **was discovered in 1983**.
- Dusty belts are the **debris from collisions of larger bodies**, analogous to asteroids and comets, **and are frequently described as 'debris disks.'**
 - These disks are **similar to Solar System's Kuiper Belt** (a doughnut-shaped **ring of icy objects around the Sun**, extending just **beyond the orbit of Neptune**).
 - **Three belts of Fomalhaut are made up of planetesimals** (dust clumps, pebbles etc that are **building blocks of planets**).
- JWST, **NASA's s infrared flagship observatory**, is an international collaboration **between NASA, European Space Agency, and Canadian Space Agency**.
 - It is **placed in Sun-Earth Lagrange Point 2 (L2)**.
 - JWST is being considered as **successor of Hubble Space Telescope (HST)**.

ALSO IN NEWS



Land Port Authority of India (LPAI)

- Recently, Union Home Minister laid the **foundation stone of various development projects of LPAI**.
- LPAI is a **statutory body**, under **Ministry of Home Affairs**, to **develop and manage facilities** for cross-border movement of passengers and goods **at designated points along international borders**.
- LPAI is responsible for **establishing, operating and managing Integrated Check Posts (ICPs)** along land borders of India.
- There are **currently nine Land Ports operational in India** at Attari, Agartala, Petrapole, Raxaul, Jogbani, Moreh, Sutarkandi, Srimantapur and PTB at Dera Baba Nanak.



Bharat EMart

- **India Post signed an MoU** with Confederation of All India Traders (CAIT) and Tripta Technologies **to facilitate operationalisation of Bharat EMart portal**.
- It will provide **facility of pick-up of consignments** from premises of traders and will ensure **delivery at the doorsteps of consignees across the country**.
 - Platform **has around 8 crore traders registered** under it.
- It would **provide much needed logistics support to small traders** which would **increase their businesses** and also the **opportunities for employment**.



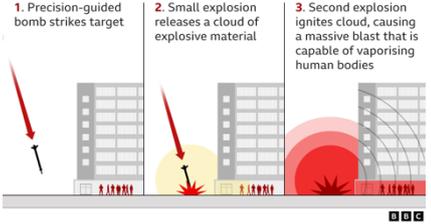
Petermann Glacier

- A **rapid melt induced by daily tides with increased water temperature** was noticed in the Petermann Glacier.
 - It could result in **previously unaccounted-for melting and potentially faster sea level rise**.
- Glacier is located in the **north western Greenland** and the **glacier's grounding line shifts significantly with the arrival of tides**.
 - **Grounding line is the area where the ice sheet begins to extend out on top of the ocean**.
- This **revelation is against the common belief of the scientists** that the grounding line do not migrate with the tides



Watsonx Platform

- Watsonx, **launched by IBM**, is a new **artificial intelligence (AI) and data platform** to help companies integrate AI in their business.
- It provides self-service **access to high-quality, trustworthy data, enabling users to collaborate** on a single platform.
- It helps **facilitate the entire data and AI lifecycle**, from data preparation to model development, deployment and monitoring.

 <p>Maternal and Newborn deaths</p>	<ul style="list-style-type: none"> A UN report highlighted that progress in tackling maternal and newborn deaths has stalled since 2015. <ul style="list-style-type: none"> ➤ Maternal Mortality Ratio in India stands at 97/ lakh live births (2018-20). Key Findings <ul style="list-style-type: none"> ➤ 4.5 million women and babies die every year during pregnancy, childbirth or the first weeks after birth (1 death happening every 7 seconds). ➤ COVID-19 pandemic, rising poverty, and worsening humanitarian crises have intensified pressures on stretched health systems. ➤ In worst-affected countries in Sub-Saharan Africa and Central and Southern Asia, fewer than 60% of women receive even four, of WHO's recommended eight, antenatal checks.
 <p>Multi-Drug Resistant-TB (MDR-TB)/ Extensively drug resistant TB (XDR TB)</p>	<ul style="list-style-type: none"> Scientists at CSIR-Centre for Cellular & Molecular Biology (CCMB) established that mutations in DNA repair genes could be used for early diagnosis of MDR/ XDR TB. Bacteria that cause tuberculosis (TB) can develop resistance to antimicrobial drugs used to cure the disease. MDR-TB is TB that does not respond to at least isoniazid and rifampicin, 2 most powerful anti-TB drugs. XDR TB is a rare type of MDR TB that is resistant to isoniazid and rifampin, plus any fluoroquinolone and at least one of three injectable second-line drugs (i.e., amikacin, kanamycin, or capreomycin).
 <p>Dhruv advanced light helicopter</p>	<ul style="list-style-type: none"> A government regulatory body has called for a safety upgrade of the Dhruv helicopter. It is a multi-role, multi-mission new generation helicopter certified for both civil and military roles. <ul style="list-style-type: none"> ➤ It is indigenously designed and developed by Hindustan Aeronautics Limited. It is capable of operating in all-weather conditions and powered by twin shakti engines.
 <p>Thermobaric Bomb</p>	<ul style="list-style-type: none"> Human rights group accused Myanmar's military of using thermobaric bomb (also called a vacuum or aerosol bomb - or fuel air explosive). A thermobaric bomb consists of a fuel container with two separate explosive charges. <ul style="list-style-type: none"> ➤ When it hits its target, first explosive charge opens the container and widely scatters fuel mixture as a cloud. ➤ A second charge then detonates the cloud, resulting in a huge fireball, a massive blast wave and a vacuum which sucks up all surrounding oxygen. There are no international laws specifically banning their use. <div> <p>How thermobaric weapons work</p>  <ol style="list-style-type: none"> 1. Precision-guided bomb strikes target 2. Small explosion releases a cloud of explosive material 3. Second explosion ignites cloud, causing a massive blast that is capable of vaporising human bodies </div>
 <p>Gallantry Awards presented</p>	<ul style="list-style-type: none"> Gallantry Awards have been instituted by Government to honour the acts of bravery and sacrifice of officers/personnel of Armed Forces, other lawfully constituted Forces and civilians. Announced twice in a year - on Republic Day and on Independence Day. Gallantry Awards are classified into two Categories: <ul style="list-style-type: none"> ➤ Gallantry in Face of Enemy: Param Vir Chakra, Mahavir Chakra, Vir Chakra ➤ Gallantry Other than in Face of Enemy: Ashok Chakra, Kirti Chakra, Shaurya Chakra. Order of precedence: Param Vir Chakra, Ashoka Chakra, Mahavir Chakra, Kirti Chakra, Vir Chakra and Shaurya Chakra.
 <p>Personality in News</p>	<p>Maharana Pratap</p> <ul style="list-style-type: none"> Maharana Pratap was a Rajput King who belonged to Sisodiya clan of Rajputs. He was the ruler of Mewar, a province in modern day Rajasthan. He was the eldest son of Uday Singh II, founder of Udaipur. His army lost to Mughals in battle of Haldighati. Chetak was the loyal horse of Rana Pratap with whom he shared a deep bond. Personality traits: Bravery, courage, valour, leader etc.

Update: Geological Survey of India (GSI) said that **media reports of large lithium reserves** being identified in Rajasthan were baseless.