

NEWS TODAY

WORLD'S FIRST PROTOTYPE OF THE BS 6 STAGE II 'ELECTRIFIED FLEX FUEL VEHICLE (FFV)' LAUNCHED

- This vehicle has both the **flex fuel engine as well as an electric powertrain.**
 - It offers **higher use of ethanol** combined with **better fuel efficiencies.**
- FFV has an internal combustion engine **that can run on more than one type of fuel, or even a mixture of fuels** such as petrol and ethanol.
 - **For example: E85** which has 85% ethanol fuel and 15% gasoline or other hydrocarbon by volume.
 - **Benefits:** Lower harmful pollutant emission like Carbon monoxide, sulphur, etc., reduced import dependence on crude oil.
 - **Drawbacks:** Lower mileage compared to traditional gasoline, use of water-intensive crops such as sugarcane for production of ethanol, etc.
- **Bharat Stage VI (BS VI)**
 - Bharat stage (BS) emission standards are laid down **to regulate the output of air pollutants from internal combustion engine and spark-ignition engine equipment.**
 - Government had decided to **leapfrog directly from BS-IV to BS-VI** emission norms w.e.f. **April 01, 2020.**
 - The **fuel quality has improved significantly from BS-IV to BS-VI norms** by **reducing the permissible Sulphur content by 80%** (from 50 Parts Per Million (ppm) to maximum 10 ppm).

ETHANOL BLENDED PETROL (EBP) PROGRAMME

- The **target of 10% ethanol blending** for Ethanol Supply Year (ESY) 2021-22 **has already been achieved.**
- The **National Policy on Biofuels – 2018 targets 20% blending of ethanol in petrol** by ESY 2025-26.

MINISTRY OF TEXTILES (MOT) APPROVED STARTUP GUIDELINES FOR RESEARCH AND ENTREPRENEURSHIP ACROSS ASPIRING INNOVATORS IN TECHNICAL TEXTILES (GREAT)

- **Key highlights**
 - **Aim:** Developing the **Startup Ecosystem** in Technical Textiles (TTs).
 - **Focus: Niche sub-segments** such as Bio-degradable and Sustainable textiles, High-performance & Specialty fibres, Smart textiles, etc.
 - **Financial Aid:** Grant-in-aid to support individuals and companies to **translate prototypes** into technologies and products and **commercialize them.**
 - **Startups** will get grant-in-aid **up to ₹50 lakhs** for up to a **period of 18 months.**
 - **Incubator** will get an **additional 10%** of total grant-in-aid.
 - **Support to premier institutes:** IIT Delhi, NIFT Mumbai among others got approval for **upgrading laboratory infrastructure**, and introduction of **new degree programmes** in TTs.
- TTs are **engineered textile materials and products** used primarily for their **technical performance and functional properties** rather than aesthetic and decorative features.
 - TTs are broadly classified **into 12 different categories** including Agrotech, Oekotech, Buildtech, Meditech, Geotech, etc.
- **Initiatives for TTs**
 - **Quality Control Orders (QCOs)** for 31 TTs.
 - **National Technical Textiles Mission** to position India as a **global leader in TT.**
 - It will be implemented from **FY 2020-21 to 2023-24.**
 - **Components:** Research, Innovation and Development; Promotion and Market Development; Export Promotion; Education, Training, Skill Development.

FOR THE FIRST TIME, UN COMMITTEE ON THE RIGHTS OF THE CHILD (CRC) ISSUED GUIDANCE ON CHILDREN'S RIGHTS AND ENVIRONMENT

- New guidance, formally known as **General Comment No. 26**, has affirmed children's right to live in a clean, healthy and sustainable environment.
 - It provides a **comprehensive interpretation of State obligations** under the **UN Convention on the Rights of the Child (UNCRC)**.
 - It aims to address the adverse effects of **environmental degradation and climate change** on the **enjoyment of children's rights**.
- **Recommendations of General Comment No. 26:**
 - Extent and magnitude of **triple planetary crisis** - climate emergency, the collapse of biodiversity and pervasive pollution - is an **urgent and systemic threat to children's rights globally**.
 - States shall:
 - **protect children** against environmental damage from commercial activities,
 - **provide child-friendly pathways for accessing justice**,
 - **address climate finance gaps**.
- UNCRC, adopted in **1989**, outlines children's rights, including to life, health, clean drinking water, and survival and development.
 - It is ratified by **196 state parties (including India)**.
 - CRC is the **body of 18 independent experts** that monitors implementation of the UNCRC by its States parties.

IMPACT OF CLIMATE CHANGE ON CHILDREN

Greater risk of rights violations due to climate induced displacements.

Affecting development potential due to poor nutrition, loss of education etc.

Severe disease vulnerabilities.

Physiological and emotional vulnerabilities like mental stress.

PRODUCTION LINKED INCENTIVE (PLI) SCHEME FOR AUTOMOBILE AND AUTO COMPONENTS EXTENDED ANOTHER YEAR TO 2027-28

- Government has also decided to **disburse the incentives on a quarterly basis**, instead of annual plan.
- **About PLI Scheme for Automobile and Auto Component Industry (PLI-AUTO)**
 - **Nodal Ministry:** Ministry of heavy industries (MHI)
 - **Purpose:** To drive supply chain of Advanced Automotive Technology (AAT) products (vehicles and components).
 - **Incentive:** Incentive **upto 18% for fresh investments in indigenous supply chain** of AAT.
 - **2% additional incentive** for achieving **higher growth**.
 - **Base Year (BY):** BY for calculation of Eligible sales for incentive is 2019-20.
 - **Conditions for incentive:** Minimum 50% domestic value addition.
 - **Effect on eligibility under FAME-II:** Incentive payable under this scheme to electric vehicle (EV) manufacturers is **in addition** to the incentives given under FAME-II scheme.
 - **Project Management Agency:** IFCI Limited (IFCI), a Non-Banking Finance Company in the public sector.
 - **Achievements**
 - **95 companies** have been admitted under the scheme.
 - **Investment** (till June 30, 2023) is **₹10,755 crore out of the total outlay of ₹67,690 crore in the next five years**.
- Government aims to increase the contribution of automobile sector to India's **GDP to 12%** (currently 7.1%) and **employment generation to 50 million** (currently 37 million).

FULLY SEQUENCED Y CHROMOSOME REVEALS 41 NEW GENES, ADDS 30 MILLION NEW BASES TO HUMAN GENOME

- **Y is the last human chromosome** to have been **sequenced** end-to-end, or T2T (telomere-to-telomere).
 - **Telomeres** are structures **made from DNA sequences and proteins** and cap and **protect the end of a chromosome**.
 - Chromosomes are **thread-like structures made of protein and a single molecule of DNA** that serve to carry the genomic information from cell to cell.
- This breakthrough will **help understand:**
 - **Working** of genes for sex and sperm work,
 - **Evolution** of Y chromosome.
 - If the Y chromosome will **disappear in a few million years** as predicted.
- **About Y chromosome**
 - It is one of the two **human sex chromosomes** (X being the other).
 - Human genome has **22 pairs of autosomes** and **one pair of sex chromosomes** (XX in female and XY in male).
 - Y chromosome is **male-determining** because it bears **SRY genes** which is responsible for certain sex characteristics, such as testes.
 - Unlike the X chromosome, **Y chromosome is smaller and bears few genes** (only 27 compared to about 1,000 on the X).
 - Y also has a **lot of 'junk DNA** (sequences that don't seem to contribute to traits)'.
 - **Human genome has 22 pairs of autosomes and one pair of sex chromosomes (XX in female and XY in male).**

PROGRESS OF AADHAAR-BASED PAYMENT SYSTEM (ABPS) REVIEWED BY MINISTRY OF RURAL DEVELOPMENT

- The mixed route of wage payment (National Automated Clearing House (NACH) and ABPS route) **has been extended till 31st December 2023 for payment of wages** under Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGS).
- Presently, the wage payment of the MGNREGS beneficiaries may be made **either using ABPS or NACH depending upon the status on ABPS of a beneficiary.**
 - **Option 1- ABPS:** if a beneficiary is ABPS enabled, the payment will be made through ABPS only.
 - **Option 2- NACH:** In case due to some technical reasons etc, the beneficiary is not enabled for ABPS, NACH is used as the mode for making wage payment.
- **ABPS** is a route for a payment instruction to follow and finally payment is getting credited into a bank account.
 - Once Aadhaar is updated in the scheme database, **beneficiary need not update account numbers** due to change in location or change in bank account number.
 - Money will be transferred to the **account number which is linked with Aadhaar number.**
- **NACH** developed by NPCI is a web-based solution to facilitate interbank, high volume, electronic transactions of repetitive and periodic nature.

About Aadhaar Based Payment Bridge system

- MGNREGS has not adopted Aadhaar-enabled payment, rather it has **opted for Aadhaar Based Payment Bridge system.**
- **APBS** is a unique payment system implemented by **National Payments Corporation of India (NPCI).**
- It uses **Aadhaar number as a central key for electronically channelizing the Government subsidies** and benefits in the Aadhaar Enabled Bank Accounts of the intended beneficiaries.

ALSO IN NEWS

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|  <p>Social Stock Exchanges (SSEs)</p> | <ul style="list-style-type: none"> • SEBI has proposed to reduce the threshold of the minimum issue size for not-for-profit organizations (NPOs) to facilitate fund-raising. • SSEs are platforms regulated by SEBI that allow NPOs to raise funds for their social initiatives. <ul style="list-style-type: none"> ➤ Idea of a SSE for listing of social enterprise and voluntary organisations for raising capital as equity, debt or like a mutual fund was mooted in the Union Budget 2019-20. ➤ Social enterprises include a revenue-generating business whose primary objective is to achieve a social objective, for example, providing healthcare or clean energy. |
|  <p>Self-Respect Marriages</p> | <ul style="list-style-type: none"> • Recently, Supreme Court ruled that lawyers can solemnise 'self-respect marriages' (suyamariyathai or seerthiruththa) between two consenting adults under Section 7-A of the Hindu Marriage Act (HMA) 1955. <ul style="list-style-type: none"> ➤ Also, public declaration of such marriage is not necessary. • Section 7-A of HMA, added in 1967 and applicable only to Tamil Nadu, deals with the special provision on "self-respect and secular marriages". <ul style="list-style-type: none"> ➤ Self-respect marriage allows partners to solemnize their marriage without a priest and through a joint declaration in presence of friends, relatives or other persons. |
|  <p>Pacific Decadal Oscillation (PDO)</p> | <ul style="list-style-type: none"> • According to studies, PDO could make cyclones near the Equator more frequent in future. • About PDO <ul style="list-style-type: none"> ➤ PDO is a sea surface temperature (SST) climate cycle describing sea surface temperature anomalies over the Northeastern Pacific Ocean. ➤ PDO is a naturally occurring phenomenon that shifts between warm and cool phases, with each phase lasting around 20-30 years. ➤ It is often described as a long-lived El Niño-like pattern of Pacific climate variability. ➤ Impact on climate: Change in location of the cold and warm water masses alters the path of the jet stream. |
|  <p>Global Research Alliance on Agricultural Greenhouse Gases (GRA)</p> | <ul style="list-style-type: none"> • New Zealand Minister recently invited India to join the GRA for sharing researches on mitigation of climate change impacts on agriculture. • GRA was launched in 2009 to promote international cooperation and investment in research to mitigate the effect of agricultural greenhouse gas emissions. <ul style="list-style-type: none"> ➤ It aims to deepen and broaden mitigation research efforts across the agricultural sub-sectors of paddy rice, cropping, and livestock. ➤ It currently has 67 member countries (excluding India). |

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|  <p>Kampala Ministerial Declaration on Migration, Environment and Climate Change (KDMECC)</p> | <ul style="list-style-type: none">• This declaration is also known as Kampala declaration. Around 48 African countries have agreed to adopt it.• It aims to address the nexus of human mobility and climate change in the continent.• Declaration calls for enhanced cooperation to address five areas of concern:<ul style="list-style-type: none">➤ Progressive desertification and land degradation➤ Unsustainable use of ecosystems➤ Unplanned migration of people due to climate change and disasters➤ Paucity of data and statistics on the impact of climate change➤ Limitations of partnerships and financing to respond to the climate crisis |
|  <p>Findings of Pragyan Rover</p> | <ul style="list-style-type: none">• Pragyan, rover module of Chandrayaan-3, confirmed the presence of Sulphur near the lunar south pole.<ul style="list-style-type: none">➤ It was confirmed through in-situ measurements by Laser-Induced Breakdown Spectroscopy (LIBS) instrument onboard the rover.• The rover has detected presence of other elements including Aluminium (Al), Calcium (Ca), Iron (Fe), Chromium (Cr), Titanium (Ti), Manganese (Mn), Silicon (Si), and Oxygen (O).• Earlier, ChaSTE (Chandra's Surface Thermophysical Experiment) probe on the lander Vikram recorded temperature variations on the lunar surface.• The mission is set to go on till September 6, when the Sun sets on the Moon. |
|  <p>National Sickle Cell Anaemia Elimination Mission (NSCEM)</p> | <ul style="list-style-type: none">• NSCEM aims to eliminate Sickle Cell genetic transmission by 2047.<ul style="list-style-type: none">➤ Implemented across 17 high-focus states, it entails awareness, universal screening and counselling.• Sickle cell disease is a group of inherited Red Blood Cell (RBC) disorders.<ul style="list-style-type: none">➤ RBCs contain haemoglobin (oxygen carrying protein).• It changes the shape of RBCs (from round to crescent shape that can block blood flow in the body).<ul style="list-style-type: none">➤ It can lead to chronic anaemia, organ damage etc.➤ It is more common in tribal populations in India.➤ Blood and bone marrow transplant is currently the only cure. |
|  <p>Spamouflage</p> | <ul style="list-style-type: none">• Meta has taken down thousands of Facebook accounts that were part of a campaign known as "Spamouflage".• Spamouflage was a widespread online Chinese spam operation which posted praise for China and criticisms of the USA, western foreign policies, and critics of Chinese government.• Similar campaign by Russia, named Doppelganger, was disrupted last year.<ul style="list-style-type: none">➤ It mimicked websites of mainstream news outlets in Europe and post bogus stories about Russia's war on Ukraine, then try to spread them online. |
|  <p>Pradhan Mantri Ujjwala Yojana (PMUY)</p> | <ul style="list-style-type: none">• Centre will provide an additional 75 lakh Ujjwala connections, raising the total PMUY beneficiaries to 10.35 crores.• PMUY aims to safeguard health of women & children by providing them with a clean cooking fuel-LPG.<ul style="list-style-type: none">➤ Ministry of Petroleum & Natural Gas launched PMUY in 2016 and Ujjwala 2.0 in 2021.➤ Benefit: Deposit-free LPG connection is given to the eligible household.<ul style="list-style-type: none">▪ Financial assistance of Rs 1,600 per connection is also given to cover the cost of a cylinder, pressure regulator, LPG hose, etc. |
|  <p>Personalities in News</p> | <p>Major Dhyan Chand</p> <ul style="list-style-type: none">• The National Sports Day was recently celebrated in India on 29 August to commemorate the birth anniversary of hockey legend Major Dhyan Chand.• Contributions:<ul style="list-style-type: none">➤ Indian field hockey player.➤ Contributed majorly in the victory of the Indian team in 1928 Olympics when India won its first gold medal in hockey.➤ In 1934, he was made the captain of the Indian team.➤ Conferred the Padma Bhushan in 1956.➤ Values: Dedication towards duty, Patriotism |