

NEWS TODAY

SCIENTISTS DEVELOP SYNTHETIC EMBRYOS USING STEM CELLS

● In a major breakthrough in the world of In Vitro Fertilisation (IVF) and human reproduction, a team of scientists in the US and the UK has **developed the world's first ever synthetic human embryo-like structures using stem cells.**

➤ These embryos resemble **natural embryos in the earliest stages of human development.**

➤ While they **lack a beating heart or the beginnings of a brain**, they contain cells that would give rise to the **placenta, yolk sac and the embryo.**

● **Importance:**

➤ Will help understanding **the impact of genetic disorders** and the biological reasons behind **recurrent miscarriages.**

➤ Reportedly dodges the **need for eggs or sperms** for the creation of human embryos.

● **About stem cells:**

➤ A cell with the **unique ability to develop into specialised cell types** in the body.

➤ Provide **new cells for the body** as it grows, and replace specialised cells that are damaged or lost.

➤ **Two unique properties:**

▪ Can **divide over and over again** to produce new cells.

▪ As they divide, they can **change into the other types of cell** that make up the body.

TYPES OF STEM CELLS

Embryonic Stem cells: These cells **formed during the blastocyst phase of embryo**, they are pluripotent but do not contribute to the development of extraembryonic cells like the placenta.

Adult stem cells : These cells **found in specific tissues** that function to repair and **form cells of only those tissues.**

Induced pluripotent stem cells: These are **formed by the fusion of adult cells with embryonic stem cells** to aid therapeutic medicine.

UNION MINISTER OF COMMERCE AND INDUSTRY HIGHLIGHTS PROGRESS MADE IN INDIA AFRICA TRADE

● It was remarked at the **18th CII-EXIM Bank Conclave on 'India-Africa Growth Partnership'**.

➤ The **bilateral trade** of India with Africa **grew by 9.26% in FY 2022-23** reaching almost \$100 Billion.

➤ India's goal is to **double the trade volume to US\$ 200 Billion** by 2030.

➤ The exports and imports are approximately balanced with exports being US\$ 51.2 Billion and imports being US\$ 46.65 Billion in FY 2022-23.

● **About India Africa partnership:**

➤ **Long history of partnership, with solidarity and political affinity** going back to the early 1920s when both regions were fighting **against colonial rule and oppression.**

▪ However, India's economic engagement with Africa began **intensifying in the early 2000s.**

➤ **Importance of Africa:**

▪ With abundant mineral reserves, oil and natural gas reserves, Africa can help **India's quest for energy security.**

▪ Critical to **India's security**, especially the Horn of Africa region.

▪ Support of African countries is important for **India's aim of gaining a permanent seat in UNSC.**

INDIA'S DEVELOPMENT INITIATIVES IN AFRICA

27 Least Developed Countries (LDCs) of Africa benefit from the **Duty-Free Tariff Preference** on non-reciprocal basis.

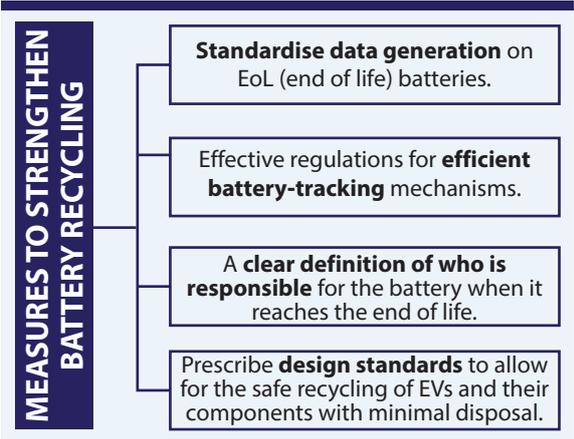
Extends concessional lines of credit (LoC) to fund the **construction of railway lines, electrification projects, farm mechanisation** etc.

Many African countries participating in the **International Solar Alliance (ISA).**

e-Vidya Bharati and the e-Aarogya Bharati initiatives, Vaccine Maitri' initiative etc.

G20 POLICY PAPER MOOTS GLOBAL FUND FOR EV BATTERY MINERAL RECYCLING CAPACITY

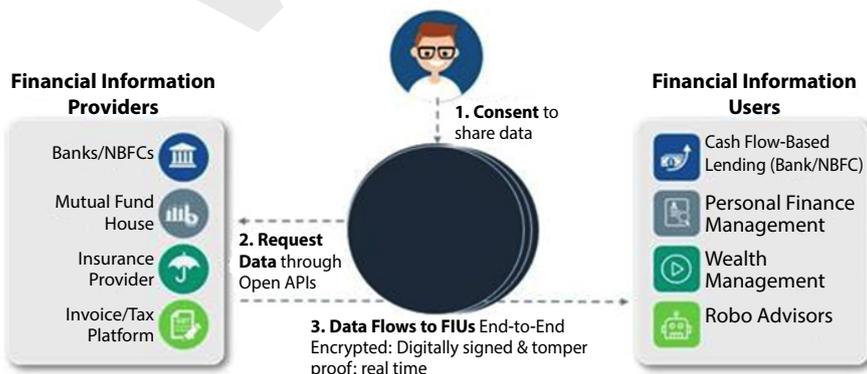
- **Key highlights of the policy paper - Building a resilient EV battery value chain:**
 - It points out that **battery recycling is at a nascent stage with gaps concerning technology** in reducing recycling cost and improving material recovery capacity.
 - It has also **called for setting up of a central fund to provide incentives** for recycling facilities globally.
 - It favours a **comprehensive approach for recycling end of life EV batteries** to meet rising demand for minerals such as Lithium, Cobalt, Nickel and Graphite.
- EVs are often **correlated with their sustainability and environment-friendly nature.**
 - However, critics often point out that the **emission benefits are often overstated as battery management challenges are ignored.**
 - The cumulative potential of lithium-ion batteries in India from 2022–30 across all segments is estimated to be **around 600 GWh (base case).**
 - **Battery waste management Act 2022** confers the Producers (including importers) the **obligation of Extended Producer Responsibility (EPR)** for the battery that they introduce in the market to ensure its collection and recycling.
- **Challenges in Recycling:** High Capital Cost, Non-Eco Friendly in nature, Requires high temperature and sophisticated machinery, lack of digital identifiers for batteries.



GOVT, RBI LOOKING TO INTEGRATE GSTN WITH TRADE RECEIVABLES DISCOUNTING SYSTEM (TREDS) VIA ACCOUNT AGGREGATOR

- In order to **enable direct sanctions of MSME invoice claims and improve the tax compliance**, the Government and RBI are looking to integrate GSTN with TReDS via Account Aggregators.
 - The move **will also lead to faster loan sanctions** as the GST platform will provide more assurance to financiers with respect to the genuineness of invoices.
- TReDS is an **electronic platform** for facilitating the **financing / discounting of trade receivables** of MSMEs through multiple financiers.
- **Account Aggregator Network (AAN)** is an **RBI regulated entity (with an NBFC-AA license)** to help an individual to **digitally access and share information** from one financial institution to another within the AAN.
 - It **allows sharing of transaction data or bank statements between different financial institutions** based on the consent of the user.
 - AAN provides assistance to ease **two key services namely access to loans and access to money management.**
 - Currently, **23 banks from both public and private** are under the AAN.
 - AA framework was **created in 2021 through an inter-regulatory decision by RBI** and other regulators including SEBI, IRDA, and PFRDA through and initiative of the Financial Stability and Development Council (FSDC).

Account Aggregator empowers the individual with control over their personal financial data, which otherwise remains in silos



TAMIL NADU GOVERNOR REJECTS REQUEST TO SHIFT PORTFOLIOS OF MINISTERS

- **Article 164(1)** states that the **CM shall be appointed by the Governor** and the other **Ministers shall be appointed by the Governor on the advice of the CM.**
 - However the **state complains that the action of the Governor amounts to interference** in it's administration and is also **against the concept of Federalism.**
- The governor is the **chief executive head of the state** who acts as an agent of the central government. He possess various powers like
 - **Executive:** appointing Chief Minister of the state along with the council of ministers.
 - **Judicial:** pardon, remit or commute the sentence under state laws.
 - **Legislative:** issue ordinances in times of emergency.
- **Various other cases of misuse of Governor's office**
 - **Governor's Political affiliations** lead to his/her alleged partisan functioning.
 - **Lack of coordination** between the elected government and appointed Governor.
 - **Mistrust due to frequent recommendation of bills to the President under Article 200.**
 - **Delaying the assent to the resolutions** passed by the state assemblies,
 - **Rejecting the recommendation of names** to various posts by the states.
- Various committees like **Rajamannar Commission, Punchi Commission, Sarkaria Commission, Venkatachaliah Commission** have recommended steps for better relationship between the Governor and the States.

SUBSIDIES DON'T HELP FIGHT CLIMATE CHANGE, WORLD BANK REPORT FINDS

• Key Highlights of the report:

- Report highlights the **negative consequences of inefficiently subsidising agriculture, fishing, and fossil fuel sectors**, both implicitly and explicitly, by spending trillions of dollars, exacerbating climate change.
- These subsidies exceed about **8% of global gross domestic product**.
- The distribution of subsidies across sectors and countries is **highly skewed and uneven**.

• Effects of subsidies:

- **Agriculture subsidies** are responsible for the **loss of 2.2 million hectares of forest per year** - or 14% of global deforestation.
- **Fossil fuel usage**, incentivized by subsidies, is a key driver of the **7 million premature deaths each year** due to air pollution.
- Fisheries subsidies, which **exceed \$35 billion each year**, are a key driver of **dwindling fish stocks, oversized fishing fleets, and falling profitability**.

• Guiding principles for successful subsidy reforms

- **Build public acceptance** and overcome credibility gaps;
- Implement **complementary measures** to improve effectiveness and lower the costs of reform;
- **Mitigate short-term price shocks** through social protection and compensation;
- **Smooth the transition** with carefully phased, step-wise reductions in harmful subsidies;
- **Redistribute revenue** through long-term reinvestments with equitable or progressive benefits.

ALSO IN NEWS



Justice Clocks

- It is **Electronic signage systems** which have been installed across the court complexes of High Courts.
- The initiative will **inform stakeholders about court-related key parameters and bring awareness among public by providing bird eye view of court-related data**.



Competition Act

- In its recent judgement in 'Coal India Ltd Vs Competition Commission of India (CCI)' SC has observed that
 - **State Monopolies, Government Companies and Public Sector Units cannot be allowed to indulge in anti-competitive practices** and they all fall under the **purview of Competition act and CCI**.
- **The Competition Act 2022, was recently amended in 2023**, in which various Provisions for Penalty and Settlement Mechanisms were amended along with expansion in the Scope of CCI and decriminalisation of certain offences.



Seafood exports

- India's **Sea food Exports recently reached all time high in FY 2022-23**
- The sector **grew 26.73% in terms of quantity and 4.31% in terms of value** over FY 21-22
- India has **shipped around 17 Lakh MT of seafood** during the period, which **values around \$ 8 Bn**.
- **USA is the largest importer** of Indian seafood **followed by China, EU, South East Asia**
- **Frozen shrimp remained the major export item from India** and accounted for **around 41% of the overall exports in terms of quantity**.



National Bank for Financing Infrastructure and Development (NaBFID)

- The NaBFID has raised around 10,000 Cr through its maiden issue of bonds.

National Bank for Financing Infrastructure and Development



Genesis: It was **set up in 2021, by The National Bank for Financing Infrastructure and Development Act, 2021**



Objective: To **provide specialized focus on addressing the long-term financing needs of the infrastructure sector in India**.



Structure: It is to be run by a **board of directors**, Whose Chairman is selected by the Bank Board Bureau.



Functions: To act as a provider, enabler, and catalyst for financing as well as refinancing long term infrastructure projects.

 <p>Open market Sale Scheme (OMSS)</p>	<ul style="list-style-type: none">Recently, in order to keep the prices of foodgrains in check, the centre has suspended the sale of Rice and Wheat through OMSS.Food Corporation of India sells surplus stocks of wheat and rice under OMSS at pre-determined prices through e-auction in the open market from time to time.<ul style="list-style-type: none">➤ It aims to enhance the supply of food grains, especially wheat during the lean season and thereby moderate the open market prices specially in the deficit regions.➤ Both Private players and State Governments can participate in the auctions.➤ Ministry: Ministry of Consumer Affairs, Food and Public Distribution.
 <p>National Time Release Study (NTRS) 2023 report</p>	<ul style="list-style-type: none">Central Board Of Indirect Taxes & Customs (CBIC) under Ministry of Finance released the National Time Release Study (NTRS) 2023 report which presents port-category wise average release time.Time Release Study (TRS) as a performance measurement tool aims to present quantitative measure of the cargo release time.Advantages of NTRS:<ul style="list-style-type: none">➤ Assess the progress made towards the National Trade Facilitation Action Plan targets;➤ Identify the challenges to more expeditious reduction in release time etc.
 <p>ASCI Guidelines to counter misleading 'dark patterns' in online advertising</p>	<ul style="list-style-type: none">Dark Patterns is unethical online advertising techniques adopted by companies to convince consumers into purchasing products or services.Various other terminologies related to it:<ul style="list-style-type: none">➤ Drip Pricing: Practice in which elements of the costs are not revealed up front, and total price is only revealed at the end of buying process or after confirmation of purchase.➤ Bait and Switch: Advertising goods at an incredibly low price with the aim of substituting them with inferior alternatives at time of purchase.➤ False Urgency: Stating that quantities of a particular product/service are more limited than they actually are.
 <p>Ayushman Bharat Health Account identity (ABHA ID)</p>	<ul style="list-style-type: none">Recently, the push for Ayushman Bharat Health Account identity (ABHA ID) have sparked security concerns after alleged hacking of government's covid 19 vaccination portal data.ABHA ID is a 14 digit number that will uniquely identify a participant in India's digital healthcare ecosystem.<ul style="list-style-type: none">➤ It link all healthcare benefits ranging from public health programmes to insurance schemes.➤ It reduces treatment time by avoiding multiple registration at different locations➤ It is issued under the Ayushman Bharat Digital Mission (ABDM)
 <p>Pokkali Rice</p>	<ul style="list-style-type: none">Pokkali Rice is an organic variety of Paddy grown in the state of Kerala.It is highly salt tolerant and grown in low lying areas of the state.Pokkali cultivation needs no use of fertilizer or pesticide.It follows a unique rotational crop pattern where residue of paddy acts as a feed for shrimp culture and shrimp waste enriches the soil for future cultivation.It was also accorded the Geographical indication (GI tag) in 2008.
 <p>MQ 9 Reaper Drone</p>	<ul style="list-style-type: none">Recently, Defence Acquisition Council (DAC) under Ministry of Defence has cleared acquisition of 31 US MQ 9 reaper drones from the USA which will boost Indian armed forces' surveillance capabilities.MQ 9 Reaper Drone is the primary offensive strike unmanned aerial vehicle for the U.S. Air Force.<ul style="list-style-type: none">➤ These drones have an endurance of more than 27 hours and can operate at up to 50,000 feet.DAC is the highest body headed by Minister of Defence to take the decisions on acquisitions.
 <p>Vaishvik Bhartiya Vaigyanik (VAIBHAV) fellowships programme</p>	<ul style="list-style-type: none">The Government recently announced VAIBHAV fellowships programme.About VAIBHAV fellowships programme:<ul style="list-style-type: none">➤ Implementing agency: Department of Science and Technology (DST), Ministry of Science and Technology.➤ Objective: To connect the Indian STEMM (Science, Technology, Engineering, Mathematics and Medicine) diaspora with Indian academic and R&D institutions for collaborative research work.➤ Eligibility: Would be awarded to outstanding scientist/technologists of Indian origin (NRI/OCI/PIO) who are engaged in research activities in their respective countries.