

NEWS TODAY

ONE-QUARTER OF THE GLOBAL POPULATION FACES EXTREMELY HIGH WATER STRESS

• **New data from World Resources Institute (WRI)**, a global research organisation, shows that 25 countries, **including India**, face extremely high water stress each year.

➤ A country facing **“extreme water stress”** means it is **using at least 80% of its available supply**, **“high water stress”** means it is **withdrawing 40% of its supply**.

• Other Key findings

➤ **50% of world’s population** live under **highly water-stressed conditions** for at least one month of the year.

➤ **31% of global GDP** will be exposed to **high water stress by 2050**. **India, Mexico, Egypt and Turkey** will **account for over half of exposed GDP** in 2050.

➤ **60% of world’s irrigated agriculture** faces extremely high water stress.

➤ **Causes of global water stress:** Increased water use, lack of investment in water infrastructure, unsustainable water use policies, increased variability due to climate change etc.

• Recommendations

➤ Improve **water governance through nature-based solutions** and green infrastructure.

➤ **Consider programs like debt-for-nature swaps** for a commitment to invest in mangrove restoration or wetland conservation.

➤ **Switching to water-efficient crops** or using methods like sprinkler or drip irrigation versus flooding fields.

➤ Cities should develop **urban water resilience action plans**.

INITIATIVES TAKEN IN INDIA

• National Water Mission

• Water conservation initiatives under various schemes such as MGNREGS, Atal Bhujal Yojana, Pradhan Mantri Sinchayee Yojana (PMKSY), AMRUT, Jal Jeevan Mission etc.

• Jal Shakti Abhiyan - Catch the Rain.

• Sahi Fasal campaign

INDIAN SPACE RESEARCH ORGANISATION (ISRO) WILL LAUNCH ADITYA-L1 MISSION ON SEPTEMBER 2

• **Aditya-L1** will be the **first Indian space mission to study the sun**, to be launched by **Polar Satellite Launch Vehicle (PSLV)**.

➤ **Spacecraft** shall be placed in a **halo orbit around Lagrangian point 1 (L1) of the Sun-Earth system**, about **1.5 million km** from Earth.

▪ **Lagrange Point** is a **spot in space** where the force of gravity of the nearest celestial entities cancels each other out, helping an **object remain in equilibrium**.

• **Payloads:** Seven payloads on board with **four** of them carrying out **remote sensing of the Sun** and **three** carrying **in-situ observation**.

• **Objectives:** Study the **Sun’s corona, solar emissions, solar winds and flares**, and **Coronal Mass Ejections (CMEs)**, and will carry out round-the-clock imaging of the Sun.

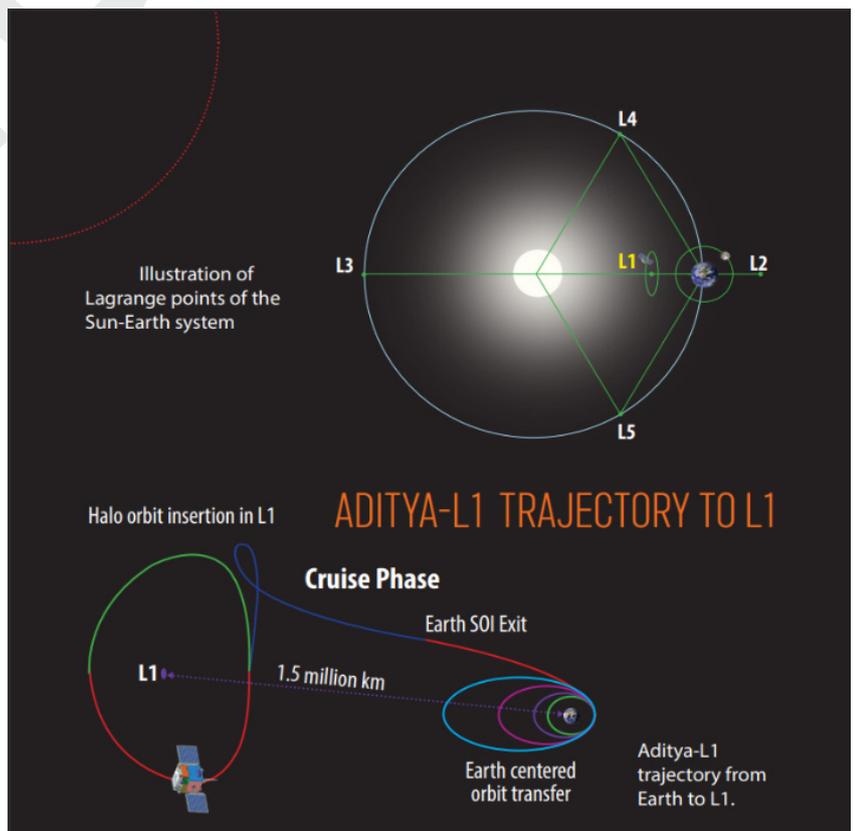
• Uniqueness of Mission:

➤ **CME will be measured close** to the solar disk (from a 1.05 solar radius) thereby providing information on its acceleration regime which is not observed consistently.

➤ **Observe directional** and energy anisotropy of **solar wind using multi-direction observations**.

➤ **On-board intelligence to detect CMEs** and solar flares for optimized observations and data volume.

• **Significance:** Provide information on **pre-flare and flare activities** and on **coronal heating**, propagation of particles and fields,





G20 INDIA AGRI-TECH SUMMIT 2023 SUPPORTS DIGITISATION OF AGRICULTURE

- **Digitalization of Agriculture (DoA)** means **integrating** advanced **digital technology** into the **farm value chain** including **AI, robotics, sensors, and communication networks**.
 - **DoA** is **one of the four priorities** identified by the **Agricultural Working Group of G20**.
 - **Other priorities: food security, sustainable financing for climate-resilient agriculture, and strengthening infrastructure** for small farmers.
- Modern farming methods such as **precision farming, smart farming, farming 4.0, etc.** are **based on DoA** and its application using **sensor-assisted soil assessment, automated monitoring of pastures, etc.**
- **Advantages:**
 - Providing farmers with **real-time data,**
 - **Creating crop protection forecast models,**
 - Integrating AI for projections **regarding crop disease outbreaks, etc.**
 - Reduction in **Agri-waste** and improved **supply chain management.**
- Agri-Tech Summit also focused on transforming the agriculture sector into a **data-driven, smart, and adaptive** sector with a focus on open-access **agricultural data platforms** and recognizing them as **global public goods.**
- **Initiatives for DoA**
 - **Digital Agriculture Mission (2021–2025)**
 - Promotion of the use of **drones.**
 - Cisco (Pvt Firm) created an **Agricultural Digital Infrastructure (ADI)** solution to improve farming and knowledge exchange.

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE (MOEF&CC) RELEASED ELEPHANT CORRIDORS OF INDIA REPORT

- Wildlife corridors are an **important means of ensuring larger habitat availability** to species, **genetic exchange** within and between populations, and **minimising of human-wildlife conflict** in altered habitats.
 - Report was **prepared by Project Elephant.**
- **Key Highlights of the report**
 - **150 elephant corridors identified** in 15 elephant-ranging states.
 - **40% of elephant corridors have reported an increase in use.** Also, 19% of the corridors have recorded a decline in use.
 - **West Bengal has the highest number** of corridors.
 - There are **6 transnational corridors** between **India and Nepal.**
 - **Challenges faced:** Encroachment, mining activities, development of linear infrastructure such as roads and railway tracks and other human interventions
 - **Measures needed to safeguard corridors:** Habitat enrichment, accurate demarcation, measures to check human interventions, legal protection under appropriate laws at state level etc.
- **About Indian elephant (Elephas maximus)**
 - **Highly intelligent** animals characterised by **strong family bonds, sophisticated forms of communication, ability to feel grief** and compassion.
 - **Form herds** of related females **led by the oldest female,** the 'matriarch'.
 - Have **longest gestation period** of all mammals (18 to 22 months).
 - **Karnataka has highest number** of elephants in India.
 - **IUCN status:** Endangered

PROJECT ELEPHANT

- It was **launched in 1992 as a Centrally Sponsored Scheme** by MoEF&CC. Under the project, government provides **technical and financial help to major elephant-bearing States** in the country.
- It was **recently merged with Project Tiger.**

UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP) LAUNCHED NATIONAL CARBON REGISTRY

- National Carbon Registry is an **open-source software** that allows countries to **effectively manage national data and processes for trading carbon credits.**
 - It has been **accredited as a digital public good (DPG)** and **can be integrated with national measurement, reporting and verification (MRV) systems** to meet international reporting requirements.
- National carbon Registry **will promote development of Carbon Market** by facilitating trading of carbon credits.
 - **Article 6 of Paris Agreement** allows countries to voluntarily **cooperate with each other to achieve emission reduction targets** set out in their Nationally Determined Contributions (NDCs).
- **Carbon markets are trading systems** in which carbon credits are sold and bought.
 - Companies or individuals can **use carbon markets to compensate for their greenhouse gas emissions by purchasing carbon credits** from entities that remove or reduce greenhouse gas emissions.
 - **One tradable carbon credit equals one tonne of carbon dioxide** or the equivalent amount of a **different greenhouse gas reduced, sequestered or avoided.**
 - Carbon trading was **introduced by Kyoto Protocol** in 1997.
- In India, **Ministry of Power notified Carbon Credits Trading Scheme (CCTS), 2023** for institutionalisation and functioning of Indian Carbon Market (ICM).

EUROPEAN UNION'S DIGITAL SERVICES ACT (DSA) COMES INTO EFFECT

- **DSA is a set of rules that aims to make the online world safer and more transparent** for users in the European Union (EU).
- **Applicability:** online platforms such as social media, e-commerce, or cloud services that offer **goods, services, or content to EU citizens.**
- **Key Provisions**
 - **Removal of content:** online platforms to take **measures to prevent and remove illegal or harmful content, such as hate speech, terrorism, child abuse, or those that promote illegal goods.**
 - **Monitoring:** platform with **more than 10% of the EU population per month as users must share data, cooperate with crisis response, and undergo external and independent audits.**
 - **Prohibits:** using a **person's sexual orientation, religion, ethnicity, or political beliefs** as criteria for targeted advertising.
 - **Mandates:** to **disclose the algorithms that operate and influence the content** they display.
 - **Penalties for non-compliance:** up to 6 percent of their global revenue.
- **Significance**
 - **Restrict monopolistic trends** by big tech.
 - Set as a **benchmark** for a **regulatory approach** to **online intermediaries.**
 - Act as a standard **intervention for the protection of fundamental rights like the Right to Privacy.**

OTHER INITIATIVES BY EU TO REGULATE BIG TECH AND EMERGING TECHNOLOGIES

- **General Data Protection Regulation:** aims to **harmonize data privacy laws across Europe.**
- **European Data Act:** that aims to **boost the EU's data economy** fostering a competitive European cloud market.
- **Markets in Crypto Act (MiCA)** to **embrace innovation** and **new financial technologies.**

ALSO IN NEWS

 Article 35A	<ul style="list-style-type: none"> • Supreme Court observed that Article 35A denied fundamental rights to non-permanent residents of Jammu & Kashmir (J&K). • Article 35A was introduced through the Constitution (Application to Jammu and Kashmir) Order, 1954 issued by the President under Article 370. • Provisions <ul style="list-style-type: none"> ➤ It provides permanent residents of J&K with the exclusive right to purchase land, seek State government employment, and other benefits in education and health care. ➤ It had even provided immunity to these special privileges from judicial review. • Abolished through the Constitution (Application to Jammu and Kashmir) Order, 2019 which revoked Article 370.
 Zonal Council	<ul style="list-style-type: none"> • Zonal Councils are statutory, deliberative, and advisory bodies set up under the States Re-organization Act, of 1956. • Aim: to promote interstate cooperation and coordination. • Chairperson: Union Home Minister. • 5 Zonal councils viz: <ul style="list-style-type: none"> ➤ Northern: Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Rajasthan, Delhi, Chandigarh) ➤ Central: Chhattisgarh, Uttarakhand, Uttar Pradesh, Madhya Pradesh ➤ Eastern: Bihar, Jharkhand, Orissa, Sikkim, West Bengal ➤ Western: Goa, Gujarat, Maharashtra, Daman & Diu and Dadra & Nagar Haveli. ➤ Southern: Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, and Puducherry.
 Census	<ul style="list-style-type: none"> • Statutory Provision: Section 3 of the Census Act, of 1948, empowers "only the Central Government" to conduct a Census. • Constitutional Mandate: It is covered in the Union List under Entry 69 in the Seventh Schedule. • Conducting Authority: Office of the Registrar General and Census Commissioner of India, under the Ministry of Home Affairs. <ul style="list-style-type: none"> ➤ The last census was conducted in 2011. ➤ The last caste census was conducted in the year 1931.
 National Strategy for Financial Education (NSFE) for 2020-25	<ul style="list-style-type: none"> • RBI is taking various initiatives towards fulfilling objectives of NSFE. • NSFE for 2020-25 has been prepared by National Centre for Financial Education (NCFE) to enable people to develop knowledge, skills needed to manage their money better. • Objectives of NSFE are financial literacy concepts among population, encourage participation in financial markets, develop credit discipline, plan for old age and retirement etc. • It focuses on 5 C approach of content, capacity, community, communication and collaboration.



 <p>SVAMITVA Scheme</p>	<ul style="list-style-type: none"> SVAMITVA scheme under the Ministry of Panchayati Raj (MoPR) won the National Award for e-Governance 2023. About SVAMITVA scheme <ul style="list-style-type: none"> It is a central sector scheme that aims to establish clear ownership of property in rural areas, with issuance of legal ownership cards to the property owners. It uses drone technology for mapping land parcels to 'Record of Rights' to village households. Scheme covers multifarious aspects viz. facilitating monetisation of properties and enabling bank loan; reducing property related disputes; comprehensive village level planning etc.
 <p>Addis Ababa Declaration</p>	<ul style="list-style-type: none"> Declaration was a key outcome of the 19th African Ministerial Conference on the Environment (AMCEN) 2023, held in Addis Ababa, Ethiopia. The declaration prioritizes wide-ranging actions related to climate change, plastics pollution, marine protection, land degradation, and natural capital. Signed by 54 African Nations.
 <p>Emperor Penguins</p>	<ul style="list-style-type: none"> A study predicted that Emperor Penguins will face Quasi-Extinction by the end of the century. <ul style="list-style-type: none"> Quasi-extinction threshold reflects that a population may be doomed to extinction even if there are still individuals alive. About Emperor Penguin <ul style="list-style-type: none"> These are flightless birds Diet: Carnivore - Fish crustaceans, etc Group name: Colony Habitat: outlying Antarctic islands IUCN Status: Near Threatened
 <p>Coil guns</p>	<ul style="list-style-type: none"> Chinese navy is reportedly testing the most powerful coil gun ever built. Coil guns, also known as magnetic accelerators, is a type of electromagnetic weapon capable of launching projectiles with extremely high speed and a shorter preparation time. <ul style="list-style-type: none"> Coil guns feature a series of coils arranged along the barrel of the gun. Each coil is energised one after another to create a magnetic field that can levitate and propel a projectile forward. Application: Weapon systems, near-Earth satellites, high-speed missile launches etc.
 <p>Smishing</p>	<ul style="list-style-type: none"> Smishing is a social engineering attack (uses psychological manipulation and exploits human error) that uses fake mobile text messages to trick people into downloading malware, sharing sensitive information, or sending money to cybercriminals. <ul style="list-style-type: none"> Smishing is a combination of SMS (short message service) and phishing. Phishing is a broad term for cyberattacks that use social engineering to trick victims into paying money, handing over sensitive information, or downloading malware. <ul style="list-style-type: none"> Main difference between the different types of phishing attacks is the medium used to carry out the attacks.
 <p>Somatic genetic variants</p>	<ul style="list-style-type: none"> Somatic mutations are a change to DNA that occurs after conception to any cell that isn't a germ cell (egg or sperm cell) and are not hereditary. <ul style="list-style-type: none"> On the other hand, Germline mutations occur in reproductive cells (egg or sperm). Importance of studying Somatic genetic variants <ul style="list-style-type: none"> Immune cells in our body undergo an enormous amount of somatic changes to create diverse proteins. Play an important role in the development of cancers thus they can help with early detection, diagnosis, and prognosis. Understanding development of genetic diseases.

Errata: In **News Today Dated 25th August, 2023**, under subheading '**FIDE World Cup**' of 'Also in News', it was **incorrectly mentioned** that **FIDE World Cup** is held as a match **between the reigning champion and a challenger**.

Correct Information is '**FIDE World Cup** is a tournament that serves as **one of the qualification process for the Candidates Tournament**, which in turn **determines the challenger** for the World Chess Championship title.'

FIDE World Chess Championship is the match that determines the actual World Chess Champion and it is held **between the reigning champion and a challenger**.