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Science Reporter

विज्ञान एवं प्रौद्योगिकी मंत्रालय
MINISTRY OF SCIENCE AND TECHNOLOGY
सत्यमेव जयते



MK Yadav Sir

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THE HINDU Page 1

RHINOCEROSES

(Syllabus: GS Paper 3 - Env & Eco)

Curious collage shows rhino horns are shrinking

Scientists analysed artwork and photographs to assess changes in horn length and human attitudes towards the animal

Rahul Karmakar
GUWAHATI

The horns of rhinoceroses may have become smaller over time from the impact of hunting, according to a recent study which analysed artwork and photographs of the animal spanning more than five centuries.

The study, published in the latest edition of *People and Nature* by the British Ecological Society, relied on a repository of images maintained by the Netherlands-based Rhino Research Center (RRC).

"We found evidence for declining horn length over time across species, perhaps related to selective pressure of hunting, and indicating a utility for image-based approaches in understanding societal perceptions of large vertebrates and trait evolution," said the study, authored by scientists from the Universities of Helsinki and Cambridge, as well as the RRC.



Rhino horn is valued in many cultures. RITU RAJ KONWAR

Five species face threat

Rhinos have long been hunted for their horns. The five surviving rhino species are threatened by habitat loss and hunting.

The study found that the rate of decline in horn length was highest in the critically endangered Sumatran rhino and lowest in the white rhino of Africa, the most commonly found species in the wild and in captivity.

This observation follows patterns seen in other animals, such as tusk size in elephants and horn length in wild sheep, which have been driven down by directional selection due to trophy hunting, the study said.

The RRC's repository holds a collection of more than 4,000 rhino images, including artistic portrayals from 1481 and photographs, of which the earliest was taken in 1862. The scientists used this for two research approaches.

They studied 3,158 images to assess the changes in representations of rhinos and human interactions with the animal over 500 years. They identified 80 images of all five rhino species, to analyse changes in horn length over time, extracting morphological data from photographs.

Context: The horns of rhinoceroses may have become smaller over time from the impact of hunting, according to a recent study which analysed artwork and photographs of the animal spanning more than five centuries.

Rhinoceroses

- **About**: any of a family (Rhinocerotidae) of large heavyset herbivorous perissodactyl mammals of Africa and Asia that have one or two upright keratinous horns on the snout and thick gray to brown skin with little hair.
- **5 species of rhino:**
  - White and black rhinos in Africa.
  - The greater one-horned, Javan and Sumatran rhino species in Asia.
- **Habitat**: tropical and subtropical grasslands, savannas and shrublands, tropical moist forests, deserts and shrublands
- **IUCN Red List Status:**
  - **White Rhino**: Near Threatened.
  - **Black Rhino**: Critically endangered..
  - **One-Horned Rhino**: Vulnerable
  - **Javan**: Critically Endangered
  - **Sumatran Rhino (extinct in Malaysia)**: Critically Endangered.
- **Rhino in India:** Only the Great One-Horned Rhino(also known as Indian rhino) is found in India which is the largest of the rhino species.
  - **Habitat**: restricted to small habitats in Indo-Nepal terai and northern West Bengal and Assam.
    - **States where rhino found**: Assam, West Bengal and Uttar Pradesh in India.
    - **4 protected areas in Assam where rhino found:** Pabitora Wildlife Reserve, Rajiv Gandhi Orang National Park, Kaziranga National Park, and Manas National Park.
  - **Protection Status:**
    - **IUCN Red List**: Vulnerable.
    - **CITES:** Appendix I (Threatened with extinction)
    - **Wildlife Protection Act, 1972**: Schedule I (protection from poaching, killing, trading etc.)

Conservation Efforts

- **New Delhi Declaration on Asian Rhinos 2019:** It was signed by India, Bhutan, Nepal, Indonesia, and Malaysia at the Second Asian Rhino Range Countries Meet, organised by the Environment, Forest and Climate Change Ministry in collaboration with the IUCN Asian Rhino Specialist Group, WWF-India, and Aaranyak.
- **DNA Database for Indian Rhinos**: The Ministry of Environment Forest and Climate Change (MoEFCC) has begun a project to create DNA profiles of all rhinos in the country.
- **National Rhino Conservation Strategy**: Launched by the Ministry of Environment Forest and Climate Change (MoEFCC) in 2019, It is a project to create the DNA profiles of rhinos in India and conserve the endangered greater one-horned rhinoceros.
- **Indian Rhino Vision 2020**: to increase the total rhino foundation in Assam from around 2000 to 3000 by 2020, with these rhinos distributed across at least 7 protected areas (PA) to ensure the long-term viability of the one-horned rhino population.

BUSINESS STANDARD

Page 4

TREASURY BILL

(Syllabus: GS Paper 3 - Economy)



T-Bill yields at multi-year high on near-term liquidity fears

India's 91-day and 182-day treasury bill yields remain at near multi-year highs on concerns over tight liquidity in the medium term, analysts said. The Reserve Bank of India on Wednesday sold 91-day notes at 6.47 per cent cutoff yield, highest since May 2019, while the 182-day bills were sold at 6.80 per cent yield, highest since January 2019. Yields across both securities rose 7-8 basis points over the previous week's auction.

REUTERS

Context Indias 91-day and 182-day treasury bill yields remain at near multi year highs on concerns over tight liquidity in the medium term.

Government Security

- **About:** a tradable instrument issued by the Central Government or the State Governments.
- **2 Types**: Short term (treasury bills) and Long term (called Government bonds or dated securities with original maturity of one year or more).
- **Issued by**: The **Central Government issues both** treasury bills and bonds or dated securities.
    - The **State Governments issue only bonds or dated securities**, which are called the State Development Loans (SDLs).

Treasury Bill

- **About**: short term (up to one year) borrowing instruments of the Government of India or by a central authority of any country which enable investors to park their short term surplus funds while reducing their market risk.
- **Issued by**:The Central Government.
    - The S**tate governments do not issue** any treasury bills.
- **Auctioned by**: Reserve Bank of India (RBI)
- **Types of Treasury Bills**: presently issued in three tenors, namely, 91 days, 182 days and 364 days.
    - The 91-day T-Bills are issued on a weekly auction basis while 182-day T-Bill auction is held on Wednesday preceding Non-reporting Friday and 364-day T-Bill auction on Wednesday preceding the Reporting Friday.
    - In 1997, the Government had also **introduced the 14-day intermediate treasury bills.**
- **Eligible buyers**: Individuals, Firms, Trusts, Institutions and banks
    - Interest on the treasury bills is determined by market forces.
    - To get money under repo, banks give the RBI treasury bills.
    - They can also hold it if they need to meet their Statutory Liquid Ratio (SLR) standards.
- **Taxation**: Short-term capital gains (STCG) on these bills are subject to STCG tax at rates determined by the investor's income tax bracket.
    - However, **retail investors do not have to pay any tax deducted at source (TDS)** upon redemption of these bonds, minimizing the difficulties of claiming the same through income tax returns if they do not fall into the taxable income level.

INDIAN EXPRESS

Page 1

ENFORCEMENT DIRECTORATE

(Syllabus: GS Paper 3 - Internal Security)

ED summons Hemant Soren today, he says am not afraid

Jharkhand CM targets BJP, alleges nexus; will be questioned in Ranchi

ABHISHEK ANGAD & DEEPTIMAN TIWARY
RANCHI, NEW DELHI, NOVEMBER 2

JHARKHAND CHIEF Minister Hemant Soren has been summoned Thursday by the Enforcement Directorate in connection with its probe into alleged money laundering in cases of illegal mining in the state.

"The CM has been asked to appear before the Investigating Officer in Ranchi on Thursday for questioning. Some facts have been revealed during our investigations against his aide Pankaj Mishra which need to be verified," an ED official said.

Responding to the summons, Soren, while inaugurating the second phase of Sarkar Aapke Dwar delivery scheme in Sahibganj, said "I do not fear" the ED.

EXPLAINED

E. The divide deepens

THE ILLEGAL mining scam, the searches, seizures and submissions in court have dominated headlines in Jharkhand, and deepened the political divide. The JMM and BJP have been trading charges and the Governor's remarks in an interview have only heightened tensions.

Sources in the CMO said the Chief Minister is supposed to visit Raipur for an Adivasi Nritya Mahotsav Thursday.

In Sahibganj, Soren targeted the BJP and alleged a nexus: "ED

CONTINUED ON PAGE 4

Context: Jharkhand Chief Minister has been summoned by the Enforcement Directorate in connection with its probe into alleged money laundering in cases of illegal mining in the state.

Enforcement Directorate

- **About**: a law enforcement agency and economic intelligence agency responsible for enforcing economic laws and fighting economic crime in India.
- **Nodal Ministry**: part of the Department of Revenue, Ministry of Finance.
- **Prime objective**: The enforcement of the Foreign Exchange Management Act 1999 (FEMA), the Prevention of Money Laundering Act 2002 (PMLA) and The Fugitive Economic Offenders Act, 2018 (FEOA).
- **Structure**: headed by the Director of Enforcement.
  - **Tenure**: fixed two-year tenure and **three annual extensions**.
  - **No further extension:** after the completion of a period of five years in total including the period mentioned in the initial appointment.
- **Functions**:
  - **Conservation of Foreign Exchange and Prevention of Smuggling Activities Act, 1974 (COFEPOSA)**: empowered to sponsor cases of preventive detention with regard to contraventions of FEMA.
  - **FEMA 1999**: responsibility to conduct investigation into suspected contraventions of foreign exchange laws and regulations, to adjudicate and impose penalties on those adjudged to have contravened the law.
  - **PMLA 2002**: responsibility of executing the provisions of PMLA by conducting investigation to trace the assets derived from proceeds of crime, to provisionally attach the property and to ensure prosecution of the offenders and confiscation of the property by the Special court.
  - **FEOA 2018**: mandated to attach the properties of the fugitive economic offenders who have escaped from India warranting arrest and provide for the confiscation of their properties to the Central Government.
- **Jurisdiction**: ED can take action **against any person** on which above act applies.
  - **All the public servants come under the jurisdiction** of the agency if they are involved in any offence related to money laundering.
  - ED can **not take an action suo motu.**

LIVEMINT Page 2

AD-1 MISSILE
(Syllabus: GS Paper 3 - Sci & Tech)

India test-fires ballistic missile interceptor



New Delhi: India has successfully conducted the maiden flight test of Phase-II Ballistic Missile Defence (BMD) interceptor AD-1 missile with large kill altitude bracket from APJ Abdul Kalam Island, Odisha. The AD-1 is a long-range interceptor missile.

SAURAV ANAND

Context: The Defence Research and Development Organisation (DRDO) conducted a successful maiden flight-test of phase-II Ballistic Missile Defence (BMD) interceptor AD-1 missile with a large kill altitude bracket from the APJ Abdul Kalam Island.

AD-1 missile

- **About**: a long-range interceptor missile designed for **both low exo-atmospheric and endo-atmospheric interception** of long-range ballistic missiles as well as aircraft.
- **Developed by**: DRDO
- **Key features:**
  - Propelled by a **two-stage solid motor.**
  - Equipped with an indigenously developed advanced **control system and a navigation** and guidance algorithm to precisely guide the vehicle to the targets that move at very high speeds.
  - Contained high-power radars and could potentially protect large areas from the adversary missile or other air attacks.

Ballistic Missile

- **About**: a rocket-propelled **self-guided strategic-weapons system.**
- **Mechanism**: follows a **ballistic trajectory (the path of an unpowered object)** to deliver a payload from its launch site to a predetermined target.
  - Short-range ballistic missiles stay within the Earth's atmosphere, while intercontinental ballistic missiles (ICBMs) are launched on a sub-orbital flight.
- **Key features**: may travel above the atmosphere into outer space.
- **Types**:
  - **Air-launched ballistic missile (ALBM)**
  - **Tactical ballistic missile:** Range between about 150 to 300 kilometres (93 to 186 mi)
  - **Theatre ballistic missile (TBM)**: Range between 300 to 3,500 kilometres (190 to 2,170 mi)
  - **Short-range ballistic missile (SRBM)**: Range between 300 to 1,000 kilometres (190 to 620 mi)
  - **Medium-range ballistic missile (MRBM):** Range between 1,000 to 3,500 kilometres (620 to 2,170 mi)
  - **Intermediate-range ballistic missile (IRBM) or long-range ballistic missile (LRBM)**: Range between 3,500 to 5,500 kilometres (2,200 to 3,400 mi)
  - **Intercontinental ballistic missile (ICBM):** Range greater than 5,500 kilometres (3,400 mi)
  - **Submarine-launched ballistic missile (SLBM):** Launched from ballistic missile submarines (SSBNs)
- **India's Ballistic Missiles:** Prithvi-III , Dhanush , Prahaar, Shaurya and Pralay.

ECONOMIC TIMES

Page 4

BYE-ELECTIONS IN INDIA

(Syllabus: GS Paper 2 - Polity & Governance)

Voting in By-elections to Seven Assembly Seats in Six States Today



Patna/Lucknow/Hyderabad: Voting will be held on Thursday in bypolls to seven assembly seats in six states. While in Haryana former chief minister Bhajan Lal's family is trying to hold on to its bastion of five decades, Bihar will see the first electoral test for the Nitish Kumar-led 'Mahagathbandhan' government, formed less than three months ago after the JDU parted ways with the BJP. The saffron party is seeking to retain Gola Gorakhnath seat in Uttar Pradesh and Dhamnagar in BJD-ruled Odisha, banking on sympathy votes as it has fielded the sons of sitting MLAs whose death necessitated the bypolls.–PTI

Context: By-elections for seven Assembly constituencies across the states of Maharashtra, Haryana, Bihar, Telangana, Odisha and Uttar Pradesh will be held from 7 am to 6 pm amid tight security and the counting of votes will be conducted on November 6.

Bye-Elections in India

- **About:** It refers to such elections that are **conducted to fill previously elected offices that have fallen vacant**, before the completion of tenure of such elected offices.
- **Legal provisions:** They derive their legitimacy in India from the **Representation of People Act (RPA), 1956 where the term 'Bye-election' finds its mention**.
    - As per **Sections 147,149,150 and 151 of the Representation of People Act (RPA), 1956**, when the seat of a member elected becomes vacant, declared vacant or the member's election to any of such bodies is in itself declared to be void before the expiration of term of office, bye-elections are conducted.
- **Vacancy of seats**
    - A seat is deemed to be vacant in either House of Parliament or that of the State Legislature **when a sitting member dies.**
    - When a **sitting member of the Parliament or a State Legislature resigns**, the seat is deemed to be vacant. It has been stated in articles 101 and 190 of the Indian Constitution.
    - A seat in the Parliament or a State Legislature is deemed to be vacant when the member concerning that seat is a**bsent for a period of 60 days** without the permission of the House.
    - In case of election to multiple seats.
    - A seat may become vacant on the grounds of **defection under the 10th Schedule of the Indian constitution**.
    - Vacancy of seats may transpire also **due to ineligibilities or disqualifications of the members,** as prescribed by law.
    - When an election through which a member was earlier elected to either House of Parliament or either House of State Legislature is **declared to be void.**

- **Timeline**: As per section 151-A of the Representation of People Act (RPA),1956, a by-election should commence or be conducted within 6 months from the occurrence of vacation of a seat or declaration of vacation of a seat or declaration of the election to a seat as void.
    - **Exceptions**: When the remaining tenure of the member concerning the vacancy is less than 1 year then no need to conduct elections.
    - When the Election Commission of India (ECI), in consultation with the Central Government certifies that it is difficult to hold bye-elections within that time constraint.
    - **Procedure**: Similar to that of the General election.

TIMES OF INDIA

Page 12

Non-reporting of Pocso offences a serious crime: SC

Dhananjay.Mahapatra
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New Delhi: The Supreme Court on Wednesday said nonreporting of sexual assault of minors to police is a serious crime under the Protection of Children from Sexual Offences (Pocso) Act and ordered a doctor to face trial for not reporting sexual exploitation of several minor tribal girls in a Maharashtra students hostel.

During medical examination, the minor tribal students, some of them in class three and five, had informed the doctor about their sexual exploitation by the superintendent of the hostel of Infant Jesus English Public High School in Chandrapur district and four others. But the medical practitioner allegedly kept silent to protect the accused.

The police in June 2019 had chargesheeted the five accused as also the doctor under Pocso. Earlier this year, the Nagpur bench of the Bombay HC quashed the chargesheet against the doctor after undertaking a through and elaborate scrutiny of the statements of the survivors. The state government had appealed against the high court judgment in the SC.

Allowing the appeal, a bench of Justices Ajay Rastogi and C T Ravikumar said, "Prompt and proper reporting of the commission of offence under the Pocso Act is of utmost importance and we have no hesitation to state that failure to do so, even after coming to know about the commission of any offence thereunder, would defeat the very purpose and object of the Act."

Writing the judgment reversing the HC decision, Justice Ravikumar said, "Non-reporting of sexual assault against a minor child despite knowledge is a serious crime and more often than not, it is an attempt to shield offenders of the crime of sexual assault."

'TRIBALS EXPLOITED'

The bench said, "We may say, we are not peeved, but certainly pained, as a legitimate prosecution under the Pocso Act has been throttled at the threshold by the exercise of power under Section 482 of the CrPC without permitting the materials in support to it to see the light of the day in respect of misprision of sexual assault against minor tribal girls in a girls' hostel."

The high court should have permitted the prosecution to adduce evidence and its scrutiny during the trial instead of launching into an elaborate inquiry all by itself, the apex court said.

POCSO ACT

(Syllabus: GS Paper 2 - Social Justice)

Context: The Supreme Court said nonreporting of sexual assault of minors to police is a serious crime under the Protection of Children from Sexual Offences (Pocso) Act and ordered a doctor to face trial for not reporting sexual exploitation of several minor tribal girls in a Maharashtra students hostel.

Protection of Children from Sexual Offences (Pocso) Act

- **About:** The POCSO Act was enacted in 2012 to **provide a robust legal framework for the protection of children from offences of sexual assault**, sexual harassment and pornography while safeguarding the interests of children at every stage of the judicial process.
- **Salient features**
  - The act defines child as any individual aged **below 18 years of age.**
  - There are **multiple forms and acts of sexual abuse defined under this act** that is not just limited to pornography, harassment, or penetrative/non-penetrative offenses.
  - These acts would be considered '**aggravated' if the child is mentally ill** and/or the perpetrator comes from a position of authority and/or trust like a family member, doctor, teacher, etc.
  - The **prevention of 're-victimization**' of the child within the judicial system is of utmost importance as this act allows a policeman to act under the role of a child protector throughout the investigation.
  - The process of investigation is to be made as child-friendly as possible, and **justice to be served promptly within a year** front the reporting of the incident.
  - The **setting up of 'Special Courts'** has been done under this act which will exclusively deal with such offenses with the sensibility and sensitivity they need.
  - The central government is given the **authority to make rules under the 45th section of the act**.
  - The State Commissions for the Protection of Child Rights (SCPCRs) and the National Commission for the Protection of Child Rights (NCPCR) have been given the authority to monitor the implementation of the act's provisions.
  - The act makes the **reporting of a sexual offense mandatory.**
  - Misuse of these laws with the **purpose of defamation of the person is punishable.**
  - It provides stringent deterrents for the commission of offences against children **ranging from a minimum of 20 years of imprisonment to the death penalty** in case of aggravated penetrative sexual assault.

PIB

Nov 3

NUTRIENT BASED SUBSIDY SCHEME

(Syllabus: GS Paper 3 - Economy)

Cabinet approves Nutrient Based Subsidy rates for Phosphatic and Potassic fertilizers for Rabi season 2022-23 from 1st October, 2022 to 31st March, 2023

Context: The Union Cabinet has approved the proposal of the Department of Fertilizers for per Kilogram rates of **Nutrient Based Subsidy (NBS) for various Nutrients.**

Nutrient Based Subsidy Scheme

- **Origin**: was initiated in the year 2010.
- **Nodal Ministry**: administered by the **Department of Fertilizers under the Ministry of Chemicals & Fertilizers.**
- **Key feature**: **All Non-Urea based fertilisers** are regulated under Nutrient Based Subsidy Scheme.
  - The MRPs of non-urea fertilisers are **decontrolled or fixed by the companies.**
  - The **Centre pays a flat per-tonne subsidy** on these nutrients to ensure they are priced at reasonable levels.
  - **Examples of non-urea fertilisers**: Di-Ammonium Phosphate (DAP), Muriate of Potash (MOP).

Urea Subsidy Scheme

- **About**: It is **part of Central Sector Scheme (CSS)** of Department and is wholly financed by Central Government of India through budgetary support.
  - It also **includes Imported Urea subsidy** which is directed towards import to bridge gap between assessed demand and indigenous production of urea in the country.
  - It **also includes freight subsidy** for movement of urea across the country.
- **Subsidy on Urea**: The Centre pays subsidy on urea to fertiliser manufacturers on the **basis of cost of production at each plant** and the units are required to sell the fertiliser at the government-set Maximum Retail Price (MRP).

PIB

Nov 3

INDIA POST PAYMENT BANK

(Syllabus: GS Paper 3 - Economy)

India Post Payments Bank conducts India's First Floating Financial Literacy Camp

'Niveshak Didi' initiative was launched to promote Financial Literacy "By the women, for the women"

Context: India Post Payments Bank (IPPB) conducted India's First Floating Financial Literacy Camp with an initiative called **'Niveshak Didi' to promote Financial Literacy** 'By the women, for the women', in Srinagar, J&K.

- 'Niveshak Didi' initiative is **based on the ideology of women for women** as rural area women feel more comfortable to share their queries with a female itself.

India Post Payment Bank (IPPB)

- **Origin**: launched in 2018 with **100% equity owned by the Government of India.**
- **About**: a payments bank of the Indian postal department which works through a network of post offices and postmen.
- **Governance**: governed by the Reserve Bank of India (RBI).
- **Key features**:
  - **Accepts deposits**, offers remittance services, mobile banking and third-party fund transfers.
  - **Can issue debit cards** and ATM cards.
  - **Cannot issue credit cards** and cannot loan money
  - **3 types of saving account:**
    - **Safal**: Regular Account
    - **Sugam**: Basic Savings Bank Deposit Account (BSBDA)
    - **Saral**: BSBDA Small
  - **Maximum limit on deposits for current and savings account**: Rs 1 lakh.
  - Bank offers a **4% interest rate on savings account**.
  - IPPB account holders will be **issued a QR Code based biometric card** with a unique QR code.

Payment Bank

- **About**: a differentiated bank, offering a limited range of products.
- **Origin**: recommended by Nachiket Mor committee (2013)
- **Limitations**: It can accept demand deposits only that is savings and current accounts, **not time deposits**.
  - **Restricted to holding a maximum balance of Rs. 1 lakh only** per individual customer.
  - **Cannot accept Non-Resident Indian (NRI) deposits.**
  - **Cannot set up subsidiaries** to undertake non-banking financial services activities.

DTE

Nov 3

INSIGHT MARS MISSION

(Syllabus: GS Paper 3 - Sci & tech)



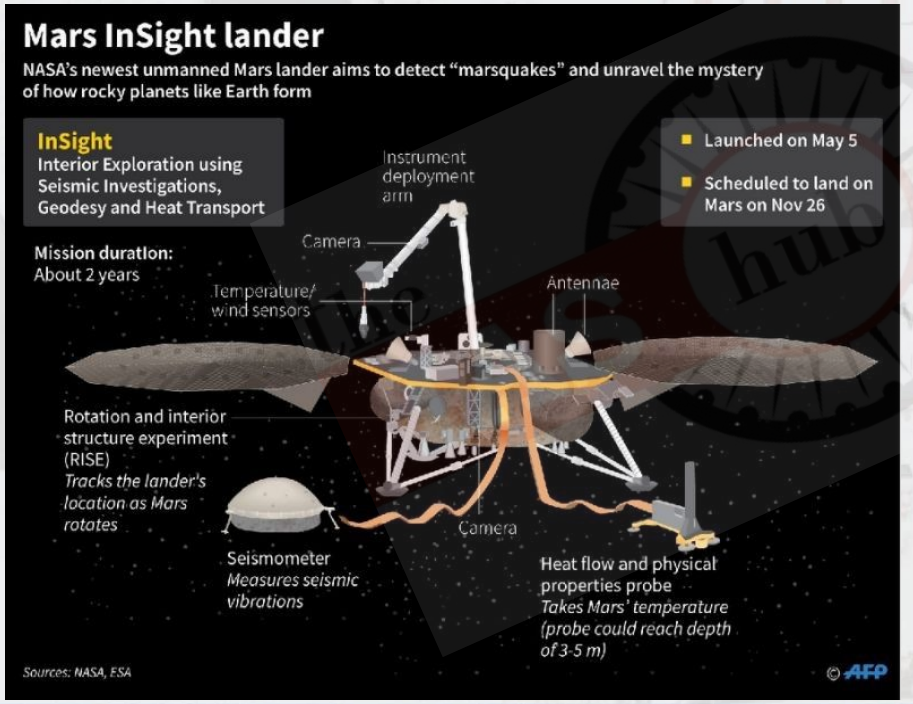
NASA gets ready to say farewell to InSight spacecraft on Mars

Lander losing power after 4 years on the Red Planet as dust gathers over solar panels

NEXT NEWS >

By Nandita Banerji

Published: Wednesday 02 November 2022



Context: The National Aeronautics and Space Administration (NASA) is **preparing to say goodbye to its nSight lander** designed to explore the deep interiors of Mars.

Key points

- InSight is short for **Interior Exploration using Seismic Investigations, Geodesy and Heat Transport**.
- It is the first outer space robotic explorer to **study in-depth the "inner space" of Mars:** The crust, mantle and core.
- The spacecraft was **launched in May 2018.**
- NASA announced that the **lander was gradually losing power** as its solar panels were gathering dust.

InSight Mission

- **About**: part of NASA's Discovery Program (1992) and **a two year mission**.
- **Key feature**: first mission to peer deep beneath the Martian surface, **studying the planet's interior** by measuring its heat output and listening for marsquakes, which are seismic events similar to earthquakes on Earth.
- **Mechanism**: use the **seismic waves generated by marsquakes** to develop a map of the planet's deep interior.
- **Key Findings:**
  - Mars trembles more often than expected, but also more mildly.
  - **Mars doesn't have tectonic plates like Earth,** but it does have volcanically active regions that can cause rumbles.

Various Mars Missions

- **Mars 2 and Mars 3 (1971):** Soviet Union
- **Mars Orbiter Mission (MOM) or Mangalyaan (2013)**: India
- **ExoMars rover (2021):** European Space Agency
- **Tianwen-1**: China's Mars Mission (2021)
- **Hope Mars Mission:** UAE's first-ever interplanetary mission) (2021)

DTE

Nov 3

DENGUE DISEASE

(Syllabus: GS Paper 3 - Sci & Tech)

Dengue cases on the rise in India, Delhi records its 1st death

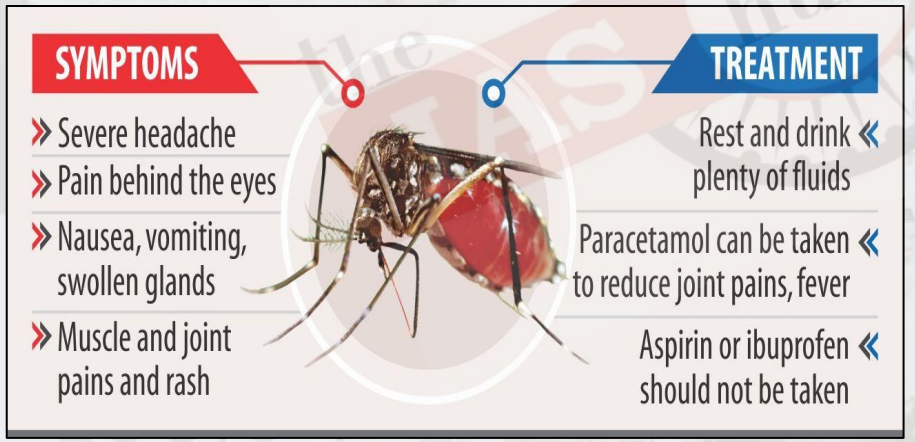
India recorded 63,280 dengue cases as of September 30, 2022

NEXT NEWS >

By DTE Staff

Published: Wednesday 02 November 2022





Context: As many as 12 states of India have been gripped by dengue since the beginning of this year, with cases soaring in October.

Key points

- Experts have linked the surge to a **delayed monsoon withdrawal, enabling prolonged breeding** of the vector-borne mosquitoes.
- **India recorded 63,280 dengue cases** as of September 30, 2022, according to data shared by the National Center for Vector Borne Diseases Control.
- In neighbouring **Nepal, 43,685 cases of dengue** was recorded by October 31, 2022.

About Dengue Disease

- **About**: a **viral infection** transmitted to humans through the bite of infected mosquitoes.
- **Primary vectors**: Aedes aegypti mosquitoes..
  - This mosquito also transmits chikungunya, yellow fever and Zika infection.
  - The virus responsible for causing dengue, is called **dengue virus (DENV).**
- **Region affected**: found in **tropical and sub-tropical climates** worldwide, mostly in urban and semi-urban areas.
- **Symptoms:** Sudden high fever, severe headaches, pain behind the eyes, severe bone, joint, and muscle pain, etc.
- **Treatment**: There is **no specific treatment** for dengue/severe dengue.
  - Early detection of disease progression associated with severe dengue, and access to proper medical care lowers fatality rates of severe dengue to below 1%.
- **Vaccine**: As of 2022, **one version of Dengue vaccine is commercially available**, known as CYD-TDV, and sold under the brand name Dengvaxia.
  - The dengue vaccine CYD-TDV or Dengvaxia was approved by the US Food & Drug Administration in 2019, the first dengue vaccine to get the regulatory nod in the US.
  - The vaccine is only recommended in those who have previously had dengue fever or populations in which most people have been previously infected.
  - It is available in 20 countries for people ages 9 - 45 years old.

THANK YOU!

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www.theiashub.com/daily-quiz

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