NEXT IAS

DAILY CURRENT AFFAIRS (DCA)

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NHRC RECOMMENDED ALL STATES TO HAVE ANTI- HUMAN TRAFFICKING NODAL OFFICER

Context

- The **National Human Rights Commission (NHRC)** has recommended **all states to have anti-human trafficking nodal officer.**

About

- The Commission noted that the selling of women on stamp papers is a "prevailing practice" in the male-dominated Kanjar community and the immoral practice of trafficking the girls is rampant in certain communities residing in various parts of Rajasthan.

Recommendations

- All states must have an anti-human trafficking nodal officer, who shall coordinate with the government by taking effective steps and measures through the **District Anti-Human Trafficking Units (DAHTU)** and state government concerned.

- This officer **should not be below the rank of a secretary** to a state government or an inspector general of police.

- He should be effectively monitoring such incidents with the help of representatives from the departments of women and child welfare, health and family welfare, labour and employment, reputed local NGOs and experts in the field of human trafficking and legal counsellors in the district.

Status of Trafficking in India

- India is a source as well as a destination country for human trafficking. The main source countries are **Nepal, Bangladesh and Myanmar** from where women and girls are trafficked in the lure of a better life, jobs and good living conditions on this side.

- A majority of those trafficked are minor girls or young women who after their arrival in India are sold and forced into commercial sex work.

- According to NCRB data, as many as **6213 victims** of human trafficking were rescued in 2021, and of them, **3912** were female. Maximum number of victims were rescued from Odisha (1290), followed by Maharashtra (890), Telangana (796), and Delhi (509).

Reasons

- Poverty, hunger, and lack of work are the main reasons for this. The caste and community-based discrimination and unfair treatment in rural areas are also at the root of this problem.

- Externalities such as the COVID-19 pandemic, armed conflict, and climate change catalyse precarity for children.

Issues and Challenges

- India doesn't have a composite anti-trafficking law that addresses prevention, protection, rehabilitation and compensation of survivors.

- There are, however, separate regulations that address different crimes related to trafficking.

- The government did not report investigating, prosecuting, or convicting government officials for alleged involvement in trafficking crimes.

- Efforts to audit government-run or -funded shelters remained inadequate, and shortcomings in protection services for victims, especially children, remained unaddressed."

Laws governing anti-trafficking crimes

- **The Immoral Traffic (Prevention) Act, 1956 (PITA)** is targeted at stopping immoral trafficking and sex work. It went through two amendments, in 1978 and 1986.

- **The Prohibition of Child Marriage Act, 2006**, prohibits and penalises the act of child marriage.

- **The Child Labour (Prohibition and Regulation) Act, 1986**, prevents children from partaking in certain employments and regulates the conditions of work for children in other fields.

- The **Bonded Labour System (Abolition) Act, 1976**, prohibits systems of labour where people, including children, work under conditions of servitude to pay off debt, and also provides a framework for rehabilitating released labourers.

- The **Juvenile Justice (Care and Protection of Children) Act 2015,** which governs laws relating to children alleged and found to be in conflict with law.

- **The Transplantation of Human Organs and Tissues Act, 1994**, makes commercial dealing in human organs a punishable offence.

- **Protection of Children from Sexual Offences (POCSO) Act, 2012** seeks to prevent commercial sexual exploitation of children.

- I**ndia set up Anti-Human Trafficking Units (AHTUs) in 2007.**
  - AHTUs are tasked with "addressing the existing gaps in the law enforcement response," "ensuring a victim-centric approach which ensures the 'best interest of the victim/ survivor' and prevents 'secondary victimization/ re-victimisation of the victim," and developing databases on traffickers.

- The **Criminal Law (Amendment) Act, 2013**, revised Section 370 of the Indian Penal Code, which deals with buying and selling of any person as a slave, to include the concept of human trafficking.

Way Forward

- Motivating and updating the knowledge base of the officers dealing with human trafficking is essential, for which States had to make special efforts and provide them adequate training and resource material etc. on a regular basis.

- The conviction rate will remain low unless India has a comprehensive legislation that provides for a strong investigation mechanism clarifying the roles and responsibilities of investigating agencies such as AHTUs and the NIA (National Investigation Agency).

Source: TW

IAMAI ON PROPOSED DIGITAL COMPETITION BILL

In News

- Members of the Internet and Mobile Association of India (IAMAI) expressed a divergent stance on the **proposed Digital Competition Bill (DCB)**, and have written to the Ministry of Corporate Affairs (MCA) to quickly implement regulations that prevent anti-competitive practices.

About the bill

- The bill emerges against the backdrop of the **Competition Act, 2002**, and subsequent amendments and recommendations aimed at updating India's competition framework to better address the digital economy.

- The Ministry of Corporate Affairs constituted the Committee on Digital Competition Law to draft this bill, which seeks to introduce ex-ante measures for regulating Big Tech companies
  - Ex-ante regulations are proactive measures designed to prevent certain practices before they occur.

Key Proposals of the Bill

- The bill identifies **Systemically Significant Digital Enterprises (SSDEs**) and subjects them to certain restrictions to prevent anti-competitive conduct.
  - These include prohibitions on self-preferencing and anti-steering practices.

- It seeks to complement the current ex-post framework with ex-ante measures.

- It has proposed a penal structure for those found guilty of anti-competitive practices, and has also suggested restrictions to cross-sharing of data and breaking up of groups of apps and services that serve only specific companies.

Purpose

- In the rapidly evolving digital landscape, India has taken a significant step towards regulating anti-competitive practices with the introduction of the Draft Digital Competition Bill.

- The bill aims to create a **level playing field in the digital economy**, ensuring fair competition and fostering innovation.

- It aims to ensure a fair, transparent, and contestable digital ecosystem.

- It also aims to foster a balanced digital ecosystem, promoting innovation and protecting the interests of smaller players, including startups

Concerns and Criticisms

- Despite its intentions, the bill has faced criticism for potentially being too restrictive.

- Stakeholders have expressed concerns that it could stifle innovation, undermine the interests of Indian tech companies, and make consumers more vulnerable to cyber fraud

- It may hinder investments in tech startups and negatively impact micro, small, and medium enterprises (MSMEs)

- There are also worries about consumer vulnerability to cyber fraud

Government's Stance

- The government emphasises that the bill is not meant to regulate big players per se but to regulate on an ex-ante basis to prevent potential harm to competition.

Conclusion and Way Forward

- As India positions itself to become an innovation-led economy, the Digital Competition Bill represents a critical juncture.

- As the bill undergoes public scrutiny and debate, it will be crucial to strike a balance between regulation and innovation to safeguard the interests of all stakeholders in India's burgeoning digital economy.

Source:BS

BIOLOGICAL DIVERSITY (AMENDMENT) ACT, 2023

Context

- The 2023 amendments to India's Biological Diversity Act of 2002 has caused a debate concerning biodiversity protection and India's responsibilities as a signatory to the Kunming-Montreal framework.

Background

- In **2022,** at the United Nations Biodiversity Conference, countries all over the world adopted the **Kunming-Montreal framework** to enhance biodiversity protection and conservation.

- The countries adopted calls to **protect 30 percent of all ecosystems by 2030**, to protect biodiversity and genetic diversity and ensure fair and equitable sharing of benefits of traditional knowledge with the local and indigenous communities that steward this knowledge.

Amendments under scrutiny

- **Under the original 2002 Act,** approvals from the **National Biodiversity Authority (NBA)** were required before applying for intellectual property rights (IPR) related to biological resources.

  - **The 2023 amendments** have eased this requirement, no longer mandating approval from the National Biodiversity Authority for IPR, but only requiring them to be registered with the authority before granting approvals – raising concerns about possible resource overexploitation.

- The exemption of codified traditional knowledge from the **benefit-sharing mechanism and stringent regulatory oversight** has also raised further concerns.

  - These changes undermine the principle of fair and equitable benefit-sharing, which is central to both the original Act and **Nagoya Protocol.**

- By allowing **AYUSH practitioners and related industries to access biological resources without prior approval,** the amendments open the door to commercial exploitation without adequate compensation to local communities that hold traditional knowledge.

- **Decriminalization of offenses:** Previously, violations could result in imprisonment and fines, however the amendments now replace imprisonment with civil penalties.

Nagoya Protocol

- The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) is a supplementary agreement to the **Convention on Biological Diversity (CBD).**

- It provides a transparent legal framework for the effective implementation of one of the three objectives of the CBD: **the fair and equitable sharing of benefits arising out of the utilization of genetic resources.**

- It was adopted in **2010 in Nagoya,** Japan and entered into force in **2014.**

What are the Concerns?

- The amendments could lead to **false claims about the cultivation of bio-resources** and potential manipulation by businesses.

- It is argued that without stringent oversight, there could be **widespread misuse and exploitation of local resources,** adversely affecting both biodiversity and the livelihoods of local communities dependent on these resources.

- In the North East, where traditional knowledge about medicinal plants and ecological management is profound, this change could **exacerbate existing socio-economic disparities** and **contribute to cultural erosion.**

Strengthening monitoring systems

- The amendments strengthen the role of **Biodiversity Management Committees (BMCs)** by clarifying their functions and mandating their establishment in rural and urban areas.

- The new provisions also place a **stronger emphasis on monitoring biological resources derived from foreign countries**, ensuring compliance with international agreements like the **Nagoya Protocol.**

Way Ahead

- It is crucial that the **regulatory changes are implemented with strong safeguards, robust monitoring, and active involvement of local communities** to ensure that biodiversity conservation and sustainable development go hand in hand.

- **Balancing economic development with conservation** and equitable benefit-sharing will be essential to safeguard India's rich biological heritage for future generations.

Biological Diversity Act, 2002

- The Act was introduced to achieve the objectives of **United Nations Convention on Biological Diversity (CBD), 1992.**

- It provides a framework for **access to biological resources and sharing the benefits arising out of such access and use.** It is in line with the **Nagoya Protocol on Access and Benefit Sharing.**

- The act envisaged a **three-tier structure** to regulate the access to biological resources: The National Biodiversity Authority (NBA), The State Biodiversity Boards (SBBs) and The Biodiversity Management Committees (BMCs).

- **The National Biodiversity Authority (NBA)**
  - It is a **Statutory Body** established in 2003 to implement India's Biological Diversity Act (2002).
  - **It advises the Central Government** on matters relating to the conservation of biodiversity, sustainable use of its components and equitable sharing of benefits arising out of the utilization of biological resources.
  - **It also advises the State Governments i**n the selection of areas of biodiversity importance to be notified as **heritage sites** and measures for the management of such heritage sites.
  - **It considers requests by granting approval** or otherwise for undertaking any activity referred to in Sections 3,4 and 6 of the Act.

- **The State Biodiversity Boards (SBBs)**
  - They are established under **Section 22** of the Act and focus on advising the State Governments, subject to any guidelines issued by the Central Government, on matters relating to the conservation of biodiversity.
  - The SBBs also regulate, by granting of approvals or otherwise upon requests for commercial utilization or bio-survey and bio-utilization of any biological resource by the Indians.
- **The Biodiversity Management Committees (BMCs)**
  - As per the Act, **the local bodies constitute the BMC** within their area of jurisdiction for the purpose of promoting conservation, sustainable use and documentation of biological diversity.

Source: BL

ARCHAEOLOGISTS, SANSKRIT SCHOLARS COLLABORATE TO DECIPHER RIGVEDA TEXT

Context

- A group of archeologists are now **collaborating with Sanskrit scholars to decipher the text of the Rigveda.**
  - Researchers need to get more understanding about what is mentioned in Rigvedic text, and how much of that can be co-related with archaeological evidence.

About

- **Aim:** The research aims to potentially **establish a relationship between the Harappan civilisation and the people of the Vedic age.**
  - A clear understanding of what is mentioned in the Rigveda text is important in order to co-relate archaeological evidence unearthed in excavations of Harappan settlements.

Correlating Evidences

- **Worship Rituals:** While excavating the site of Rakhigarhi, we found evidence of ritual platforms and fire altars. Parallely, fire worship is mentioned in Rigvedic texts.

- **Age of Vedas:** Currently, there is a debate about the period of origin of the Vedas, with one set of historians holding that the Vedas originated between 1,500 BC and 2,000 BC. However, another set of historians, believe that the Vedas date farther back to 2,500 BC — or 4,500 years ago.

  - This would coincide with the age of the genetic evidence from the erstwhile Harappan woman's bone samples tested at the Rakhigarhi site.

- **Saraswati River:** The mention of the river is recorded at least 71 times in the Rigvedic text.

  - During archaeological excavations, a majority of Harappan settlements were discovered along the banks of river Saraswati.

- **Rigvedic texts do not mention the use of iron,** so co-relation with early historic settlements which came much later and are 2,400 year old ones (near the Ganga Basin and the Deccan region) is not possible.

- **South Asian ancestor theory:** Contrary to the theory that there was a large scale immigration of 'Aryans' from Europe to central Asia and then to south Asia, the NCERT textbook revisions mention that the Harappans were indigenous to India, dating back to 10,000 BC.

The Vedic Age

- The Vedic Age refers to the period in ancient Indian history **characterized by the composition of the Vedas,** which are the oldest sacred texts of Hinduism.

- It's generally dated from around **1500 BCE to 600 BCE**.

- During the Vedic Age, society was largely **pastoral and tribal, with the Aryans being the dominant group.**

- They composed hymns and performed rituals centered around gods like **Indra, Agni, Varuna, and Soma.**

- **These hymns were eventually compiled into the four Vedas: the Rigveda, Samaveda, Yajurveda, and Atharvaveda.**

  - The Rigveda is a collection of 1,028 hymns divided into 10 mandalas. They are the earliest compositions and hence depict the life of the early Vedic people in India.

  - The Samaveda is a collection of verses mostly taken from the Rigveda but arranged in a poetic form to facilitate singing.

  - The Yajurveda is found in two recensions, Black and White, and are full of rituals to be performed publicly or individually.

  - The Atharvaveda is a collection of magic spells and charms to ward off the evil spirits and diseases.

- The end of the Vedic Age marked the beginning of the later Vedic period, during which the focus shifted from the ritualistic practices of the Vedas to more philosophical inquiries, as seen in the Upanishads.

Source: TH

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KOYA TRIBE

Context

- The **Koya tribe** recently faced a cultural crisis that threatened over the sacred Mahua flower in **Godavari valley of Andhra Pradesh.**

About Koya Tribe

- **Geographical Distribution:** The Koyas primarily inhabit the **Malkangiri district in south Odisha.** They are also found in **Andhra Pradesh and Chhattisgarh.**

- **Identity and Name:** The Koyas refer to themselves as 'Koya' or 'Koitor', which translates to 'people'.

  - In the **adjacent Bastar region of Chhattisgarh**, the Koyas are known as **Dorla and Madia.**

- Traditionally, the Koyas are **pastoralists and shifting cultivators**. They own large herds of cows and bullocks.

- According to their traditional system, **Chom (or wealth) means cattle**, because a Koya without cattle has no status in the society.

- **Cultural Richness:** Koyas boast a rich cultural heritage that includes colorful dance, music, folklore, art, and craft.

  - Their traditional society has been shaped by centuries of existence and interaction with neighboring communities.

Source: TH

PHENOME INDIA-CSIR HEALTH COHORT KNOWLEDGEBASE' (PI-CHECK)

Context

- The Council of Scientific and Industrial Research (CSIR) announced the conclusion of the first phase of its longitudinal health monitoring project, the **'Phenome India-CSIR Health Cohort Knowledgebase' (PI-CheCK).**

About

- The PI-CHeCK project aims to assess risk factors in non-communicable (cardio-metabolic) diseases within the Indian populace.

- This health cohort study will collect comprehensive data, including clinical questionnaires, lifestyle and dietary habits, body composition measurements, scanning-based assessments, blood biochemistry, and molecular assay-based data.

Council of Scientific and Industrial Research(CSIR)
• **CSIR is a R&D organization** known for its cutting edge R&D knowledge base in diverse S&T areas.
• **It was established** as an autonomous body in **1942** and Headquartered in **New Delhi.**
• CSIR has a dynamic network of **37 national laboratories, 39 outreach centers, 1 Innovation Complexes,** and three units with a pan-India presence.
• **The CSIR laboratories** specialize in topics ranging from the genome to geology, food to fuel, minerals to materials, and so on.

Source: PIB

PRAVAHA

Context

- **The Indian Space Research Organisation (ISRO)** has developed Computational Fluid Dynamics (CFD) software named **Parallel RANS Solver for Aerospace Vehicle Aero-thermo-dynamic Analysis (PraVaHa).**

About

- It can **simulate external and internal flows on launch vehicles,** winged and non winged re-entry vehicles.

- Any aerospace vehicle while moving through the Earth's atmosphere during launch or re-entry is subjected to **severe aerodynamic and aerothermal loads** in terms of external pressure and heat flux.

- PraVaHa has been used extensively in the **Gaganyaan program for aerodynamic analysis** of human-rated launch vehicles, viz, HLVM3, Crew Escape System (CES), and CM.

- Currently, the PraVaHa code is **operational to simulate airflow for Perfect Gas & Real Gas conditions.**

Source: TH

STATE OF INDIA'S ENVIRONMENT

Context

- Recently, the Centre for Science and Environment (CSE) released the **State of India's Environment In Figures for 2024**.

About the India's Climate Trends in 2023 and 2024

- **Second-Hottest Year:** India experienced its second-hottest year on record in 2023.

- **Record-Breaking Temperatures:** At least 102 weather stations across the country shattered their monthly highest 24-hour maximum temperature in 122 years.
  - Ten of these stations were in million-plus cities.
  - Twenty-seven of the weather stations with record-breaking temperatures were in Andhra Pradesh, Kerala, and Tamil Nadu.
  - The country recorded its hottest minimum temperature in 122 years during 2023.

- **Minimum Temperatures:** Except for October, minimum temperatures remained above normal in the other five months.
  - Anomalies increased from 0.57°C in July to 1.71°C in December.
  - December saw the highest minimum temperature anomaly in 122 years (1.71°C above normal).

- **Consistent Warmth:** The average minimum temperature in the southern peninsular region remained above normal during all four months.
  - The region consistently experienced its second-highest minimum temperature in 122 years.

- **New Normal for Minimum Temperatures:** The trend suggests a new normal for minimum temperatures, indicating warmer nights.
    - The rising maximum temperature and record-breaking temperatures reported from Delhi and other states are concerning.
    - The ongoing trend for minimum temperatures highlights the shift toward warmer nights.

Source: DTE

RBI'S GOLD RESERVE

Context

- Recently, the Reserve Bank of India (RBI) has transferred 100 metric tonnes of gold from the United Kingdom to domestic vaults in FY24.

About the Gold Reserve

- It is the **gold held by a country's central bank (RBI in case of India)**, acting as a backup for financial promises and a store of value.
- India, like other nations, stores some of its gold reserves in foreign vaults **to spread out risk and facilitate international trading.**
    - India's total gold holding now stands at **822 metric tonnes in FY24.**
- **India's gold reserves** are **primarily stored in the Bank of England**, which is known for its stringent security protocols.
    - The RBI stores **a portion of its gold reserves** at the **Bank for International Settlements (BIS) in Basel, Switzerland, and the Federal Reserve Bank of New York in the United States**.

> **Do You Know?**
> - During **India's foreign exchange crisis in 1990-91**, the country pledged some of its gold reserves to the Bank of England **to secure a $405 million loan.**
> - Even though the loan was paid back by November 1991, India decided to keep the gold in the UK for convenience.

Countries with the most gold reserves

- As estimated by the **World Gold Council**, the **current rankings** of gold reserves by country in **Q1(2024)** are United States of America (8,133.46 tonnes), Germany (3,352.65 tonnes), 3 Italy (2,451.84 tonnes), France (2,436.88 tonnes), Russian Federation (2,332.74 tonnes), China (2,262.45 tonnes), Switzerland (1,040.00 tonnes), Japan (845.97 tonnes), **India (822.09 tonnes)**, and Netherlands (612.45 tonnes) etc.

Source: LM

'GREEN-BEARD' GENES

Context

- Scientists have gained valuable new insights into natural altruism **by studying the amoeba Dictyostelium discoideum through 'Green-beard' genes.**

About

- **Green-beard genes** allow the individuals bearing them to recognise and preferentially cooperate with each other.
- Alternatively, a green-beard gene **could provoke individuals to behave harmfully towards those carrying a different version of the gene.**
- Thus, green-beard genes **encode some kind of tag** that helps the genome to know their identity (i.e. self-recognition).
- **Dictyostelium discoideum** is a free-living, fast-growing, unicellular amoeba.
    - In the wild, it feeds on bacteria that grow on decaying vegetation.

Source: TH

CUBA

In News

The Government of India is extending Humanitarian Assistance to the Government of the Republic of Cuba.

- The assistance reaffirms India's status as the **"Pharmacy of the World"** and underlines our commitment to historic friendship with Cuba.

About Cuba

- The Republic of Cuba is an island country in the Caribbean and located at the entrance of the Gulf of Mexico.
- Havana is the largest city in Cuba and the country's capital
- **Location:** Cuba is located where the northern Caribbean Sea, Gulf of Mexico, and the Atlantic Ocean meet.
    - **West:** Mexico

- **North:** American state of Florida and the Bahamas.
- **Southeast:** Haiti and Dominican Republic
- **South:** Jamaica and the Cayman Islands

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- Highest point:
    - Highest point is **Pico Turquino** at 6,476 ft.
    - It is a part of the **Sierra Maestra Mountain range**, located in the southeast of the island.
- Cuba has negligible inland water area.
    - The largest natural water mirror is **Laguna de Leche**.

Source: AIR

HYDROXYUREA TO TREAT SICKLE CELL DISEASE

In News

- The Indian Council of Medical Research (ICMR) invited Expressions of Interest (EoI) from eligible organisations for the "joint development and commercialisation" of low dose or paediatric oral formulation of hydroxyurea to treat **sickle cell disease in India**.

About Sickle Cell Disease

- It is a group of inherited red blood cell disorders.
    - Red blood cells contain hemoglobin, a protein that carries oxygen. Healthy red blood cells are round, and they move through small blood vessels to carry oxygen to all parts of the body.
- In someone who has SCD, the **hemoglobin is abnormal**, which causes the red blood cells to become hard and sticky and look like a C-shaped farm tool called a sickle.
- India has the **highest prevalence of sickle cell disease** in South Asia, and over 20 million sickle cell affected individuals reside in the country.
- **Treatment :** Hydroxyurea, a myelosuppressive agent, is an effective drug for treating patients of sickle cell disease, and thalassemia.
    - In India, according to the National Health Mission's guidelines, healthcare providers initiate hydroxyurea therapy to only symptomatic sickle cell disease patients among children both because of the lack of availability of paediatric doses as well as the fear of toxicity.
- **Mission :** The **National Sickle Cell Anaemia Elimination Program**, introduced in the Union Budget 2023, focuses on addressing the significant health challenges posed by sickle cell disease.
    - The program is executed in a mission mode as part of the National Health Mission (NHM), aims to eliminate sickle cell genetic transmission by the year 2047, showing a long-term commitment to eradicating the disease.

Source:TH

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