



24 July, 2023

Copper Age

Context: Ancient human genomic data suggests Copper Age farmers and steppe pastoralists may have interacted 1,000 years earlier than thought.

Key Highlights

- Previous genomic analyses identified two major genetic turnover events in Western Eurasia: one linked to farming spread (7,000-6,000 BC) and another from steppe pastoralist expansion (3,300 BC).
- The Copper Age followed, characterized by metallurgy, wheel and wagon use, and horse domestication.
- The period between the Copper Age decline (around 4,250 BC) and pastoralist expansion lacked clear understanding.
- Recent study suggests early contact and admixture between Copper Age farmers in southeast Europe and Neolithic groups from southern Ukraine's steppe (starting around 5,500 BC).
- Admixture was localized to the NW Black Sea region during the fourth millennium BC and didn't impact southeastern European hinterland.



Chalcolithic Age

- The Chalcolithic period, also called the Copper Age, bridges the gap between the Neolithic and Bronze Age.
- It is characterized by the use of both stone tools and early metalworking, specifically copper.
- In India, it lasted from around 2000 BC to 700 BC.
- The Chalcolithic culture was mainly observed in the Pre-Harappan phase, extending to the Post-Harappan phase in some areas.
- People lived in rural settlements near hills and rivers.
- Prominent farming communities of this age included Kayatha, Ahar or Banas, Malwa, and Jorwe.
- They practiced animal husbandry and agriculture, cultivating wheat, rice, millet, lentil, urad, moong, and other pulse crops.

Section 498A of IPC

Context: The Karnataka High Court recently acquitted a 46-year-old man in a Section 498A IPC case as the complaint was made by his 'second wife', rendering the marriage 'null and void'.

About Section 498A

- Section 498A of the Indian Penal Code deals with the criminal offense of "cruelty by husband or relatives of husband" towards a married woman.
- It was introduced in 1983 as an amendment to address the growing concern of domestic violence and harassment faced by married women in India.
- Under this section, a husband or his relatives can face up to three years in jail for subjecting the wife to cruelty.
- The term "cruelty" includes conduct likely to drive the woman to suicide or cause grave injury to her mental or physical health, as well as harassment with the intention of coercing her to meet unlawful demands for property or valuable security.
- Bail under Section 498A is possible, but it can only be granted by the Magistrate after an FIR has been registered based on the aggrieved party's complaint.
- The Supreme Court has emphasized using Section 498A sparingly, with genuine evidence of cruelty, and not as a means of settling personal scores.

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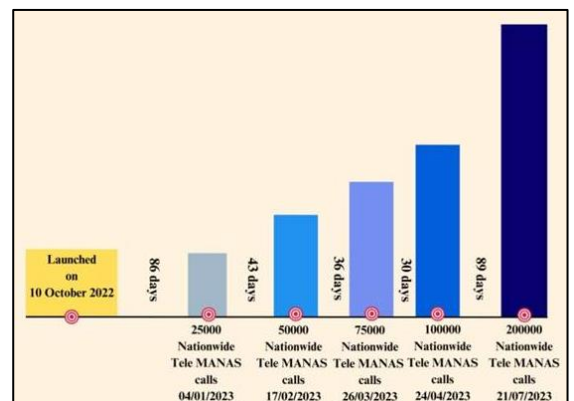
Other laws to curb violence against women

- Dowry Prohibition Act, 1961
- Protection of Women from Domestic Violence Act, 2005 (PWDVA)
- Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act, 2013
- Various amendments to the Indian Penal Code (IPC) have been made to address violence against women, including:
 - **Section 354:** Addresses criminal assault or use of criminal force against women with intent to outrage her modesty.
 - **Section 354A:** Deals with sexual harassment and punishment for the same.
 - **Section 354D:** Criminalizes stalking and provides punishment for the offense.
 - **Section 376:** Deals with punishment for rape, with stricter provisions for different types of rape offenses.
 - **Section 509:** Deals with words, gestures, or acts intended to insult the modesty of a woman.
- **Criminal Law (Amendment) Act, 2013:** Enacted in response to the Nirbhaya case, it brought about significant changes to sexual offense laws. It introduced stricter punishments for offenses like rape, gang rape, and acid attacks, aiming to enhance the safety and security of women.

Tele-MANAS Helpline

Context: Since its launch in October 2022, the Tele-MANAS Helpline has received over 200,000 calls.

- Tele-MANAS is an initiative of the Union Ministry of Health & Family Welfare.
- NIMHANS is the nodal center, with technology support from NHRSC, IIT Bengaluru, and IITB.
- Services are available 24x7 on Toll-Free Number 14416, with language selection options for callers.
- At least one Tele-MANAS Cell to be established in each State/UT.
- It operates in a two-tier system: Tier 1 with state Tele-MANAS cells, including trained counsellors and mental health specialists, and Tier 2 with specialists at DMHP/Medical College resources.
- Currently, there are 5 regional coordination centers and 51 State/UT Tele-MANAS cells.
- The initial rollout provides basic support and counselling through IVRS, being customized for all States and UTs.
- It aims to link with other services like National tele-consultation, e-Sanjeevani, Ayushman Bharat Digital Mission, mental health professionals, health and wellness centers, and emergency psychiatric facilities.
- The goal is to encompass the entire spectrum of mental wellness and illness and integrate all mental health care systems.



Features of Ayushman Bharat Digital Mission

- **Ayushman Bharat Health Account Number (ABHA Number):**
 - Unique identifier for individuals to thread their health records and authenticate them across systems with patient consent.
- **Healthcare Professionals Registry (HPR):**
 - Comprehensive repository of healthcare professionals from modern and traditional systems.
 - Enabling connection to India's digital health ecosystem.
- **Health Facility Registry (HFR):**
 - Comprehensive repository of health facilities, public and private, including hospitals, clinics, labs, and pharmacies.
 - Enabling connection to India's digital health ecosystem.
- **ABHA Mobile App (Ayushman Bharat Health Account):**
 - App to access health records, public health initiatives, insurance plans, and ABHA numbers.

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- **Unified Health Interface (UHI):**
 - Open network for digital health services between patients and health service providers.
 - Services include appointment booking, teleconsultation, and service discovery.
- **ABDM Sandbox:**
 - Framework for technology and product testing in the national digital health ecosystem.
 - Assisting private players and organizations in joining the digital health network.

Expected Credit Loss (ECL) Framework

Context: ICICI Bank, a private sector lender, has recently announced its readiness to transition towards an expected credit loss (ECL) framework for provisioning.

Loan Provisioning

- The RBI defines loan loss provision as funds reserved by banks for covering defaulted loans.
- Banks allocate a portion of expected loan repayments to build these reserves, offering protection against potential losses.
- Instead of facing cash flow losses, banks can utilize these reserves to cover any incurred losses.
- The RBI proposes a shift to an "expected credit loss" approach from the current "incurred loss" approach for provisioning.
- The new approach aims to determine provisions based on expected credit losses to enhance the safety and soundness of banks.

ECL Framework

- The proposed ECL practice requires banks to estimate expected credit losses based on forward-looking projections rather than waiting for actual losses.
- Banks will classify loans as Stage 1, 2, or 3 based on their credit risk profile, with higher provisions for Stage 2 and 3 loans.
- ECL allows banks to estimate the probability of default and likely loss given default for each loan to determine expected losses.
- This approach contrasts with the current incurred loss provisioning, which relies on NPA category duration for provisions.
- **Benefits** of the ECL regime:
 - Ensures ample provisions, reducing the risk of inadequate provisions seen in the incurred loss approach.
 - Enhances the overall resilience of the banking system to align with international standards.

Problem with "Incurred Loss" approach

- The ECL regime mandates timely provision for incurred loan losses.
- Prompt recognition of loan losses prevents excessive provisions and safeguards bank capital.
- Improved capital base enhances banks' resilience and mitigates systemic risks.
- Earlier recognition of losses prevents overstatement of banks' income.
- The regime encourages a balanced approach to dividend payouts, supporting a stable capital position.

NEWS IN BETWEEN THE LINES

Ludwigia Peruviana



Recently, Ludwigia Peruviana, an invasive weed, has a significant impact on elephants and their habitats.

Name and Origin: Ludwigia Peruviana, also known as primrose willow, is native to Central and South America. It was possibly introduced as an ornamental plant due to its tiny yellow flowers.

Physical Characteristics: The plant grows up to 12 feet in height and features pale yellowish flowers. As an aquatic plant, it poses a threat to swampy areas globally.

Rapid Spread and Invasive Nature: Ludwigia Peruviana spreads quickly in wetlands, outcompeting native vegetation. It is one of the 22 priority invasive plants in Tamil Nadu.

Environmental Impact: The weed's rapid growth disrupts perennial foraging grounds for elephants and other animals. It reduces the growth of grass and native plants that animals rely on for food.

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Bonded Labour



Recently, the Bonded Labour System (Abolition) Act, 1976, gained attention as individuals from Odisha faced distress in a Tamil Nadu brick kiln.

What is Bonded Labour?

Bonded labour is a form of forced labour where individuals are trapped in exploitative conditions, compelled to work to repay a debt. This practice is prohibited by the Bonded Labour System (Abolition) Act, 1976.

Prevalence and Sectors: Bonded labour exists in both rural and urban areas, prevalent in unorganized industries like brick kilns, stone quarries, coal mining, agriculture, domestic servitude, circus and sexual slavery.

International Obligations: India has committed to ending modern slavery by 2030 under Sustainable Development Goal 8.7. It has ratified the ILO Abolition of Forced Labour Convention, 1957 (No. 105).

Constitutional Provisions:

- Article 21: Right to Life and Personal Liberty.
- Article 23: Prohibition of forced labor.
- Article 24: Prohibition of child labor in factories, etc.
- Article 39: State to protect workers' health, children from abuse and prevent economic coercion.

Related Legislations:

- Bonded Labour System (Abolition) Act, 1976
- Central Sector Scheme for Rehabilitation of Bonded Labourers (2016)

Mihir Bhoja



Recently, Rajasthan villages banned entry of BJP leaders over the Samrat Mihir Bhoj statue controversy.

Mihir Bhoja (c. 836–885 CE), also known as Bhoja I, was a Gurjara-Pratihara Dynasty king.

Titles and Devotion: He was a Vishnu devotee and took the title of "divarha," inscribed on some coins.

Reign and Capital: His reign was marked by his capital at Kannauj (present-day Uttar Pradesh).

Conquests: Mihir Bhoja was a renowned general and empire builder, with notable victories over Arab invaders, Palas, Rashtrakutas, and others.

Succession: His son Mahendrapala I succeeded him.

Coins: His coins depict the "Adivaraha" incarnation of Vishnu with various symbols and emblems.

Recently, in Rajasthan's Hadoti region, farmers protested for two weeks in front of Kota's Chambal Command Area Development office, demanding Chambal River water for irrigation.

About Chambal River:

- Chambal River flows through Madhya Pradesh, Rajasthan and Uttar Pradesh.
- It is about 885 km (550 miles) long and originates in the Vindhya Range.
- The Chambal is a major tributary of the Yamuna River, which is itself a tributary of the Ganges.
- It houses four dams - Gandhi Sagar, Kota Barrage, Jawahar Sagar and Rana Pratap Sagar, used for hydropower generation and irrigation.
- Chambal River supports the Keoladeo National Park known for eco-tourism and birdwatching.
- The National Chambal Sanctuary, established in 1979, is a habitat for diverse wildlife, including crocodiles, turtles, otters, and river dolphins.
- The river has faced pollution issues in recent years, threatening its ecosystem.



Chambal River

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Bedaquiline



Recently, Johnson & Johnson's patent on bedaquiline, a key drug for drug-resistant tuberculosis (DR-TB) treatment, expired on July 18.

About Bedaquiline:

- Bedaquiline is a cornerstone drug for drug-resistant tuberculosis (DR-TB) treatment.
- Johnson & Johnson's (J&J) patent on bedaquiline expired on July 18, allowing generic manufacturers to supply the drug.
- J&J filed secondary patents till 2027 in 66 low and middle-income countries, including high TB burdened nations, raising concerns over maintaining its monopoly.
- Tuberculosis is a major global health threat, with millions affected by drug-resistant and drug-sensitive TB.
- Janssen Pharmaceutical, a subsidiary of J&J, made bedaquiline and several clinical trials were sponsored by public and philanthropic organizations.
- The recent WHO recommendation for bedaquiline as a core drug for DR-TB treatment is based on collective evidence from research efforts.

Zero FIR



Recently, two Zero FIRs were filed in Manipur, one for the incident of two women being stripped and paraded, and another for the alleged abduction, rape and murder of two Kuki-Zomi women.

What is a Zero FIR?

A Zero FIR is a written complaint registered by any police station for an alleged offense under another police station's jurisdiction, as per Section 154 of the Code of Criminal Procedure (CrPC).

Purpose: The concept of Zero FIR was established to ensure that victims do not face delays in getting their complaints registered and that timely action can be taken after the filing of the FIR.

Implementation: The Justice Verma Committee recommended the provision of Zero FIR to expedite trials and increase penalties for crimes against women, particularly after the 2012 Delhi gang rape case.

Process: When a police station receives a complaint about an offense that is not within its jurisdiction, it registers a Zero FIR and transfers it to the relevant police station for further investigation.

Redressal: Upon receiving the Zero FIR, the concerned police station registers a fresh FIR and initiates the investigation into the alleged offense.

Place in News

Hekinan

Recently, amidst global commitments to phase out coal, Japan's largest coal-fired power plant in Hekinan, central Japan, stands out as an exception.

Location: Hekinan is a city situated in Aichi Prefecture, which is located in the Chubu region of central Japan.

Largest Coal-Fired Power Plant: Hekinan hosts Japan's largest coal-fired power plant, owned by Jera. The plant's vast area holds 400,000 tons of coal.

Coal Dependency: Despite global efforts to phase out coal, Japan maintains its reliance on coal for energy generation, making Hekinan's power plant an exception to the trend.

Environmental Concerns: The continued operation of the coal-fired power plant in Hekinan raises environmental concerns, as coal is a major source of greenhouse gas emissions and air pollution.

Energy Transition Challenges: Japan faces challenges in transitioning to cleaner energy sources while balancing its energy demands, leading to debates on the future of coal power in the country.

Impact on Climate Goals: Japan's stance on coal could impact its progress towards achieving international climate goals, especially in the context of reducing carbon emissions.



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