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MINISTRY OF SCIENCE AND TECHNOLOGY
सत्यमेव जयते



MK Yadav Sir

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PIB July 26

WHITE LABEL ATMS

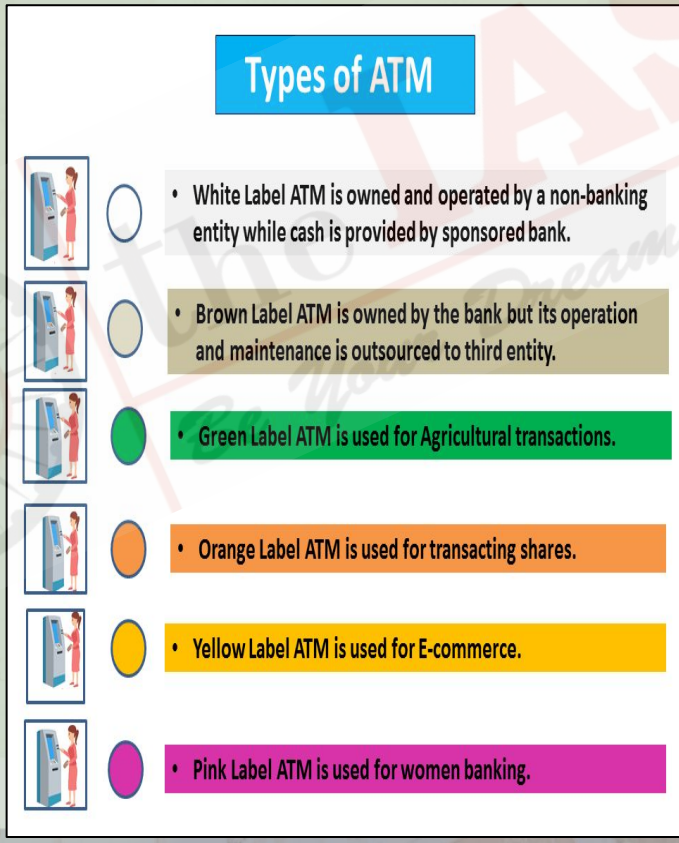
(Syllabus: GS Paper 3 - Infrastructure)

White Label ATMs (WLAs) to drive ATM penetration in India with a greater focus on Tier III to VI centres

Context: The Reserve Bank of India (RBI) has apprised that in order to drive ATM penetration in the country with a greater focus on Tier III to VI centres, non-bank companies have been permitted to set up, own and operate **White Label ATMs (WLAs)** in the country.

White Label ATMs (WLAs)

- ATMs set up, **owned and operated by non-banks** are called WLAs.
- Non-bank ATM operators are authorised under the **Payment & Settlement Systems Act, 2007** by the Reserve Bank of India (RBI).
- WLAs **provide banking services** to the customers of banks in India, based on the cards (debit/credit/prepaid) issued by banks.
- In addition to d**ispensing cash, WLAs** may offer many other services / facilities which inter-alia include:
  - Account Information
  - Cash Deposit
  - Regular Bill Payment
  - Mini / Short Statement Generation
  - PIN Change
  - Request for Cheque Book



White label ATM	Brown Label ATM
When ATMs are owned and operated by non-bank entities but they are not doing 'outsourcing-contract' from a particular bank.	When banks outsourced the ATM operations to a third party.
The private company owns & operates the ATM machine, pays office rent. They negotiate with the landlord, electricity company, telecom company and so on.	Same
Sponsor bank provides the cash.	The bank (which has outsourced this work) provides cash for that ATM.
No. White label ATM doesn't have such logo. Not even of the sponsor bank.	ATM has logo of that bank (which has outsourced this work).
They've to compulsory open a few ATMs in (tier 3 to tier 6) areas.	No such compulsion.
RBI directly involved because these white label Companies have to separately get license/permission from RBI to run business.	RBI not involved directly. These outsourcing companies have contractual obligation with their respective banks.

TIMES OF INDIA

Page 1

NO-CONFIDENCE MOTION

(Syllabus: GS Paper 2 - Polity)

Oppn's no-confidence motion in LS today

New Delhi: In an attempt to force PM Modi to speak on the Manipur strife that has brought the monsoon session to a standstill, opposition parties of the Indian National Developmental Inclusive Alliance (INDIA) bloc on Tuesday decided to move a no-confidence motion against the BJP government, with focus on the northeastern state, **reports Mohua Chatterjee.**

Late Tuesday night, Congress leader in LS Adhir Ranjan Chowdhury announced, "Opposition parties will bring a no-confidence motion in Lok Sabha against the government on Wednesday." Over 50 LS members from various opposition parties are likely to submit their notice of "no-confidence" against the government on Wednesday morning, it is learnt. Sources said the opposition parties will meet early on Wednesday morning to finalise the draft. Late on Tuesday evening, Congress whip in LS, Manickam Tagore, tweeted the procedure for moving a no-confidence motion, reinforcing the possibility. The party also issued a three-line whip. Sonia Gandhi will chair a meeting of Congress MPs on Wednesday.

▶To compel PM, P 12

Say what you will, we're INDIA: Rahul

Reacting to reports that Modi has likened INDIA alliance to "East India Company" and "India Mujahideen", Congress leader Rahul Gandhi said, "Call us whatever you want, PM Modi. We are INDIA. We will help heal Manipur and wipe the tears of every woman and child. We will bring back love and peace for all her people." P 13

Context: In an attempt to force PM to speak on the Manipur strife that has brought the monsoon session to a standstill, opposition parties of the Indian National Developmental Inclusive Alliance (INDIA) bloc decided to move a **no-confidence motion** against the BJP government, with focus on the northeastern state.

- Over 50 LS members from various opposition parties are likely to submit their notice of **"no-confidence" against the government.**

No-confidence motion

- A no-confidence motion is a **parliamentary motion which is moved in the Lok Sabha against the entire council of ministers**, stating that they are no longer deemed fit to hold positions of responsibility due to their inadequacy in some respect or their failure to carry out their obligations.
- **No prior reason** needs to be stated for its adoption in the Lok Sabha.
- A motion of "No Confidence Motion" against the Government can be introduced only in the **Lok Sabha under rule 198.**
- The **Constitution of India does not mention** about either a Confidence or a No Confidence Motion.
- Although, Article 75 does specify that the Council of Ministers shall be collectively responsible to the Lok Sabha.
- A motion of No Confidence can be admitted when **a minimum of 50 members, support the motion in the house.**
- The Speaker then, once satisfied that the motion is in order, will ask the House if the motion can be adopted.
- If the motion is passed in the house, the **Government is bound to vacate the office.**
- A no-confidence motion **needs a majority vote to pass the House.**
- If individuals or parties abstain from voting, those numbers will be removed from the overall strength of the House and then the majority will be taken into account.

PIB

July 26

MULTI-STATE COOPERATIVE SOCIETIES BILL

(Syllabus: GS Paper 2 - Governance)

Union Home Minister and Minister of Cooperation, Shri Amit Shah replied to the discussion on the Multi-State Cooperative Societies (Amendment) Bill, 2022 in the Lok Sabha today, Lok Sabha passed the Bill after discussion

Context: Union Home Minister and Minister of Cooperation replied to the discussion on the **Multi-State Cooperative Societies (Amendment) Bill, 2022** in the Lok Sabha.

- The Union Cabinet has given approval to this bill to increase transparency, accountability and profit in multi-state cooperative societies.

Highlights of the Bill

- The Bill amends the **Multi-State Co-operative Societies Act, 2002.** It establishes the Co-operative Election Authority to conduct and supervise elections to the boards of multi-state co-operative societies.
- A multi-state co-operative society will **require prior permission of government authorities** before the redemption of their shareholding.
- A Co-operative **Rehabilitation, Reconstruction and Development Fund** will be established for the revival of sick multi-state co-operative societies.
- The Fund will be **financed through contributions** by profitable multi-state co-operative societies.
- The Bill a**llows state co-operative societies to merge into an existing multi-state co-operative society**, subject to the respective state laws.

Key Issues and Analysis

- Sick multi-state co-operative societies will be **revived by a Fund** that will be financed through contributions by profitable multi-state co-operative societies. This effectively **imposes a cost on well-functioning societies.**
- Giving the government the power to **restrict redemption of its shareholding in multi-state co-operative societies** may go against the co-operative principles of autonomy and independence.

PM-JAY
(Syllabus: GS Paper 2 - Health)

One in three PM-JAY hospitals inactive since scheme's launch

Priyanka Sharma
priyanka.sharma@livemint.com
NEW DELHI

Nearly a third of hospitals empanelled under Ayushman Bharat are inactive, official data showed, in a worrying trend for the world's largest health insurance scheme aiming for universal health coverage.

Out of 27,000 hospitals empanelled for Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY) since its 2018 launch, only 18,783 remain active, the latest health ministry data showed. Among the rest, 4,682 hospitals have been inactive since the beginning, having never catered to a single PM-JAY beneficiary. Further, 3,632 hospitals turned inactive in last six months, taking the total number of inactive hospitals to 8,314.

Mint has reviewed the data, which is updated daily.

PMJAY offers free health cover of up to ₹5 lakh to over 107.4 million poor and vulnerable families (about 500 million beneficiaries), with free and cashless treatment through a network of private (15,000) and government (12,000) empanelled hospitals across the country. National Health Authority (NHA) is implementing and executing the scheme under the Union health ministry.



The largest number of inactive hospitals are from AP. HT

"In the recent past, several attempts have been made to state health authorities (SHAs) to turn hospitals active within their jurisdiction. However, if any hospital fails to raise even a single pre-authorization within six months from its empanelment, NHA has made stringent guidelines to de-empanel such hospitals," a person aware of the matter said on condition of anonymity.

The level of inactivity varies from state to state. The largest number of inactive hospitals are in Andhra Pradesh (1,232 inactive out of 2,659 hospitals), followed by Rajasthan (932 out of 1,372). Tamil Nadu has 731 inactive hospitals out of 2,573, and UP has 297 inactive hospitals among 3,519.

Queries sent to the ministry and an NHA spokesperson remained unanswered till press time.

A second person aware of the matter said on condition of anonymity, "There could be multiple reasons for the inactiveness of the hospitals. There are many hospitals which might not feel like participating. The price package for medical services might not be to their expectations, or the payments may not be on time." Another reason could be that there were many hospitals which do not have appropriate in-patient facilities as in the past. This issue was highlighted in Karnataka, where primary health centres (PHC) were joined under PM-JAY. PHCs do not have the capacity for secondary and tertiary care hospitalization.

Context: Over a third of hospitals empanelled under **Ayushman Bharat** are inactive, official data showed, in a worrying trend for the world's largest health insurance scheme aiming for universal health coverage.

Key Point

- Out of 27,000 hospitals empanelled for A**yushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY)** since its 2018 launch, only 18,783 remain active, the latest health ministry data showed.
- Among the rest, 4,682 hospitals have been inactive since the beginning, having never catered to a single PM-JAY beneficiary.
- Further, 3,632 hospitals tur-ned inactive in last six months, taking the total number of inactive hospitals to 8,314.

PM-JAY

- PM-JAY is the largest health assurance scheme in the world, **covering over 10 crore families** (approximately 50 crore beneficiaries) that form the bottom 40% of the Indian population.
- The scheme being implemented by the **National Health Authority (NHA)** provides health cover of ₹5 lakhs per family per year for secondary and tertiary care hospitalization.
- The beneficiaries can **avail of cashless and paperless treatment** at any of the empanelled hospitals across the country.
- The scheme is based on the **Socio-Economic Caste Census 2011 (**SECC 2011) data, which ensures that no eligible beneficiary is left out.
- The other component of Ayushman Bharat is the **Health and Wellness Centres (HWCs)**, which are being established by transforming the existing Sub Centres and Primary Health Centres.
- These centres provide comprehensive primary health care services, including maternal and child health, non-communicable diseases, free essential drugs and diagnostic services, and health promotion and prevention.
- **Except for Delhi, Odisha, and West Bengal,** the AB PM-JAY is being implemented in 33 states and union territories.

DTE

July 26

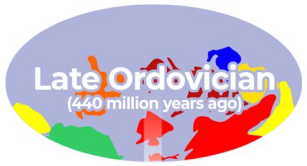
SIXTH MASS EXTINCTION

(Syllabus: GS Paper 3 - Env & Eco)

Sixth mass extinction will be worse than previously thought, say scientists

The population of around 33% of the species currently categorised as 'non-threatened' by the IUCN Red List show a declining trend

The "Big Five" mass extinctions



First mass extinction

85% of all species, including marine inverterbates like:
- graptolites
- brachiopods
- conodonts.



Second mass extinction

75% of all species including:
- brachiopods
- bivalves
- sarcopterygians.



Third mass extinction (the largest)

95% of all species, including marine animals like:
- *Dimetrodon*
- *Estemmenosuchus*
- *Orthacanthus*
- trilobites
- *Moschops*.



Fourth mass extinction

80% of all species, including:
- icthyosaurs
- paddle-finned plesiosaurs
- phytoplankton
- many species of frogs, salamanders, turtles, snakes, spiders and grasshoppers.



Fifth mass extinction

76% of all species including:
- non-avian dinosaurs
- bivalves (*Exogyra* and *Gryphaea*)
- inoceramids
- flying reptiles (pterosaurs).

Context: The **planet's sixth mass extinction**, fuelled by human activities, may trigger a rapid biodiversity imbalance, according to scientists.

- With biodiversity declines greatly exceeding the levels of increase, nearly 50 per cent of the animal population across all strata is being driven towards extinction - and eventually towards mass extinction.
- **Mass extinction** occurs when 75 percent of the world's species collapses in less than 2.8 million years.

Mass extinction

- A mass extinction is a **short period of geological time** in which a high percentage of biodiversity, or distinct species - bacteria, fungi, plants, mammals, birds, reptiles, amphibians, fish, invertebrates—dies out.
- In this definition, it's important to note that, in geological time, a '**short' period** can span thousands or even millions of years.
- The planet has **experienced five previous mass extinction events,** the last one occurring 65.5 million years ago which wiped out the dinosaurs from existence.
- Experts now believe we're in the midst of a sixth mass extinction.

THE HINDU

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BIOLOGICAL DIVERSITY BILL 2021

(Syllabus: GS Paper 3 - Env & Eco)

Lok Sabha passes contentious Biological Diversity Bill amid din

Environment Minister Bhupendra Yadav says amendments necessary to address issues in 20-year-old Act; green activists argue it will 'solely benefit' AYUSH firms; House panel had said proposed exemptions may pave way for abuse of law

The Hindu Bureau
NEW DELHI

The Lok Sabha on Tuesday passed the Biological Diversity (Amendment) Bill, 2021 amid sloganeering by Opposition members demanding that Prime Minister Narendra Modi make a statement on the Manipur violence. The Bill aims to amend the Biological Diversity Act, 2002.

"In the 20 years since the Act was brought into force by the Vajpayee government, we have seen that there were problems and it was necessary to address them," Bhupendra Yadav, Minister for Environment and Forests and Climate Change, said. "To ensure that tribes and vulnerable communities benefit from the proceeds of medicinal forest products, these amendments were necessary. By decriminalising certain activities, we are encouraging Ayurveda as well as ease of doing business."

The amended Bill was drafted in response to complaints by traditional Indian medicine practitioners, the seed sector, industry and researchers that the Act imposed a heavy "compliance burden".

The Bill sought to exempt registered AYUSH medical practitioners and people accessing codified traditional knowledge, among others, from giving prior intimation to State biodiversity Boards to access biological resources for certain purposes.

Environmental organisations such as Legal Initiative for Forests and Environment (LIFE) have said that the amendments were made to "solely benefit" AYUSH (Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy) firms and would pave the way for "bio piracy".

The Bill decriminalises a range of offences under the Act and substitutes them with monetary penalties.

An analysis by the Centre for Science and Environment and the *Down To Earth* magazine on how the Biodiversity Act was being practically implemented, showed serious shortcomings. There was no data – barring in a few States – on the money received from companies and traders for access and benefit-sharing from use of traditional knowledge and resources.

A Joint Parliamentary Committee was constituted in December 2021 to analyse the amendment Bill.

Congress spokesperson Jairam Ramesh, who was a member of the committee, in a letter addressed to other members and BJP MP Sanjay Jaiswal, committee chairperson, said that these exemptions could open the law for abuse.

Significant shift

The Biological Diversity (Amendment) Bill, 2021 seeks to exempt registered AYUSH medical practitioners from intimating biodiversity boards before accessing biological resources



Traditional knowledge: A tribal harvesting *Arogyapacha* leaves from a forest in Kerala. S. MAHINSHA

- It also aims at easing compliance burden, boosting investment and simplifying patent application processes
- Environmental organisations have raised concerns about potential for "bio piracy"; they say amendments favour industry and there is lack of clarity on benefit sharing with local communities

The Biological Diversity Act, 2002	Changes made by the Bill
Approval required from NBA (for certain foreign entities) • Entities: (i) foreign individuals, (ii) non-resident Indians, (iii) companies not registered in India, and (iv) companies registered in India and having non-Indian participation in share capital or management • Activities: obtaining biological resources occurring in India or associated knowledge for: (i) research, (ii) commercial utilisation, or (iii) bio-survey and bio-utilisation	**Approval from NBA** • Entities: changes the last category to companies registered in India which are "foreign-controlled" companies as under the Companies Act, 2013
Prior intimation required to SBB (for certain domestic entities) • Entities: (i) Indian citizens, and (ii) companies registered in India except those which require NBA approval • Activities: obtaining biological resources occurring in India for commercial utilisation • Exemptions: use by local people and communities including growers and cultivators of biodiversity, and vaids and hakims practising indigenous medicine	**Prior intimation to SBB** • Activities: access to associated knowledge for commercial utilisation will also require prior intimation • Exemptions: adds exemptions for:(i) codified traditional knowledge, (ii) cultivated medicinal plants and their products, (iii) AYUSH practitioners; limits the exception to vaids and hakims, and AYUSH practitioners to use for sustenance and livelihood

Context: The Lok Sabha passed the **Biological Diversity (Amendment) Bill, 2021** which aims to amend the Biological Diversity Act, 2002.

Highlights of the Bill

- The Bill amends the **Biological Diversity Act, 2002** to simplify compliance requirements for domestic companies.
- Users of codified **traditional knowledge and AYUSH practitioners** will be exempted from sharing benefits with local communities.
- The Bill **removes research and bio-survey activities** from the purview of benefit sharing requirements.
- **Benefit sharing** will be based on terms agreed between the user and the local management committee represented by the National Authority.
- The Bill **decriminalises** all offences under the Act.

Key Issues and Analysis

- The term **codified traditional knowledge** has not been defined.
- A broad interpretation might exempt all **local traditional knowledge** from benefit sharing requirements.
- The Bill removes the direct role of local communities in determining benefit sharing provisions.
- The Bill **decriminalises offences under the Act** and instead provides for a wide range of penalties.
- Further, the Bill empowers government officials to **hold inquiries and determine penalties.**
- It may be questioned whether it is appropriate to confer such **discretion to government officials.**

BUSINESS STANDARD

Page 4

BLACK MONEY ACT 2015

(Syllabus: GS Paper 3 - Security)

₹15,666 cr tax demand under Black Money Act since 2015



As on March 31, tax assessment under the Black Money (Undisclosed Foreign Income and Assets) and Imposition of Tax Act, 2015, resulted in a cumulative demand of ₹15,666 crore, government data showed. The Black Money Act effective from July 2015 was introduced to specifically deal with the issue of black money stashed away abroad. According to data, assessment orders were passed in 61 cases in FY23, where a tax demand of ₹2,100 crore was raised.

BS REPORTER

Context: As on March 31, tax assessment under the **Black Money (Undisclosed Foreign Income and Assets) and Imposition of Tax Act, 2015**, resulted in a cumulative demand of ₹ 15,666 crore.

- The **Black Money Act** effective from July 2015 was introduced to specifically deal with the issue of black money stashed away abroad.

Features of the Act:

- **Applicability**: The Act will **apply to all person** resident in India.
  - It will also **apply to a person being Not an ordinary resident or Non-resident** but who was an ordinary resident of India during the previous year when undisclosed income was earned or assets acquired outside India.
  - Provisions of the Act will apply to both undisclosed foreign income and assets (including financial interest in any entity).
- **Tax**: **Undisclosed foreign income** or assets shall be taxed at a flat rate of 30 percent.
  - No deductions, exemptions, carry forward, or set-off shall be available while computing tax liability under the BM Act, unlike the Income Tax Act.
- **Penalties**: The penalty for non-disclosure of income or an asset located outside India will be **equal to three times the amount of tax payable thereon,** i.e., 90 percent of the undisclosed income or the value of the undisclosed asset. This is in addition to the tax payable at 30%.
  - There are other penalties also leviable on account of non-disclosure of required information, and there are prosecution provisions also within the Act.
- **One-time compliance opportunity:** The Act also provides a **one-time compliance opportunity for a limited period** to persons who have any undisclosed foreign assets which have hitherto not been disclosed for the purposes of Income-tax.
  - Such persons may file a declaration before the specified tax authority within a specified period, followed by payment of tax at the rate of 30 percent and an equal amount by way of penalty.
  - Such persons will not be prosecuted under the stringent provisions of the Act.

ECONOMIC TIMES
Page 3

CASTE CENSUS

(Syllabus: GS Paper 1 - Population Associated Issues)

'No Caste-Based Census, Except SCs, STs Since Independence'

Some political parties have requested to collect caste details in Census, MoS says in LS

Our Political Bureau

New Delhi: The central government has not enumerated caste-wise populations other than Scheduled Castes (SCs) and Scheduled Tribes (STs) in the Census since independence, the Lok Sabha was informed on Tuesday. Union Minister of State for Home Nityanand Rai said some political parties and a few organisations have requested to collect caste details in the forthcoming Census.

He said in the Census, the castes and tribes which are specifically notified as Scheduled Castes (SCs) and Scheduled Tribes (STs) as per the Constitution (Scheduled Castes) Order, 1950, and the Constitution (Scheduled Tribes) Order, 1950, as amended from time to time, are enumerated.

"The government of India has not enumerated caste-wise population other than SCs and STs in Census since independence," he said, replying to a written question. In a separate reply on Jammu and Kashmir, Rai said, "No terrorist could infiltrate into Jammu and Kashmir till June 30 this year while 14 terrorists entered the Union Territory in 2022. Rai said the approach adopted by the Government to tackle cross-border infiltration has ensured a perceptible decline in infiltration.

No terrorist infiltration into J&K till June 30 this year while 14 entered the UT in 2022

There has been zero "net infiltration" into Jammu and Kashmir till June 30, 2023, 14 in 2022, 34 in 2021, 51 in 2020 and 141 in 2019, he said replying to a written question.

Context: The central government has not enumerated **caste-wise populations other than Scheduled Castes (SCs) and Scheduled Tribes (STs)** in the Census since independence.

- In the Census, the castes and tribes which are specifically notified as Scheduled Castes (SCs) and Scheduled Tribes (STs) as per the **Constitution (Scheduled Castes) Order, 1950,** and the Constitution (Scheduled Tribes) Order, 1950, as amended from time to time, are enumerated.

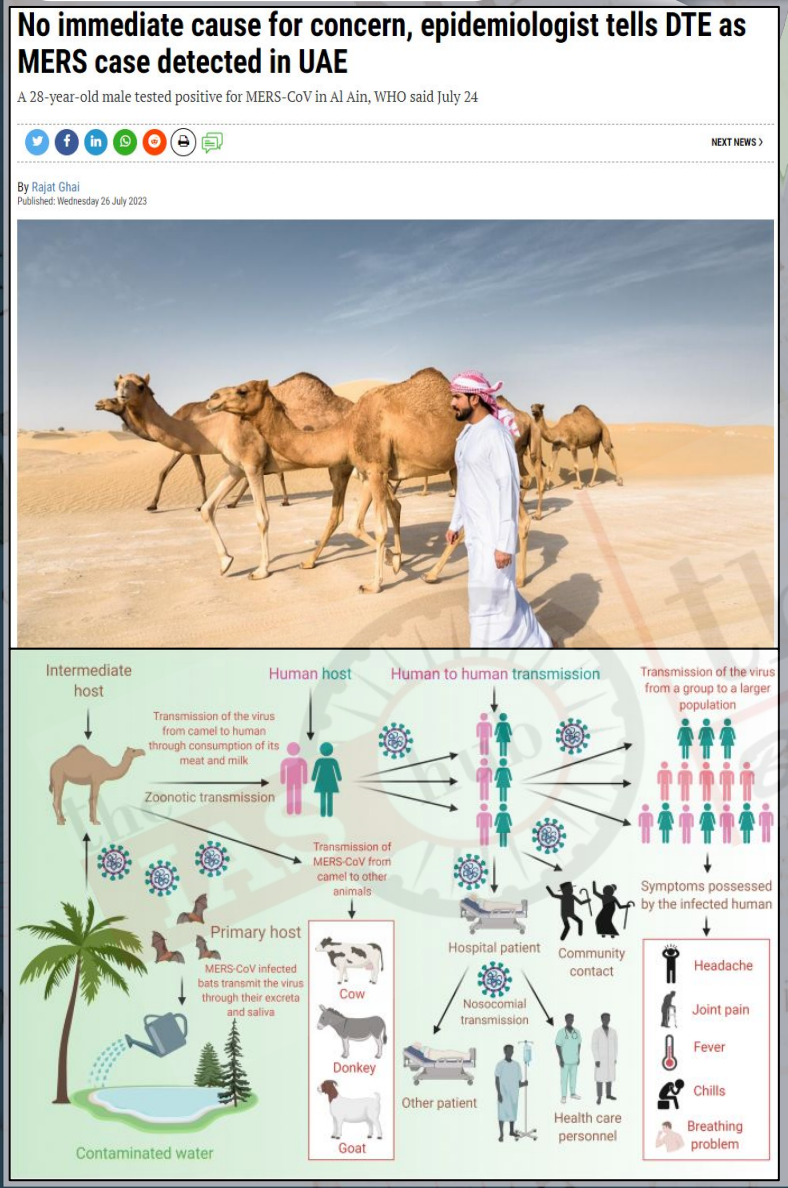
Caste Census

- **About**: Caste Census is the **demand to include the caste-wise tabulation of India's population** in the upcoming exercise.
- **Background**: Caste was last included in the Indian Census in **1931 at the time by the Britishers.**
  - From 1951 to 2011, every census in independent India provided data on **Scheduled Castes and Scheduled Tribes** but not on other castes.
  - The Britishers **ended the practice in the 1941 Census**, citing cost restrictions.
- **Importance of Cast Census:**
  - Equitable representation
  - Enumerating the marginalised
  - Removes caste rigidities
  - Data for Policy Making
  - Judicial support
- **Implications**: In the absence of such a census, there is **no reliable estimate of the number of OBCs,** other categories within OBCs, and others.
- **SECC 2011**: Conducted in 2011 **for the first time since 1931.**
  - It is meant to canvass every Indian family, both in rural and urban India, and ask about their **Economic status and specific caste name.**

DTE July 26

MIDDLE EAST RESPIRATORY SYNDROME

(Syllabus: GS Paper 3 - Sci & Tech)



No immediate cause for concern, epidemiologist tells DTE as MERS case detected in UAE

A 28-year-old male tested positive for MERS-CoV in Al Ain, WHO said July 24

NEXT NEWS >

By Rajat Ghai
Published: Wednesday 26 July 2023

Context: The World Health Organization (WHO) confirmed that a man had been infected with the deadly **Middle Eastern Respiratory Syndrome coronavirus** (MERS-CoV) in the United Arab Emirates (UAE) but there is no immediate cause for worry or concern.

- Humanity has been acquainted with MERS-CoV, which belongs to the same family as the novel coronavirus (SARS-CoV-2).
- That virus had caused the three-year-long novel coronavirus disease (COVID-19) pandemic from 2020-2022.

Middle East respiratory syndrome (MERS)

- **About**: It is a viral respiratory disease caused by **Middle East respiratory syndrome coronavirus (MERS-CoV)** that was first identified in Saudi Arabia in 2012.
  - MERS-CoV has been identified and linked to human infections in dromedary camels in several Member States in the **Middle East, Africa and South Asia.**
- **Symptoms: Fever, cough and shortness of breath.** Pneumonia is common, but MERS patients may not always develop this condition. Gastrointestinal symptoms, including diarrhoea, have also been reported among MERS patients.
- **Transmission**: MERS-CoV is a zoonotic virus, meaning it is transmitted between animals and people.
  - **Human-to-human transmission** is possible and has occurred predominantly among close contacts and in health care settings.
  - Outside the health care setting, there has been limited human-to-human transmission.
- **Prevention and treatment**: **No vaccine or specific treatment** are currently available, however several MERS-CoV specific vaccines and treatments are in clinical development.
  - In the absence of MERS-specific therapeutics, treatment of MERS patients is supportive and based on the patient's clinical condition.

DST

July 26

STARFIRE ALGORITHM

(Syllabus: GS Paper 3 - Sci & tech)

New algorithm to quantify terrestrial RFI in space for earth orbiting radio astronomy experiments

Context: Scientists have developed an **algorithm called STARFIRE** which can estimate the **Radio Frequency Interference (RFI)** emitted by FM radio stations, WiFi networks, mobile towers, radar, satellites, and communication devices, and use this calculation for designing and fine-tuning the antennas and other instrument components of missions like India's **Probing ReionizATion of the Universe using Signal from Hydrogen (PRATUSH).**

- **PRATUSH** is one of the **several mission opportunities** in space contemplated to address the growing RFI on land, to study the birth of the first stars and galaxies in the Universe using the 21-cm hydrogen line obtained from the far side of the moon.

Key Points

- The new algorithm can help design instruments that are **capable of offering optimal operations** in the presence of RFI and thereby, enriches the data obtained from the future space-based Astronomy missions.
- In order to study the early Universe and its evolution, astronomers tune their radio antennas within the **40 to 200 Megahertz (MHz) range** in search of the 21-cm hydrogen line, believed to contain some of the unknown secrets about the cosmos.
- However, given their faint and weak strength, detecting these signals is extremely challenging.
- In addition, the **fast-advancing technologies** and expanding areas of human settlements have led to an increased number of sources emitting RFIs, many even constraining the efforts for recording astronomical observations on land.

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