

**April 2022 EDITION**



# **News Juice MONTHLY**

**1st March to 31st March 2022**

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# Polity and Governance

## 1. Why digital lenders have come under the scanner

**Relevant for GS Prelims & Mains Paper II; Polity & Governance**

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Last week, the Reserve Bank cancelled the Certificate of Registration (CoR) issued to P C Financial Services Pvt Ltd, New Delhi, which was primarily engaged in mobile app-based lending operations through an app called 'Cashbean'. While PC Financial was a registered entity with the central bank, the Working Group on Digital Lending of the RBI recently estimated that there were around 600 illegal lending apps which usually charge high interest rates, adopt unacceptable and high-handed recovery methods and operate in an opaque manner.

### **Why was PC Financial licence cancelled?**

The RBI said the CoR of the company has been cancelled on account of supervisory concerns such as gross violations of RBI directions on outsourcing and know your customer norms. The company was also found to be "charging usurious rate of interest and other charges to its borrowers in an opaque manner apart from indulging in unauthorized use of logos of the RBI and Central Bureau of Investigation for recovery from the borrowers in gross violation of the Fair Practices Code".

### **Illegal digital lenders**

As per the findings of an RBI Working Group, released in November 2021, as many as 600 out of 1100 lending apps currently available for Indian Android users across 80 application stores are illegal apps. And as the number of lending apps grow, this trend would spike, since a user downloading a lending app cannot identify if the app is legitimate or not. It is also likely that several copycat apps and websites will mushroom across the internet. "If a consumer uses such an app or website, it could collect the user's personally identifiable information (PII), financial data and other sensitive details, which can then be used to compromise the user's accounts, carry out phishing attacks and identity theft. Apart from affecting the user, it also damages the reputation of the company that the fake app is impersonating," the RBI panel said.

A couple of weeks ago, scamsters allegedly misused PAN information of unsuspected citizens to avail loans through Dhani app of Indiabulls. These scamsters never repaid loans while people whose PAN documents were misused were shocked to see their credit score plummeting due to default of the loan. Complaints against DLAs—Sachet, a portal established by the Reserve Bank for registering complaints by public, has been receiving significantly increasing number of complaints against digital lending apps — around 2,562 complaints from January 2020 to March 2021. Majority of the complaints pertained to lending apps promoted by entities not regulated by the RBI.

Specific instances were reported for Dhani Loans and Services, formerly known as Indiabulls Consumer Finance Ltd. "The number of users is few, however, we will leave no stone unturned to mitigate any possibility of identity theft. We have a customer service team of over 6,500 executives to provide speedy resolutions after due diligence. Our risk management and tech teams have been on overdrive, constantly building more robust systems to try and keep such activities at a distance. We have integrated with G-defence which is a global security platform to further re-verify each device against a specific customer and PAN through various data fields. If any individual has a query or needs to connect with us, can reach us on 0124 6555 555 or write to us at support@dhani.com " said a spokesperson for Dhani Loans and Services.

### **What is the RBI up to?**

The RBI is likely to come out with a comprehensive regulatory framework for digital lending soon. The working group set up by the RBI has proposed stringent norms for digital lenders, including a separate legislation to prevent illegal digital lending activities. Regulators may consider introducing interest rates caps in a phased manner broadly in line with the effective interest rates of credit cards.



The panel said digital lending apps should be subjected to a verification process by a nodal agency to be set up in consultation with stakeholders. It also proposed the setting up of a Self-Regulatory Organisation (SRO) covering the participants in the digital lending ecosystem. It proposed that disbursement of loans should be directly into the bank accounts of borrowers. The committee said algorithmic features used in digital lending to be documented should ensure necessary transparency. The RBI has already cautioned public against the illegal digital lending platforms.

### **How big is digital lending business?**

The RBI working group says lending through digital mode relative to physical mode is still at a nascent stage. Private sector banks and NBFCs with 55 per cent and 30 per cent share respectively are the dominant entities in digital lending ecosystem. In the case of banks, Rs 1.12 lakh crore was disbursed via digital mode against Rs 53.08 lakh crore through the physical mode whereas for NBFCs, a higher proportion of lending at Rs 23,000 crore was done through the digital mode against Rs 1.93 lakh crore through the physical mode as of March 2020. Overall volume of disbursement through digital mode for the sampled entities has exhibited a growth of more than twelvefold between 2017 and 2020— from Rs 11,671 crore to Rs 1,41,821 crore.

### **Reckless lending:**

Several digital lenders are indulging in reckless lending practices guided by sheer profit motives, riding on excessive interest rates to compensate for the delinquencies. As the central bank said, there is also a tendency to increase the business rapidly by lending to sub-prime borrowers beyond their repayment capacity and the increased risk gets priced in terms of higher spread charged to all borrowers, resulting in exorbitant interest rates.

The RBI panel says their assessment models are based on high loss rates which, in turn, are compensated by levying high interest rate and other charges on all borrowers. Further, there is a tendency to mask the excessive interest rates by disclosing only weekly or monthly rates depending on the repayment schedule. They are known for adoption of unacceptable and high-handed recovery methods and misuse of agreements to access data on the mobile phones of the borrowers.

**Source: The Indian Express**

## **2. Rules for deputation of DIGs: what Centre proposes to change, and why**

### **Relevant for GS Prelims & Mains Paper II; Polity & Governance**

After its proposal to amend the All India Service Rules that would allow it to call any IAS, IPS or IFoS officer on central deputation with or without the state's consent, the Centre has issued another order on central deputation of Deputy Inspector General-level IPS officers that may not be palatable to the states.

### **What is the order?**

In an order issued on February 10, the Department of Personnel and Training (DoPT) has said that IPS officers coming to the Centre at DIG level would no longer be required to be empanelled at that level with the Union Government.

According to existing rules, a DIG-ranked IPS officer with a minimum experience of 14 years could only be deputed to the Centre if the Police Establishment Board empanelled them as DIGs at the Centre. The board chooses the panel on the basis of officers' career and vigilance records. Only Superintendent of Police-level officers do not require empanelment at the Centre.

The new order makes the entire pool of DIG-level officers in a state eligible for central deputation.

### **Why has it been issued?**



Sources in the Ministry of Home Affairs (MHA) said the move is aimed at increasing the pool of DIG-level IPS officers for central deputation in the backdrop of massive vacancies in central police organisations (CPOs) and the Central Armed Police Forces (CAPFs).

According to data sourced from various CPOs and CAPFs, out of 252 posts reserved for IPS officers at DIG level at the Centre, 118 (almost half) are vacant. IPS officers have a quota of 40% in CPOs and CAPFs. The Centre had in November 2019 written to states proposing to decrease this quota by 50%, saying more than 60% posts remain vacant since most states do not spare their officers.

### **How will the move help?**

According to MHA sources, the idea is to ease up the process of central deputation as verification of records takes a long time. "Because the number of DIGs is high, the empanelment process had become cumbersome and it was taking as long as one year to just complete the process," an official said.

Also, it increases the size of the pool of officers available to the Centre.

However, this would not automatically allow DIGs to come to the Centre. Officers would still have to be put on the offer list for central deputation which is decided by the states and the Centre in consultation. Also, states would have to be willing to relieve them.

### **So why would states have a problem?**

If read with the recent proposal on deputation of IAS, IPS and IFoS officers, the new order may be seen by many states as the Centre's attempt at pushing the envelope further on increasing its powers over officers serving in the states.

Under the proposals sent In December and January, the Centre would have powers to demand, within a stipulated time frame, a certain quota of officers from the state for central deputation, and also to call any IAS officer on central deputation in "public interest". In case the state failed to relieve the officer, he/she would be deemed relieved following the date fixed.

Most states, including some ruled by the NDA, have opposed the move.

Also, there is little evidence of a waiver of empanelment conditions having an impact on vacancies at the Centre. For example, there is no requirement of empanelment for SP level posts, yet the vacancies are close to 50%.

### **Why don't states relieve officers?**

Because there is a serious paucity of officers in the states too. In a cost-cutting move during the Atal Bihari Vajpayee regime, the size of IPS batches among other government staff was reduced even though sizeable vacancies existed even then. From 80-90 officers each, IPS batches were cut to 35-40 officers (in 1999-2002, the average was 36). The average attrition rate of IPS officers due to superannuation is 85 per year.

"While the number of districts in some states doubled in a decade or so, the availability of officers was one third," a former MHA official said.

In 2009, against a sanctioned strength of over 4,000 IPS officers, there were more than 1,600 vacancies. During the Manmohan Singh regime, the government began intake of IPS batches as large as 150. The government has continued to increase the size of batches with the 2020 Civil Services Exams taking in 200 IPS officers. According to the MHA, as on January 1, 2020, there were 908 vacancies against a sanctioned strength of 4,982.

The strength of IAS officers too had been impacted due to low intake during the 1990s.

### **How has this impacted the services?**

The anomaly in IPS recruitment adversely affected cadre management over the years. At some levels, there are fewer officers than sanctioned posts, while at others there is a glut. On one hand, states are not providing enough DIGs or SPs to the Centre, while on the other, the Centre does not have enough posts if the total cadre reserve of IPS is calculated.

Uttar Pradesh has a shortage of DIGs and IGs, but too many officers at the level of ADGs.

Then while states should ideally promote batches or parts of it according to the vacancies available, political bosses often promote entire batches to please a certain section, in effect slamming doors on promotional avenues for those below them.

CAPF officers, themselves facing career stagnation, have been demanding removal of the DIG-level quota for IPS officers as they are unwilling to join, so that force cadre officers can instead fill these posts.

Sources say that by 2025, states may have surplus officers at DIG level to spare for the Centre and, if Centre-state relations remain normal, the issue may be resolved.

**Source: The Indian Express**

### **3. How one Bill can alter power dynamics in UT civic body**

#### **Relevant for GS Prelims & Mains Paper II; Polity & Governance**

The Chandigarh Municipal Corporation on Monday approved a proposal to amend Article 80 of the Constitution so that its councillors could send a representative to the Rajya Sabha. Although experts say this move is not legally tenable, the councillors cut across party lines to push it. SAURABH PRASHAR explains the proposed bill and its legal implications.

#### **What is a Private Member Bill — The Constitution (Amendment Bill, 2021) and Amendment of Article 80, linked to Chandigarh?**

The Private Member Bill is a bill introduced by a Member of Parliament (MP), who is not a minister. MPs sitting in the Opposition mostly bring Private Member Bills in the house. Article 80 of the Constitution of India deals with the composition of the council of states also called the Upper House and Rajya Sabha (Upper House). In the case of Chandigarh, the Private Member Bill was introduced by Congress MP from Anandpur Sahib, Punjab, Manish Tewari, who is a resident of Chandigarh. Tewari has sought the adding of a provision “provided that the ‘representative of the Union Territory of Chandigarh in the council of states shall be elected by an electoral college consisting of elected members of Municipal Corporation of Chandigarh constituted under the Punjab Municipal Corporation (Extension to Chandigarh) Act, 1994” in Article 80 of the Constitution in clause (5). MP Tewari has also sought amendment of the Fourth Schedule of the Constitution with ‘Entry 32, Chandigarh..”

#### **Where does Chandigarh stand? What are the legal objections? What next?**

Chandigarh is a Union Territory without any legislative assembly. Chandigarh has a seat of Member of Parliament (MP) in the lower house (Lok Sabha) or House of the People. Chandigarh residents elect an MP every five years through direct voting. As per the legal opinion submitted by the office of Senior Standing Counsel, Chandigarh, Anil Mehta, the elected Municipal Corporation Councillors do not form the electoral college for selecting a member for Upper house (Rajya Sabha) because it is beyond the powers of the Municipal Corporation. The office of the SSC also pointed out that between 1966 and 1990, MPs for Rajya Sabha in Delhi were selected by the members of the Metropolitan Council of Delhi. There is a difference between the Metropolitan Council and Municipal Corporation. The opinion suggests that selecting Rajya Sabha MP, is beyond the listed scope of functions of the municipal corporation. If the functions of the civic body are to be extended beyond the listed scope of functions it would not be feasible and would go against the constitutional mandate of any such Municipal Corporation. As the civic body house gave its assent to the amendment, UT

Administration will send it to the Ministry of Home Affairs for further consideration. It will then be forwarded to the Parliament.

#### **Why is there a need for a Rajya Sabha MP from Chandigarh?**

The demand for a representative from UT in Rajya Sabha is not new, with political ambition stated to be one of the main reasons behind the move.

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**Source: The Indian Express**

### **4. Why rule change in BBMB has become a flashpoint between Centre and Punjab**

#### **Relevant for GS Prelims & Mains Paper II; Polity & Governance**

Political parties in Punjab, barring the BJP, are up in arms over the Centre's decision to amend the rules regarding appointments to two key positions on the Bhakra Beas Management Board (BBMB). MAN AMAN SINGH CHHINA explains the history of the BBMB, the changes that have been made and the apprehensions of the political parties and farmers of the state.

#### **How did BBMB come to be set up?**

The genesis of BBMB lies in the Indus Water Treaty signed between India and Pakistan in 1960 whereby waters of three eastern rivers— Ravi, Beas and Sutlej — were allotted to India for exclusive use while Indus, Chenab and Jhelum rivers were allocated to Pakistan.

In India, a master plan was drawn to harness the potential of these rivers for providing assured irrigation, power generation and flood control. Bhakra and Beas projects form a major part of this plan and were established as a joint venture of the then undivided Punjab and Rajasthan.

Following the reorganisation of Punjab on November 1, 1966, and the creation of the state of Haryana, the Bhakra Beas Management Board was constituted under Section 79 of the Punjab Reorganisation Act, 1966. The administration, maintenance and operation of Bhakra Nangal project was handed over to Bhakra Management on October 1, 1967. On May 15, 1976, when the Beas Projects Works were completed and handed over, the Bhakra Management Board was renamed as Bhakra Beas Management Board (BBMB). Since then, BBMB regulates supply of water and power to Punjab, Haryana, Rajasthan, Himachal Pradesh, Delhi and Chandigarh.

#### **What is the constitution of the BBMB management?**

The BBMB management includes a chairperson and two whole time members who are from the partner states of Punjab and Haryana. They are designated as Member (Power) and Member (Irrigation) from Punjab and Haryana, respectively. There is representation from each member state including Rajasthan and Himachal Pradesh as nominated by the respective state governments. The total strength of BBMB is about 12,000 employees and out of these 696 are Group A officers and are posted from the partner states.

#### **What changes have been made to the BBMB rules?**

The Government of India issued a notification on February 23, 2022 to amend the BBMB Rules 1974, thereby changing the criteria for the selection of whole-time members of the Board. New rules specify technical qualifications for the appointments and pave the way for appointment of the members from across India and not only Punjab and Haryana.

#### **What has been the objection to the new rules?**

The opposition to the new rules has come from within the engineers' fraternity, farmers as well as the political parties of Punjab. While the Congress, AAP and SAD have labelled this as an attack on the federal structure of the country, the farmer unions have promised a protest if the changes are not rolled back. The engineers have pointed out that hardly any engineer would qualify for appointment as per the new specifications, which appear to be tailor-made for some personnel to be appointed from outside Punjab and Haryana.

Senior Congress leader Sunil Jakhar has urged Chief Minister Charanjit Singh Channi to lead a delegation to Prime Minister Narendra Modi to oppose the new rules while AAP and SAD have said the Centre and BJP should refrain from changing rules arbitrarily.

### **What has been the official response to these protests?**

BBMB officials have clarified that the representation of Punjab and Haryana as well as other member states will continue as before. They have stated that the new rules only spell out the technical qualifications required for the Member (Power) and Member (Irrigation) and that the power and irrigation benefits to member states remains the same.

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It has also been argued that the changes have been made in pursuance to a judgement of the Punjab and Haryana High Court in the case of Jagmohan Singh Vs Union of India.

The BJP has also chided the other parties for raising “frivolous objections” and said that there is no material change in the rules and in the share of member states in power and irrigation projects.

### **How have the Punjab political parties responded to this explanation?**

The parties continue to maintain that the rules have been changed to drastically reduce chances of the officials from Punjab and Haryana who could be appointed to the two posts. They continue to state that these changes affect the prospects of Punjab as part of BBMB and that this was a conspiracy to ultimately remove the state from the Board. They have also pointed out that in 2018, a chairperson from Himachal Pradesh was appointed despite the fact that in the past, the person on the post had always been from outside the member states in order to maintain neutrality of the Board. Now, various farmers groups have announced that they will hold a protest on March 7 on the issue. The Samyukt Samaj Morcha has said that the BBMB should specify that the position of the member from Punjab will be permanent else an agitation may be launched against it.

**Source: The Indian Express**

## **5. Haryana govt's anti-conversion Bill, its provisions and Opposition's objections**

**Relevant for GS Prelims & Mains Paper II; Polity & Governance**

The BJP government in Haryana introduced the Haryana Prevention of Unlawful Conversion of Religious Bill, 2022 in the Vidhan Sabha amid protests by the Opposition Congress on Friday (March 4). Dr. Raghuvir Singh Kadian, a six-time MLA, was suspended after he tore a copy of the Bill on the floor of the House.

### **What is the government's reasoning for enacting such a legislation?**

Haryana Chief Minister Manohar Lal Khattar, last year in August, had said, “Law is enacted to create a deterrent for people when they start doing something wrong. Such incidents [of ‘love jihad’] have started taking place in a few places of Haryana. Till the time these were not happening, or when there were only one or two such incidents, there was no requirement of such a law in this regard. But now several incidents of forced religious conversion by way of coercion and allurements have come to light. To prevent such incidents from happening, such laws are required. By way of example, I can say this is why we passed the anti-copying Bill. Laws are required to prevent any of these incidents from increasing in number.”

### **How the state government plans to enact this legislation?**

As the first step, the draft of the Bill was approved by the state Cabinet chaired by Khattar in February. Now, the Bill was introduced in the Vidhan Sabha's ongoing Budget session that commenced on March 2. The BJP-JJP coalition in the state has a strength of 50 members in the 90-member Vidhan Sabha. The Bill is all set to be passed. It shall subsequently be sent to the Governor for his final assent. Once the Governor gives his assent, it shall be enacted as law and implemented across the state.

### **What does this Bill propose?**

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The Bill seeks to “prohibit religious conversions which are effected through misrepresentation, force, undue influence, coercion, allurement or by any fraudulent means or by marriage or for marriage by making it an offence”.

**What is the Opposition's objection to the Bill?**

Congress MLAs including BB Batra, Dr. Raghuvir Singh Kadian, Geeta Bhukkal, Shamsher Singh Gogi, Aftab Ahmed and several others raised strong objections, specifically to the reasoning for bringing such a Bill. Several Congress MLAs called the Bill “unconstitutional” and termed it the government’s attempt to “create a divide in the society on the basis of religion”. The Congress MLAs also asked the government to apprise the House as to how many such complaints or criminal cases were registered that formed the basis to bring such a Bill. However, Vidhan Sabha Speaker Gian Chand Gupta said that “certain steps are also to be taken as preventive measures”.

**What is the reasoning that the Bill mentions?**

According to the draft of the Bill, “The individual right to freedom of conscience and religion cannot be extended to construe a collective right to proselytize; for the right to religious freedom belongs equally to the person converting and the individual sought to be converted. Still, there have been umpteen cases of religious conversions, both mass and individual. Obviously, such incidents have been hotly debated, more so in a multi-religious society, such as ours. The presence of pseudo-social organizations with a hidden agenda to convert the vulnerable sections of other religions. There have been instances when gullible people have been converted by offering allurement or under undue influence. Some have been forced to convert to other religions.”

**What is the legal position on such a Bill or such incidents of forceful conversions?**

The government says that “in recent past several instances came to the notice that with an agenda to increase strength of their own religion by getting people from other religions converted, people marry persons of other religion by either misrepresentation or concealment of their own religion and after getting married they force such other person to convert to their own religion”.

“Such incidents not only infringe the freedom of religion of the persons so converted but also militate against the secular fabric of our society. The Bill, therefore, seeks to prevent religious conversions which are affected through use of force, under threat, misrepresentation, undue influence, coercion, allurement or by any fraudulent means or by marriage or for marriage by making it an offence. Provide greater punishment for such conversion in respect of the minor, women, Scheduled Castes and the Scheduled Tribes”, the statements of objectives and reasons added.

**Onus of proof to establish if a forceful conversion took place**

The burden of proof, according to the draft Bill, as to whether a conversion was not affected through misrepresentation, use of force, under threat, undue influence, coercion, allurement or by any fraudulent means or by marriage or for marriage for the purpose of carrying out conversion shall be on the accused.

**How will a wilful conversion take place?**

Every individual converting from one religion to another shall submit to the prescribed authority a declaration that the conversion affected was not through misrepresentation, use of force, under threat, undue influence, coercion, allurement or by any fraudulent means or by marriage or for marriage. The designated authority shall make an inquiry in all such cases. There will also be a provision for declaring such marriages null and void if found to have been solemnised by concealment of religion.

**Source: The Indian Express**

**6. What is teacher recruitment scam in West Bengal & why HC ordered CBI probe**

**Relevant for GS Prelims & Mains Paper II; Polity & Governance**

The Calcutta High Court on Thursday ordered a Central Bureau of Investigation (CBI) probe into alleged irregularities in the recruitment of teachers in state-run schools through State Level Selection Test (SLST).

This comes months after allegations of corruption in the recruitment of Group C and Group D employees in secondary and higher secondary schools under the West Bengal Board of Secondary Education (WBBSE).

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### **What are the alleged scams?**

The notification for appointment of teachers in state-run schools in West Bengal through SLST was published in 2014 and the recruitment process started in 2016. However, a series of petitions were filed in the Calcutta High Court alleging anomalies in the recruitment process. The petitioners alleged that many examinees who got less marks ranked high in the merit list. There were also allegations that some applicants, who weren't even in the merit list, received appointment letters.

In the second case, the West Bengal government had, in 2016, issued a notification to the School Service Commission (SSC) to recruit 13,000 Group-D employees for state-run/aided schools. In 2019, the panel making the appointments had expired, but at least 25 persons were allegedly appointed by the WBBSE.

### **What the High Court said**

In Group C and Group D recruitment case, a single bench of the Calcutta High Court ordered a CBI enquiry.

The court said, "The record reveals the shocking state of affairs and we refrain ourselves to make any observations thereupon in the midst of an investigation/enquiry by the committee constituted by this Court." The court also observed, "The moment prima facie evidence has been produced raising a serious concern on the modalities of the recommendation/appointment made to the candidates not only beyond the expiration of the panel but to the candidates who were not included in the panel itself, such stand has been taken responsibilities."

The Mamata Banerjee government, however, challenged the order before the division bench. The bench stayed the order and constituted a committee to investigate the allegations.

The division bench sought affidavits from the SSC and WBBSE. However, both bodies gave contradictory statements.

The SSC, in its affidavit, claimed that it had made no employee recommendations, while the WBBSE said it had received the data and the persons were duly appointed. During the hearing, the petitioners claimed that not just 25 but over 500 people were appointed after the SSC panel expired, and they were now drawing salaries from the state government.

Meanwhile, in the teachers' recruitment case, a single bench of the Calcutta High Court ordered a CBI probe. The Mamata Banerjee government will now challenge the court order before a division bench Monday.

### **Question marks on teachers' appointment**

The High Court's observations in both the cases have been a cause of embarrassment for the department of school education. If the probe finds the government guilty, at least 10,000 people may lose their job. No exams have been conducted for the recruitment of teachers in state-run schools after 2016. According to sources in the West Bengal School Education Department, over 60,000 posts for the appointment of teachers are vacant at present.

**Source: The Indian Express**

## **7. The debate on the Office of Governor**

**Relevant for GS Prelims & Mains Paper II; Polity & Governance**

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The makers of the Constitution of India did not anticipate that the office of the Governor, meant to “preserve, protect and defend the Constitution and the law”, would metamorphose into the most controversial constitutional office.

### **Appointment of Governor**

Though the original Draft of the Constitution provided for either the direct election or the appointment of the Governor (Article 131 of the draft which was to become Article 155), the Constituent Assembly chose a third alternative for the appointment of the Governor by the President, so as to avoid confrontation with the elected executive.

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Article 131 of the draft Constitution had provided for an elected Governor or a Governor appointed by the President from a panel of four candidates elected by the Legislative Assembly. After elaborate deliberations, the Assembly voted for a nomination provision which rules out any role for the Legislative Assembly. Jawaharlal Nehru also strongly supported a nominated Governor as an elected Governor may lead “to conflict and waste of energy and money and also leading to certain disruptive tendency in this big context of an elective governor plus parliamentary system of democracy.” Finally, a process by which the Governor is nominated by the President on the advice of the Council of Ministers was adopted and it became Article 155 of the enacted Constitution.

### **Politics till the Bommai verdict**

A classic example of Raj Bhavan getting embroiled in partisan politics was sketched by a series of events in Tamil Nadu beginning from the declaration of national emergency on June 25, 1975. This was followed by the DMK regime offering political support and shelter to the national dissidents which led to realignments in State politics. A report was then sent by the then Governor K. K. Shah seeking the dismissal of the DMK government for pervasive corruption and therefore, President's Rule was imposed on February 3, 1976.

The President's Rule was imposed in States over a 100 times prior to 1994. But after the Supreme Court's judgment in the S. R. Bommai case, such rampant practices came to an end as the Supreme Court declared that the imposition of President's Rule shall be confined only to the breakdown of constitutional machinery.

### **The Sarkaria Vision**

The S. R. Bommai judgment passed by the nine-judge bench of the Supreme Court extensively quoted from the commission on Centre-State Relations constituted by Central Government in 1983. The three-member commission headed by Justice R. S. Sarkaria remains till date the bedrock of any inquiry into the relations between the Centre and State. The Commission, which submitted its report in 1988, sought to reinfuse the spirit of co-operative federalism in Indian politics.

The Sarkaria Commission sought to restore dignity to the Raj Bhavan by focusing more on the appointee who shall be an eminent person in some walk of life, someone outside the respective State so that he would not have any personal interest to protect. The Commission reiterated the views of Nehru as expressed on the floor of the Constituent Assembly that it is “better to have a detached figure” as Governor who has not been recently active in politics. While batting for a secure term for the Governor, the Commission condemned the practice of Governors venturing further into active politics as well as ascending to other offices after the completion of the term, all of which contaminate the purity of gubernatorial intent. Regarding the Governor's role as the Chancellor of State universities, the Sarkaria Commission was of the view that it is desirable to consult the Chief Minister or the concerned minister, though it shall be left to the Governor to act on the same or not.

As a matter of fact, the first Administrative Reforms Commission (1966) in its report on “Centre-State Relationships” had recommended strongly that once the Governor completes his term of five years, he shall not be made eligible for further appointment as Governor. Unlike the Sarkaria Commission which was specifically on Centre State Relations, the mandate and canvas of the Administrative Reform Commission (ARC) was wider. Nevertheless, the limited views offered by the ARC testifies the formative concern of Indian polity on the politicisation of the office of the Governor.



The National Commission (2000) also reiterated the view of the Sarkaria Commission regarding the appointment of Governor. It enriched the discourse by stipulating that there should be a time-limit, desirably six months to give assent or to reserve a Bill for consideration of the President. If the Bill is reserved for consideration of the President, there should be a time-limit, desirably of three months, within which the President should take a decision whether to accord his assent or to direct the Governor to return it to the State Legislature or to seek the advisory opinion of the Supreme Court.

### **The Punchhi Commission**

The Punchhi Commission on Centre-State relations (2007), headed by former Chief Justice of India Justice M. M. Punchhi, was constituted to enquire into Centre-State Relations taking into account the changes in the last years since Sarkaria Commission submitted its report in 1988. Though Punchhi Commission affirmed most of the recommendations of the Sarkaria Commission, its views also reflected the changing times and its needs. The Commission could not appreciate the practice of Governors being called back at the bell of regime change, something that does not befit the salutary position assigned to the Governor. It must be remembered that a constitution bench of the Supreme Court in the B. P. Singhal Case (2010) declared that a change in power at the Centre cannot be grounds to recall governor and hence such actions are judicially reviewable. While Sarkaria Commission recommended that Governor's tenure of five years shall only be sparingly cut short, Punchhi Commission went one step ahead and recommended that Governor shall have fixed tenure so that they wouldn't hold office under the intangible pleasure of the Central government. It proposed an amendment to Article 156 so that there would be a procedure to remove the Governor from office. It also went further in recommending that Governors shall not be overburdened with the task of running universities by virtue of them being made Chancellors under the State University Acts. Complying with the norms and conventions advocated by the Sarkaria commission coupled with the functional safeguards recommended by the Punchhi Commission will go a long way in rediscovering the constitutional equilibrium.

### **The core of discontent**

The Apex Court must be credited for having drawn the lakshman rekha on gubernatorial over-reach through a catena of clear decisions ranging from the landmark S. R. Bommai (1994), Rameshwar Prasad (Bihar Assembly Dissolution Case of 2006) and Nabam Rebia (Arunachal Assembly Case of 2016) by which the possibility of gross high handedness is either eliminated or reduced to the time taken for judicial review. Arbitrary imposition of President's Rule and dissolution of Legislative Assembly on partisan grounds are becoming the fables of yore. However, conflict arises over issues which are non-critical but have the potential to upset harmonious administrative balance at the state level. Attitudinal issues form the core of such imbalance, as is recently seen in many States. When Governors turn vocal in public, the local leaders who carry electoral mandate on their sleeve respond with equal vehemence, taking the relation to a new low. Unless the practice of Governors making critical appraisals of their own council of ministers in public glare is brought to a halt, the situation in the states where an opposition party is in power would remain unhealthy. All these bring us to back to square one; the recommendation of the Sarkaria Commission that the governor appointee shall be a detached outsider and a person of eminence in some walks of life. To add to the Sarkaria commission, the paradox of an apolitical President and political Governor needs to be reconciled, sooner than later.

### **THE GIST**

Article 131 of the draft Constitution had provided for an elected Governor or a Governor appointed by the President from a panel of four candidates elected by the Legislative Assembly. After elaborate deliberations, the Assembly voted for a nomination provision which rules out any role for the Legislative Assembly.

The Sarkaria Commission recommended that the appointee should be someone from outside the respective State so that he would not have any personal interest to protect. They reiterated that it is better to have a detached figure as Governor. The Commission condemned the practice of Governors venturing further into active politics as well as ascending to other offices after the completion of their term. However, conflict still arises when Governors turn vocal in public against elected leaders, who respond with equal vehemence, taking the relation to a new low.

Source: The Hindu

## 8. The rules around guardianship of minors

Relevant for GS Prelims & Mains Paper II; Polity & Governance

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In the recent past, there have been changes to the rules for passport and PAN card that allow an applicant to furnish their mother's name if she is a single parent. But this continues to be a niggling issue when it comes to school certificates and umpteen other documents that insist on the father's name as the guardian. Last year in September, a PIL in Madras High Court sought that all documents must also require the mother's name to be mentioned along with the father's.

### What are the rules for issuing of passport and PAN cards to those with single parents?

In December, 2016, the Ministry of External Affairs liberalised its rules for the issuance of passports and took a number of steps. Certain changes were made following the recommendations of a three-member committee comprising of the Ministry of External Affairs and the Ministry of Women and Child Development that examined various concerns pertaining to passports for children after a divorce or in case of adoptions. Following the changes, applicants could provide the name of either parent instead of providing details of both the father and mother. The new passport application form also does not require the applicant to provide the name of her or his spouse when they are divorced and neither are they required to provide the divorce decree.

Similarly, in November 2018, the Central Board of Direct Taxes amended Income Tax Rules, 1962, so that the father's name was not mandatory when a mother was a single parent. The new PAN application form also seeks the mother's name alongside the father's. Applicants can also choose whether they want their father's name on the PAN card or their mother's name.

### What do the guardianship laws in the country say?

Indian laws accord superiority to the father in case of guardianship of a minor. Under the religious law of Hindus, or the Hindu Minority and Guardianship Act, (HMGA) 1956, the natural guardian of a Hindu minor in respect of the minor's person or property "is the father, and after him, the mother: provided the custody of a minor who has not completed the age of five years shall ordinarily be with the mother."

The Muslim Personal Law (Shariat) Application Act, 1937 says that the Shariat or the religious law will apply in case of guardianship according to which the father is the natural guardian, but custody vests with the mother until the son reaches the age of seven and the daughter reaches puberty though the father's right to general supervision and control exists. The concept of Hizanat in Muslim law states that the welfare of the child is above all else. This is the reason why Muslim law gives preference to the mother over father in the matter of custody of children in their tender years.

Experts say that though courts may tend to grant custody of a child following marital dispute to the mother, guardianship rests primarily with the father in the law and this contradiction highlights that mothers are perceived as caregivers, but not as decision makers for children.

The Supreme Court's landmark judgment in Githa Hariharan v. Reserve Bank of India in 1999 provides partial relief. In this case, the HMGA was challenged for violating the guarantee of equality of sexes under Article 14 of the Constitution of India and the court held that the term "after" should not be taken to mean "after the lifetime of the father", but rather "in the absence of the father". But the judgment failed to recognise both parents as equal guardians, subordinating a mother's role to that of the father. Though the judgment sets a precedent for courts, it has not led to an amendment to the HMGA.

The Law Commission of India in its 257th report on "Reforms in Guardianship and Custody Laws in India" in May 2015 recommended that the "superiority of one parent over the other should be removed and that both the mother and the father should be regarded, simultaneously, as the natural guardians of a minor."

Before this, in its 133 report too the Commission had recommended that the HMGA be amended to “constitute both the father and the mother as being natural guardians ‘jointly and severally,’ having equal rights in respect of a minor and his property.”

### **What is the way forward?**

Senior lawyer Geeta Ramaseshan says that various Government departments must proactively amend their rules to ensure that they are in sync with the Githa Hariharan judgment as amending laws can be a challenging exercise.

Until that happens individuals will have to continue to flock courts to seek relief.

**Source: The Hindu**

## **9. The electoral appeal of programmatic policies of welfare**

### **Relevant for GS Prelims & Mains Paper II; Polity & Governance**

Examining how different welfare policies deployed by political parties have the potential to influence the outcome of their electoral performance, Ankita Barthwal and Asim Ali in their paper ‘Bypassing the patronage tap: Evidence from Delhi assembly election 2020’ have particularly focused on the adoption and use of the programmatic policies of welfare (PPW) by the Aam Aadmi Party. They analyse its significance in influencing voting behavior in the 2020 Delhi assembly elections.

Drawing attention to the transitions in the electoral arena in some of the Indian States from the ‘politics of particularistic welfare based on clientelism and patronage to that of programmatic policies of universal welfare’, this paper, with the help of the data that it had gathered through the stratified random sampling of the post-poll survey that was conducted in 14 assembly constituencies of Delhi, has brought forth the electoral appeal of the PPW in the 2020 Delhi assembly election.

This also suggests the possibilities of its political appeal in other Indian states as it promises universal welfare provisions irrespective of identitarian interests and ideological considerations.

### **From patronage to programmatic welfare**

Unlike patronage policies that focus on the welfare of particular target groups, which limit welfare provision and electoral support within its clientelist circles, PPW provide goods and services to a universal public, devoid of identitarian divisions.

Thus, they benefit a broader electorate and also help political parties to garner extensive electoral support.

Political parties do combine a mixed strategy of welfare — both policies of patronage and programmatic welfare to attune themselves to the varied demands of their electoral constituencies. Welfare policies endorsed by political parties in certain Indian States such as Tamil Nadu, Andhra Pradesh and Delhi have shown a growing political inclination towards the legislation of PPW for creating appeal beyond certain identity groups or communities for electoral victory and political sustenance.

Investigating whether PPW can influence voting behavior and enable a political platform where electoral issues can move beyond particularistic ethnic appeals to aspects of universal welfare provision, this paper provides insights into the importance of PPW in delivering victory for the Aam Aadmi Party in the 2020 Delhi assembly election.

### **How Delhi leads the show**

Barthwal and Ali have stated how certain socio-political conditions peculiar to Delhi have been influential in creating a broader appeal for the application of PPW.

Being highly urbanised, comprising a larger population of the middle class, and an educated and more informed citizenry as well as a vigilant civil society, the demands of the electorate in Delhi are for an issue based, corruption-free and accountable politics.

The implementation of PPW such as universal provision of subsidised power and water, free bus rides for women, affordable healthcare and education, free public WiFi by the AAP in Delhi has produced positive electoral results for AAP by creating political reach amongst a broader populace.

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Other factors such as absence of caste based political mobilisations, lack of political appeal based on ethnic cleavages, larger role for bureaucrats in operating the programmes and policies in elected governments of Delhi and an expansive information dissemination system have also been influential in generating demands and broadening support for PPW in Delhi.

These factors were also conducive in making the AAP government's universal provision of public goods and services successful among the Delhi electorate and in establishing a cross-sectional political support.

This paper has additionally observed how the Bharatiya Janata Party's attempts at polarising the voters with its ethno-nationalist and majoritarian issues failed to create an impact in Delhi's electoral atmosphere, where the political record of the AAP in providing PPW and its assurance of universal, uniform and efficient governance devoid of any particularistic/sectional considerations increased the electoral tide in favour of AAP.

The observations made in this paper, through evidence produced in the case of the Delhi assembly elections, have thus also been important in informing us of the emerging electoral appeal of PPW in reducing the impact of divisive ethno-majoritarian appeals and the possibilities of constructing political support on the basis of programmatic welfare and universal governance.

**Source: The Hindu**

## **10. BJP retains 4 States; AAP scores landslide in Punjab**

**Relevant for GS Prelims & Mains Paper II; Polity & Governance**

The BJP retained power in four of the five States that went to the polls, while the Congress lost Punjab to the Aam Aadmi Party (AAP). The AAP said it had emerged as the "natural, national" alternative to the BJP, even as the Congress declined to a new low.

### **Election results**

The BJP held on to power in Uttar Pradesh, where it won two-thirds of the seats, compared with three-fourths in 2017. Its vote share increased in U.P., Goa and Manipur. The party conclusively won Uttarakhand, and won enough seats to retain power in Manipur and Goa — three States where its main rival was the Congress.

### **UP election analysis**

In U.P., the Samajwadi Party doubled its 2017 tally but fell far short of a majority, in the second consecutive Assembly election defeat under the leadership of Akhilesh Yadav. His call for a coalition of Ambedkarites and Samajwadis — a euphemism for Dalits and Other Backward Classes — had takers as the increase in SP's vote share shows, but nowhere enough to dislodge the BJP.

Bolstered by Hindutva, welfarism, and expansive accommodation of OBCs and Dalits, the BJP stayed ahead of the SP across all regions of the State. In west U.P., the SP's alliance with the Rashtriya Lok Dal dented the BJP but only marginally.

### **Punjab election analysis**



In Punjab, the AAP harnessed the resentment against the Congress and the Akali Dal that have been alternating in power, to build a decisive momentum that won it 92 of the 117 seats in the State. The Congress won 18 and the BJP two, which is as many as what the Congress won in U.P.

**Source: The Hindu**

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## **11. Can Donbas republics work as a buffer zone?**

### **Relevant for GS Prelims & Mains Paper II; Polity & Governance**

Three regions of the erstwhile Commonwealth of Independent States, Abkhazia in northwestern Georgia, Transnistria, a breakaway state in Moldova, and South Ossetia, also in Georgia, are territories with internal but not external sovereignty. One of the solutions to settle the crisis over Russia's invasion of Ukraine is for the Donbas republics of Donetsk and Luhansk to follow this model and exist as de facto states.

#### **What are the three para states?**

"Places that do not exist" is how the BBC has described territories like Abkhazia, South Ossetia, and Transnistria. Various described as de facto or para states, these are territories which have internal but not external sovereignty, i.e., they are not de jure states and are not recognised by the global community. However, Abkhazia and South Ossetia are recognised by Russia and some of its allies like Syria, Nauru, Nicaragua, and Venezuela. Transnistria, however, is not recognised as independent even by Russia. But these three regions recognise each other and have their own governments, parliaments, armed forces, constitutions, flags, anthems, etc.

#### **How did these de facto states come about?**

While South Ossetia and Abkhazia broke away from their parent state, Georgia, Transnistria broke away from Moldova. Both Abkhazia and South Ossetia had substantial autonomy during the Soviet period. Tensions broke out as Georgian nationalism rose in the late 1980s.

During perestroika, Abkhazia unilaterally declared independence, leading to a war with Georgia in 1992-1993, which it won, allegedly with Russian support. In March 1993, the Abkhazian parliament appealed to be included in the Russian Federation, but to no avail. In 1996, Russia and most of the Commonwealth of Independent States (CIS) members placed embargoes on it for unilaterally seceding from Georgia. However, under Russian President Vladimir Putin, Moscow did not implement the embargo and withdrew from it in 2008 when it recognised Abkhazia as an independent state. During the Russia-Georgia war in 2008 over South Ossetia, Abkhazia successfully attacked the last territories of Abkhazia that were still under Georgian control and took them. Russia now has an embassy in Sukhumi, the capital. There are Russian troops in Abkhazia as per a September 2009 military cooperation agreement, and Moscow provides substantial financial assistance.

However, Abkhazia does not completely abide by Russia's wishes on policy. For instance, it does not allow Russians to buy property for fear of being overwhelmed by Russians. In 2008, Russia had signed a bilateral agreement "On Friendship, Cooperation, and Mutual Support". However, when Russia wanted a new treaty to promote greater cooperation, Abkhazia insisted on jointly drafting it to preserve its sovereignty and ensuring that the word "integration" was dropped from the treaty. Though Abkhazia needs Russia to survive, there is not much love for Russia. As Russian expert Sergei Markedonov says, Abkhazia cooperates with Russia because of "a recognised necessity more than from a romantic ideal".

South Ossetians declared independence from Georgia in 1991. This resulted in a war, leading to a ceasefire brokered by Russia, leaving South Ossetia divided. Following the Russia-Georgia war in 2008, the rest of the territory was captured, and in 2008 Russia recognised South Ossetia's independence. South Ossetia is more pro-Russian than Abkhazia. It planned a referendum favouring integration with Russia in 2016, but this did not take place because of Russian opposition. Unlike the Abkhazians who insisted on deleting the word "integration" in their agreement with Russia, the South Ossetian version retained this word. South Ossetia is

much more integrated with Russian state structures than Abkhazia is. It also receives a lot of subsidies from Russia.

Often described as a “remnant of the Soviet Union”, Transnistria declared independence like Moldova did soon after the break-up of the Soviet Union. When Moldovan troops attempted to take over the territory in 1990-1992, Transnistria was able to resist them because of Russian soldiers based in Transnistria. These troops have now been largely withdrawn following an agreement between Russia and Moldova and what remains is a peacekeeping force of Moldovan, Transnistrian, and Russian soldiers. In a referendum held in 2006, over 97% of Transnistrians voted for future integration with Russia and after the annexation of Crimea, the government asked if it could be absorbed into Russia. Russia has not welcomed this as it perhaps prefers to retain these territories as buffer zones.

#### **What are Russia’s relations with them?**

All three territories have Russia as their patron state and cannot survive without economic, political, and military support from Moscow. They are seen as client states of Russia though Abkhazia has shown an independent streak at times. South Ossetia and Transnistria are more pro-Russian than Abkhazia. Their economies and banking systems are all linked to Russia. Most people speak Russian, at least as a second language. They have Russian passports and enjoy social security benefits from Russia like pensions. So, obviously, they fall within Russia’s sphere of influence.

#### **Can they be a model for the Donbass Republics?**

One of the solutions to settle the crisis over Russia’s invasion of Ukraine is for the Donbass republics to follow the model of these de facto states. They would get recognition from Russia, get a security guarantor and exist as de facto states. Russia would also benefit from having friendly territories on its borders, allowing it to remain the hegemon in the region. The question is: will Russia be able to subsidise them given the Western sanctions on it?

**Source: The Hindu**

## **12. How did the Chief Minister-designate lead the Aam Aadmi Party to power in Punjab?**

### **Relevant for GS Prelims & Mains Paper II; Polity & Governance**

Seen invariably donning a yellow turban and shouting slogans such as inquilab zindabad (long live revolution) at public rallies, Bhagwant Mann, the 48-year-old former comedian has just done what was seen impossible until a few years ago. He led the Aam Aadmi Party (AAP) to power in Punjab, defeating three mainstream parties — the ruling Congress, the Shiromani Akali Dal and the Bharatiya Janata Party.

The AAP, founded in 2012 by Arvind Kejriwal who came to power in Delhi in 2015, swept the Punjab elections with 92 seats out of 117. Mr. Mann won from the Dhuri constituency by a margin of over 58,000 votes. He will be sworn in on March 16 at a ceremony in Khatkar Kalan, the ancestral village of freedom fighter Bhagat Singh. The new government of Punjab “will be run from villages and mohallas instead of palaces and farm houses,” Mr. Mann said. “People from houses across Punjab will come to the [swearing-in] ceremony, they will also pay tribute to Bhagat Singh. We will have a good Cabinet, historic decisions —that were never made before — will be made. So, you will have to wait,” he said after meeting the Governor.

#### **Public’s ‘favourite’**

Ahead of the 2022 Assembly polls, Mr. Mann, the AAP’s Punjab president and its most recognisable face, was named as its chief ministerial candidate. The party said his selection was based on a ‘public opinion’ poll conducted through telephone. Before Mr. Mann was formally announced as the party’s chief ministerial face, Mr. Kejriwal had said he was “very dear to me, he’s like a younger brother”. Mr. Mann was quick to seize the momentum. He took hold of the party’s electoral campaign, galvanised its cadre, leading to what he called “a victory of the common people”. He is now in the top league of political leaders in the State.

Known for his satires on political leaders, Mr. Mann, however, ran a campaign taking up almost all serious political and social issues in the State, from unemployment to the drug problem and mafia groups. He offered change to the masses which grew increasingly impatient with the established political classes. And the voters seem to have bought it.

Mr. Mann, a two-time Lok Sabha MP, was born in Sangrur's Satoj village in October 1973. He participated in youth comedy festivals and inter-college competitions as a student at Shaheed Udham Singh Government College. He released comedy videos and music albums, besides performing in Punjabi movies. His comedy career blossomed in 2008 when he participated in the Great Indian Laughter Challenge on Star Plus and left a mark among national audiences.

He stepped into mainstream politics in 2011 as he joined the Punjab People's Party (PPP) of Manpreet Singh Badal. In 2014, Mr. Mann left the PPP and joined the AAP. He contested the 2014 parliamentary elections from the Sangrur constituency and won. In 2019, Mr. Mann got re-elected from the same constituency in 2019—he was the only AAP candidate who won from Punjab in that year's parliamentary election.

In Punjab, where the colour of turbans is a way of signifying political affiliations, Mr. Mann's yellow turban was seen as a symbol of 'revolution' by his supporters. Party members assert that yellow is associated with 'Basant' — the arrival of spring— signifying a blooming change. Besides, inquilab zindabad, which was immortalised by Bhagat Singh, has been a rallying cry for mass mobilisation for the AAP.

#### **Mann's share of controversies**

Mr. Mann had his share of controversies as well. In 2016, as an MP, he shot a video in the Parliament complex and put it on social media, triggering a controversy. Later, he apologised. Mr. Mann has often come under attack from his opponents who allege he is an 'alcoholic'. He was accused of coming to public events drunk. Suspended AAP MP Harinder Khalsa even complained to the then Lok Sabha Speaker Sumitra Mahajan about Mr. Mann coming under the influence of alcohol to Parliament. In 2019, amid mounting criticism, Mr. Mann took a vow at an AAP event to never touch alcohol again.

Mr. Mann says he has joined politics only to bring back "the prosperity and glory" of Punjab. He offered an era of the common people. The voters backed his narrative. Now the challenge before him is to walk the talk.

**Source: The Hindu**

### **13. Supreme Court tears into practice of 'sealed cover jurisprudence'**

**Relevant for GS Prelims & Mains Paper II; Polity & Governance**

Two separate Benches of the Supreme Court tore into the "sealed cover jurisprudence" practised by the government in courts.

#### **Grounds for using sealed cover**

The court was critical about how the government and its agencies file reports in sealed envelopes directly in court without sharing the contents with the opposite party. This is usually done on the ground that the contents are highly sensitive in nature, and may injure even national security or "public order". Another reason given by State agencies, mostly in money laundering cases, is disclosure would affect ongoing investigation.

Being kept in the dark about the material contained in a sealed cover report, the petitioners are crippled in mounting a defence, not knowing what they are supposed to defend against. At times, their cases, mostly involving fundamental rights like personal liberty, are dismissed on the basis of the secret contents ensconced in the sealed covers.

**Will not accept it: CJI**

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"Please do not give sealed cover reports in this court. We will not accept it," Chief Justice of India (CJI) N.V. Ramana admonished a counsel in a criminal appeal filed by a man against the Bihar government.

The CJI's remarks were recounted by senior advocate Dushyant Dave to a Bench led by Justice D.Y. Chandrachud later in the day as soon as the hearing began on the government ban of Media One channel.

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"I am very averse to what is called the 'sealed cover jurisprudence'," Justice Chandrachud reacted.

#### **'Small exception' of cases**

Justice Chandrachud said there were only a "small exception" of cases in which the court, for the benefit of the parties, do not want them to see the government files.

"Like in a case of child sexual abuse," Justice Chandrachud pointed out. He narrated how, some time ago, Attorney General K.K. Venugopal dealt with sensitive government records concerning cross-border national security in a case before the Supreme Court.

Instead of putting them in a sealed cover, Mr. Venugopal had sent his junior with the records to the office of the opposite counsel, for him to go through them so that the latter could better assist the court.

"The Attorney made it clear that he did not like the files to be made available in the public realm, but he said there is nothing secret from the petitioner's counsel, who could see the records for himself and assist the court," Justice Chandrachud narrated.

Senior advocate Huzefa Ahmadi referred to the apex court's judgment in the Anuradha Bhasin case that dealt with security measures in Jammu and Kashmir following the abrogation of Article 370.

"The court said that any portion perceived sensitive could be redacted but the substance of what is against you, be it a question of national security or not, should be disclosed to the opposite party so that they can get an opportunity to defend," Mr. Ahmadi submitted.

**Source: The Hindu**

## **14. When is a film declared tax free, and what are the benefits**

### **Relevant for GS Prelims & Mains Paper II; Polity & Governance**

WITH The Kashmir Files emerging as a crowd-puller and receiving political support, several states, including Haryana, Gujarat, Madhya Pradesh, Goa, Karnataka, Tripura, Uttar Pradesh, and Uttarakhand, have declared the movie tax-free.

The film, directed by Vivek Ranjan Agnihotri, is about the exodus of Kashmiri Pandits from the Valley during the early phase of the armed insurgency. It released on March 11. Making the film tax-free means tickets are cheaper, and many more people are able to watch it.

#### **What qualifies a film to be declared tax-free?**

Savita Raj Hiremath, one of the producers of Jhund, a film directed by Nagraj Manjule and starring Amitabh Bachchan that released earlier this month, recently expressed her disappointment on social media over her "important" film with "a big message that has received tremendous acclaim", not being made tax-free.

The fact is there are no fixed criteria for a film to claim or enjoy tax exemption. The decision to give up its claim on tax revenues is taken by state governments on a film-by-film basis, and on the particular government's assessment of the importance of the issues that the film deals with.

As a general rule, when a film deals with a socially-relevant and inspiring subject, state governments may at times exempt it from tax with the intention of making it accessible to a wider audience.

### **Exactly how much cheaper is it to watch a film that is tax-free compared with other films?**

Before the Goods and Services Tax (GST) came into effect in 2017, state governments levied entertainment tax, which varied from state to state, and was higher in states like Maharashtra and Uttar Pradesh. When a film was declared tax-free, the entertainment tax was waived, making tickets significantly cheaper.

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In the GST regime, movie tickets initially attracted a GST of 28 per cent. Subsequently, two slabs were introduced — 12 per cent GST on tickets costing less than Rs 100, and 18 per cent on more expensive tickets. The revenue is shared between the central and state governments. So when a state declares a film tax free now, only the SGST component is waived, while the CGST continues to be levied. Depending on the ticket price, the exemption could be 6 per cent or 9 per cent.

Filmmakers look at a tax free tag as an endorsement from the government, and a boost to the film's image and publicity, even if it does not make a huge difference to the money that the film makes.

Rejecting the demand by BJP lawmakers to make The Kashmir Files tax free, Maharashtra Deputy Chief Minister Ajit Pawar pointed out that if the Centre were to waive GST on the film, it would apply to the whole country — otherwise, it would only be the state forgoing its share of revenue from the film.

### **Which other films have been made tax free in the country?**

Traditionally, widely-acclaimed and significant films such as Gandhi (1982), used to be declared tax free.

In 2016, two socially relevant films, Dangal and Neerja, were made tax free in several states. Dangal is about two sisters from rural Haryana making it big in the world of wrestling; Neerja is based on the true story of Neerja Bhanot, the head purser on Pan Am Flight 73 who was shot dead by hijackers while helping passengers escape from the aircraft in Karachi in 1986.

Among the other films that have been made tax free in several states in recent years are Toilet: Ek Prem Katha (2017), which backed efforts to stop open defecation; Chhapaak (2020), the story of an acid attack victim's fight for justice; Mary Kom (2014), the biopic of the world champion and boxing legend; Taare Zameen Par (2007), the story of a dyslexic child; Mardaani (2014), which is about a policewoman's fight against human trafficking; and Nil Battey Sannata (2015), a feelgood film about the power of hope.

**Source: The Indian Express**

## **15. What is the National Pharmaceutical Pricing Authority's role in fixing drug prices?**

**Relevant for GS Prelims & Mains Paper II; Polity & Governance**

Consumers may have to pay more for medicines and medical devices if the National Pharmaceutical Pricing Authority (NPPA) allows a price hike of over 10% in the drugs and devices listed under the National List of Essential Medicines (NLEM), this coming month. The escalation which is expected to have an impact on nearly 800 drugs and devices is propelled by the rise in the Wholesale Price Index (WPI). Lobby groups that represent domestic pharmaceutical companies have been engaging with the Central Government to ask it to extend the 10% annual hike to scheduled formulations under price control.

### **How does the pricing mechanism work?**

Prices of Scheduled Drugs are allowed an increase each year by the drug regulator in line with the WPI and the annual change is controlled and rarely crosses 5%. But the pharmaceutical players pointed out that over the past few years, input costs have flared up. "The hike has been a long-standing demand by the pharma industry lobby. All medicines under the NLEM are under price regulation. As per the Drugs (Prices) Control Order 2013,

scheduled drugs, about 15% of the pharma market, are allowed an increase by the government as per the WPI while the rest 85% are allowed an automatic increase of 10% every year. The pharma lobby is now asking for at least a 10% increase for scheduled drugs too than going by the WPI,” said an industry expert.

### **Who regulates prices?**

The NPPA was set up in 1997 to fix/revise prices of controlled bulk drugs and formulations and to enforce price and availability of the medicines in the country, under the Drugs (Prices Control) Order, 1995-2013. Its mandate is to implement and enforce the provisions of the Drugs (Prices Control) Order in accordance with the powers delegated to it, to deal with all legal matters arising out of the decisions of the NPPA and to monitor the availability of drugs, identify shortages and to take remedial steps.

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The ceiling price of a scheduled drug is determined by first working out the simple average of price to retailer in respect of all branded and generic versions of that particular drug formulation having a market share of more than or equal to 1%, and then adding a notional retailer margin of 16% to it. The ceiling price fixed/revised by the NPPA is notified in the Gazette of India (Extraordinary) from time to time.

The NPPA is also mandated to collect/maintain data on production, exports and imports, market share of individual companies, profitability of companies etc., for bulk drugs and formulations and undertake and/ or sponsor relevant studies in respect of pricing of drugs/ pharmaceuticals.

Prices are revised when there is a rise in the price of bulk drugs, raw materials, cost of transport, freight rates, utilities like fuel, power, diesel, and changes in taxes and duties. The cost rises for imported medicines with escalation in insurance and freight prices, and depreciation of the rupee. The annual hike in the prices of drugs listed in the NLEM is based on the WPI. The NLEM lists drugs used to treat fever, infection, heart disease, hypertension, anaemia etc and includes commonly used medicines like paracetamol, azithromycin etc.

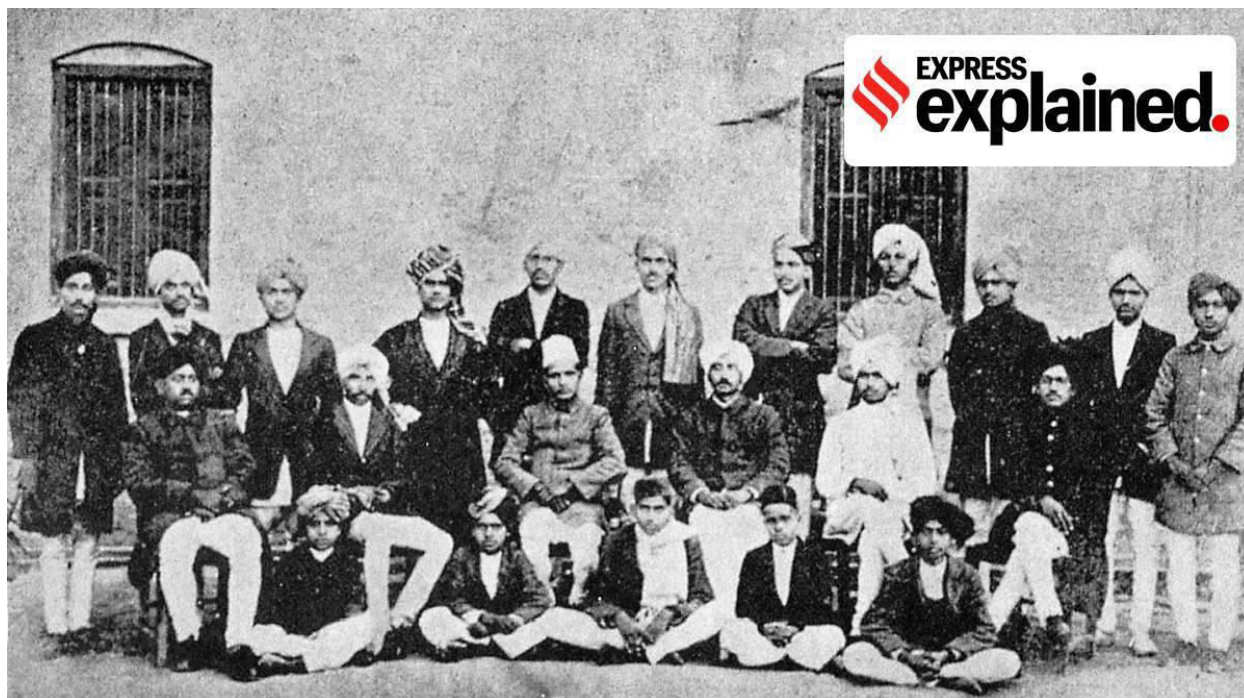
### **Why are inputs costs high?**

Speaking about the proposed move Chinu Srinivasan, co-convener, All-India Drug Action Network (AIDAN), pointed out that one of the challenges is that 60%-70% of the country's medicine needs are dependent on China. “Self-reliance for India also means self-reliance in bulk drugs (Active Pharmaceutical Ingredients/APIs) and chemicals/intermediates that go into making the drug.” Mr. Srinivasan also said the method to calculate the annual ceiling price increase should be revisited. “WPI is dependent on price rise in a basket of a range of goods that are not directly linked with the items that go into the cost of medicines. More importantly, the unrealistic simple average method of calculating ceiling prices should be replaced by a cost-plus mechanism that was prevalent under the earlier DPCO 1995,” he said.

**Source: The Hindu**

## **16. Unseeing Bhagat Singh: Why India has stopped at only talking about him**

**Relevant for GS Prelims & Mains Paper II; Polity & Governance**



*Bhagat Singh, standing 4th right, in a 1923 photo of National College Lahore Dramatics Club.*

The Punjab government's decision to display a likeness of Bhagat Singh — based on a painting by one Amar Singh — rather than any of the revolutionary's four available authentic photographs at its offices is illustrative of the approach taken over the years by India's governments towards the hero who was hanged by the British on this day, March 23, ninety years ago.

The image — and imagery — that is frequently invoked on social media and in political discourse derives from certain romanticised stereotypes rooted in the folklore around the unparalleled bravery and fearlessness of Bhagat Singh, who was only 23 when he gave his life for the nation.

### **Pre-independence: Mixed signals**

From 1929, when he was arrested and jailed, to 1931, news and pictures of Bhagat Singh — his statements in court and hunger strikes for better prison conditions — were published widely in newspapers in multiple languages across India. And yet, after his execution, Bhagat Singh's own writings were allowed to slip into oblivion.

Between 1931 and 1936, at least 200 pieces of writing, including nearly 100 books in Hindi, Tamil, Urdu, English, Punjabi, and other languages — many of them written by Bhagat Singh's comrades and contemporaries, and individuals who knew him personally — were proscribed. Some of these writers were penalised; Jitendra Nath Sanyal, who was acquitted in the Lahore Conspiracy Case, was jailed for two years for writing Bhagat Singh's biography.





*Only four authentic photos of Bhagat Singh exist. All other depictions are likenesses based on paintings done later.*

The first major personality to eulogise Bhagat Singh was EV Ramasamy Naicker, founder of the anti-Brahminical Self-Respect Movement, who wrote an editorial in the March 29, 1931 issue of his journal Kudi Arasu. Months later, Periyar got Bhagat Singh's seminal 1930 essay 'Why I am an Atheist' published in the September 27, 1931 issue of The People of Lahore. A translation in Tamil, by P Jeevanandham, was published in Kudi Arasu in 1934.

### **The Expert**

Chaman Lal is a retired professor of JNU and Honorary Advisor to Bhagat Singh Archives and Resource Centre, Delhi Archive, New Delhi. He is editor of The Bhagat Singh Reader.

Dr B R Ambedkar wrote a mild editorial in his Marathi newspaper Janta at the time, and prominent leaders of the national movement, including Gandhi, Nehru, Sardar Patel, Subhas Bose, and Madan Mohan Malviya paid tributes through press statements.

Interestingly, while Gandhi accepted black flowers in Karachi from activists of the Naujawan Bharat Sabha for not being able to save the life of Bhagat Singh, a Congress resolution condoling the sacrifice of Bhagat Singh, Rajguru, and Sukhdev ran into hurdles. As per Gandhi's wish, the resolution moved by Nehru and seconded by Malviya, paid tribute to Bhagat Singh, but asked the nation's youth to not follow his path. It passed by only a thin majority of delegates.

Gandhi also refused to associate with the memorial planned by Naujawan Bharat Sabha and Punjab Congress leaders in Lahore, for which an appeal for a fund of Rs 10 lakh was issued. The plan could not come through as the Naujawan Bharat Sabha was banned, and Congress leaders in Punjab dragged their feet in view of the Mahatma's disinclination.



A cropped version of the 1923 National College group photo on the front page of The Tribune, Lahore, on April 13, 1929.



**Post 1947: Mostly lip service**

Bhagat Singh's undisputed appeal for the youth notwithstanding, none of the more than 1,000 universities of independent India, including more than 250 controlled by the government, was named after him. It is only recently that an engineering college in Ferozepur, Punjab, which already carried his name, has been upgraded to a university. A proposal to name Chandigarh airport after Bhagat Singh is stuck in technicalities.

Until four decades after his execution, Bhagat Singh's writings were not collected in a single volume; however, they are now available in many languages and in international editions. The Bhagat Singh Chair at Jawaharlal Nehru University remains unfilled 15 years after it was created, and no major academic programme or research has been organised under its aegis.

Bhagat Singh (as also others like Chandrashekhar Azad and Masterda Surjya Sen) does not find a place in the portrait gallery of Parliament's Central Hall, even though the somewhat lesser known revolutionary Hemu Kalani, who was executed before he turned 20 in 1943, was featured in 2003 after then Home Minister L K Advani took a personal interest.

In 1929, Bhagat Singh and Batukeshwar Dutt had thrown bombs in the same complex, then called the Central Assembly, to "make the deaf hear". The reluctance to name institutions after Bhagat Singh, honour him in Parliament, or promote his ideas and vision even while paying lip service to him in speeches reflects a dichotomy similar to the one of not using his authentic picture in government offices and advertisements.

Indeed, a statue of Bhagat Singh was unveiled in the Parliament House complex by then President Pratibha Patil in 2008. But even in this case, members of the revolutionary's family had complained about the way he looked. Freedom fighters too had objected, and Fahmida Riaz, the late Urdu poet from Pakistan, had written a poem saying this was not the face of the real Bhagat Singh.

When the Government of India issued Rs 5 and Rs 100 coins in Bhagat Singh's centenary year 2007-8 showing him wearing a hat, Akalis in Punjab protested that his turbaned form had not been depicted. Interestingly, in the 1970s, then Chief Minister Giani Zail Singh had unveiled a statue of Bhagat Singh with a hat in the presence of his younger brother Kultar Singh at Nawanshahr (Now Shaheed Bhagat Singh Nagar), but the statue was later replaced with a turbaned version.

**Source: The Indian Express**

**17. Protests demanding Ahir regiment in Indian Army****Relevant for GS Prelims & Mains Paper II; Polity & Governance**

Members of the Ahir community have been sitting on an indefinite protest near Kherki Daula toll plaza in Gurgaon since February 4, demanding the formation of an Ahir regiment in the Indian Army. The same day, at least 400 protesters had taken out a rally leading to traffic congestion near toll plaza and camped at the site.

The protesters have called for another rally on March 23, with organisers expecting a large turnout including politicians from BJP, Congress, AAP and INLD. Gurgaon traffic police on Monday night issued an advisory stating that traffic was likely to be disrupted on Delhi-Gurgaon highway on Wednesday and a stretch – from Kherki Daula toll to Hero Honda chowk – would be closed for traffic from 7 am to 5 pm.

**Who is leading the protests and what are their demands?**

The protests are being organised under the banner of 'Sanyukt Ahir Regiment Morcha', a group comprising Ahir community leaders from south Haryana. The group, which was registered as a trust in March 2021, had led protests in 2018 and sat on a hunger strike for nine days before ending the agitation after assurances from politicians. After extensive consultations with block and panchayat leaders in south Haryana and parts of Rajasthan, the group has been on an indefinite protest, which it claims would intensify till their demand is met.

The protesters contend that the Indian Army had several caste-based regiments and since Ahirs had a large representation in the army, they want a separate regiment for Ahirs along similar lines.

Manoj Yadav, founder-member of the morcha, said the demand for a separate Ahir or Yadav regiment was a fight for their honour and rights.

“This is a demand for the rights for Yadav’s across the country. The Ahir community has given sacrifices in all the wars and they have won several gallantry awards. In the battle of Rezang La in 1962, out of 120 casualties, 114 were Ahirs. It is unfortunate that Ahirs have not got the recognition like other communities. The recruitment to President’s Bodyguard (PBG) is open only for Rajputs, Jats and Sikh regiments. Just like there is a separate caste-based regiment for Sikhs, Gorkhas, Jaats, Garhwals, Rajputs, we demand formation of an Ahir regiment in the army,” he said.

Yadav added that for the rally on Wednesday, they had invited several MPs and politicians from Haryana, Rajasthan, Delhi and other states.

### **Support from political parties**

The formation of a separate regiment for Ahirs has been a long standing demand of the community in the Ahirwal region – Gurgaon, Rewari and Mahendragarh belt. With leaders across party lines extending their support to the protesters, the issue is likely to gain clamour in the lead up to the next assembly elections in the state. People of Yaduvanshi Ahir community have a sizeable presence in south Haryana, north-eastern Rajasthan and south-western Delhi.

Arun Yadav, morcha member, said that they will ask politicians to include the demand in their election manifestos.

“We have given the slogan ‘vote wahi paega jo Ahir Regiment banwaega’ [those who will get the Ahir regiment formed, shall get the vote],” said Yadav.

At a ‘Shaheedi Diwas Samaroh’ in village Patauda in Jhajjar, which was held in September 2021 to mark the martyrdom on Ahirwal King Rao Tula Ram, Gurgaon MP and Union Minister of State Rao Inderjit Singh had said that he would raise his voice for a separate Ahir regiment.

On March 2, Singh visited the protest site at Kherki Daula and reiterated his support to the cause. “I support the demand of an Ahir Regiment in the Army. I have written to the defence minister regarding the same. Not only Mahendragarh and Rewari (Haryana), but people of Uttar Pradesh are also demanding the formation of Ahir regiment,” he had said.

On Saturday, Congress MP Deepender Hooda had met the protesters and extended his support. “Yaduvanshis have a deep connection with both plough and arms. Their valour needs no introduction. It is time now that an Ahir regiment is established to give them due recognition. I extend full support to the demand of Ahir Regiment in the Indian Army. I have also raised the demand in parliament and until a positive decision is taken, I will stand with you in every fight from road to Parliament,” he had told the community.

Ram Kanwar, political analyst and former professor, Haryana Agricultural University, Hisar, said that the issue of Ahir regiment was an attempt by the political parties to divert attention of people from real issues. “The issue of Ahir regiment, particularly in Ahirwal region, is an emotive issue. Ahir population is significantly higher in UP and Bihar as compared to Haryana. Parties are banking on emotive factor by invoking caste. After independence, no regiment has been raised in the army along caste lines,” he said.

**Source: The Indian Express**

## **18. Union Cabinet approves MCD reunification Bill**

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### Relevant for GS Prelims & Mains Paper II; Polity & Governance

The Union Cabinet on Tuesday cleared a Bill that proposes to unify the three civic bodies in Delhi. The Delhi Municipal Corporation (Amendment) Bill, 2022, is expected to be tabled in Parliament this week.

The amendment proposes a unified Municipal Corporation of Delhi by subsuming the South Delhi Municipal Corporation, the North Delhi Municipal Corporation and the East Delhi Municipal Corporation. The corporation was trifurcated in 2012.

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"The division of the corporation was uneven in terms of territorial divisions and revenue generation. As a result, there is a huge gap in the resources available to the three corporations, vis-à-vis their obligation," a government source said.

#### 'Widening gap'

The source said the gap has widened over time, increasing the financial difficulties of the civic bodies. "The corporations are not able to make timely payment of salaries and retirement benefits to employees, thereby creating serious impediments in maintaining civic services," the source said.

At the core of the reunification, sources in the Bharatiya Janata Party (BJP) told The Hindu, is the creation of a "parallel and more efficient Delhi Model" to be built from the ground up by bureaucrats handpicked by the Centre in time for the Delhi election in 2025.

With a unified municipal corporation, the BJP, sources said, will now be able to pit itself directly against the AAP government in an attempt to erode its presence in Delhi in the run-up to the Assembly election.

Source: The Hindu

### 19. The controversy over the proposed Mekedatu water project

#### Relevant for GS Prelims & Mains Paper II; Polity & Governance

#### Why is the drinking water project a source of confrontation? Why are both parties unable to come to a settlement?

The stage appears set for a summer of discontent yet again, as Karnataka and Tamil Nadu are heading for a political confrontation over the Mekedatu drinking water project across river Cauvery, proposed by the former. Within days of Tamil Nadu Assembly's resolution against the project, Karnataka's legislative assembly is set to counter it with a resolution seeking the project's early implementation and clearances from the Centre.

As Karnataka heads into an election year in 2023, the Mekedatu issue has been resonating within Karnataka and in Tamil Nadu as well. With Cauvery being an emotive issue that binds people in the Cauvery basin districts in Old Mysore region, Mekedatu is likely to impact election results.

In Karnataka, the latest development on Cauvery has brought together the political class across parties, which were divided over the issue just a month ago by accusing each other of delaying the project. The BJP government was on tenterhooks after Congress took out a 170-km padayatra from Mekedatu to Bengaluru seeking the project's early implementation. They also accused the Centre of delaying the project for political gains in Tamil Nadu. The padayatra was dubbed by the ruling dispensation as a political tool to consolidate the dominant Vokkaliga votes in the Old Mysore region who lean towards the regional party Janata Dal (Secular).

However, closing ranks, leaders of BJP, Congress and JD (S) have objected to the Tamil Nadu Assembly's resolution as they see it as an "interference" in a project that has been proposed within the jurisdictional limits of Karnataka. With the Chief Minister Basavaraj Bommai taking the lead by announcing piloting of a resolution,

parties feel that it was "unfair" on the part of Tamil Nadu, which has implemented drinking water projects across Cauvery in its territorial jurisdiction, to oppose a drinking water project proposed by Karnataka.

As far as Tamil Nadu is concerned, it has executed drinking water supply projects from what is available to it, without seeking to make any additional claim.

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**What is the project?**

Originally mooted in 1948, Mekedatu (which translates as Goat's crossing) is a drinking water cum power generation project across river Cauvery. Karnataka gave the project shape after the final award of the Cauvery Water Disputes Tribunal was notified in February 2013 allocating the riparian states their shares. After a pre-feasibility study report was submitted in 2018, the State submitted a detailed project report to the Central Water Commission in 2019. The ₹9,000 crore balancing reservoir at Mekedatu on the Karnataka-Tamil Nadu border envisages impounding of 67.15 tmc (thousand million cubic) ft. of water. The project, which will involve submergence of nearly 5,100 hectares of forest in Cauvery wildlife sanctuary hosting rich flora and fauna, will help the state in utilising the additional 4.75 tmc ft. of water allocated by Supreme Court in 2018 for consumptive use for drinking purpose for Bengaluru and neighbouring areas. Karnataka's share in the award has been decided at 284.75 tmc ft. In July 2019, the Expert Appraisal Committee on River Valley and Hydroelectric Projects constituted by the Union Ministry of Environment, Forest and Climate Change (MoEFCC) has said the proposal could be reconsidered only after Tamil Nadu and Karnataka reach an "amicable solution."

**How will it benefit Karnataka?**

The water from Mekedatu is to be pumped to quench the thirst of the burgeoning population of Bengaluru which is estimated to be around 1.3 crore. Currently, more than 30% of Bengaluru is dependent on borewell water. Ramanagara and Bengaluru rural districts will also benefit. Along with the 5th stage of the Cauvery Water Supply Scheme, which will be completed shortly, the water from Mekedatu is projected to meet the water requirement of the State capital for the next 30 years. Besides, there are also plans to generate 400 MW of power. The revenue earned from power generation is expected to compensate the Government its investment on the project within a few years. Karnataka argues that the reservoir will also help to ensure monthly flow stipulated in the award for Tamil Nadu rather than harm the neighbouring State's interest in any way.

**What is the current status?**

The project is now before the Cauvery Water Management Authority. The Authority is exploring the possibility of having an exclusive discussion on the project, when the matter is sub judice. Apart from writing to the Centre to withdraw the permission given to prepare the detailed project report (DPR), Tamil Nadu has also filed a petition before the Supreme Court, explaining its objections against the project. The Centre and Karnataka have also filed counter affidavits.

**What is Karnataka's stand?**

Karnataka says that there is no case for Tamil Nadu after its share of 177.75 tmc ft. of water is ensured at the inter-State border gauging centre at Biligundlu. Also, the project falls inside the jurisdictional limit of Karnataka and Tamil Nadu's permission is not needed. The State also argues that since there is no stay in any court for the project, Karnataka can go ahead. On utilising the surplus water, Karnataka says that any allocation in this sphere should be done after hydrology studies to ascertain the quantum of excess water available in the basin.

**Why is Tamil Nadu opposed to it?**

Tamil Nadu feels that Karnataka, through the project, will impound and divert flows from "uncontrolled catchments" to it, a component which was taken into account by the Tribunal in the 2007 order while arriving at the water allocation plan for the State. As per an estimate, around 80 tmc ft of water flows annually to Tamil Nadu, thanks to the catchments including the area between Kabini dam in Karnataka and Billigundulu gauging site on the inter-State border, and the area between Krishnaraja Sagar dam in Karnataka and the gauging site. As the upper riparian State has adequate infrastructure even now to address the water needs of Bengaluru, there is no need for the Mekedatu project, according to Tamil Nadu. Mekedatu also does not find mention in the Tribunal's final order or the Supreme Court judgement. Besides, given the unpleasant experiences that it



has had with Karnataka in securing its share of the Cauvery water, as per the monthly schedule of water release, Tamil Nadu is wary of assurances from the other side.

### **Is Karnataka ready for negotiation?**

No. A recent suggestion by the Union Water Resources Minister Gajendra Singh Shekhawat for a negotiated settlement raised a storm in Karnataka's political circles and the State Water Resources Minister Govind Karjol met him to reiterate the State's stand. Karnataka has said that there is no scope for negotiation in any interstate river water sharing issue where the tribunal award has been concluded and Karnataka's right on water has been established after the award has been gazetted.

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**Source: The Hindu**

## **20. How will DU's CUET affect admissions to St Stephen's, other minority colleges?**

### **Relevant for GS Prelims & Mains Paper II; Polity & Governance**

Delhi University's Academic Council Tuesday approved undergraduate admissions for the academic session 2022-23 based solely on the Common University Entrance Test (CUET). This will not only apply to most DU colleges that hitherto held admissions on the basis of cut-offs calculated on the basis of Class 12 marks, but also minority colleges, including the prestigious St Stephen's College.

The proposal by the Standing Committee said, "It was decided that all admissions to all minority colleges...will be done only through CUET. During centralised counselling, separate merit lists will be generated for UR (unreserved) and minority candidates as per the reservation policy."

### **How has St Stephen's College been holding admissions until now?**

While DU undergraduate admissions are based on cut-offs, St Stephen's College, which reserves 50 per cent of its seats for Christian candidates, used to conduct admissions differently. The college released cut-offs separate from the overall DU cut-off, after which admission was granted on the basis of three factors: 85 per cent weightage was given to class 12 marks and 15 per cent weightage each to both written tests and interviews. However, in light of the coronavirus pandemic, the college did away with written tests, and interviews moved online.

### **What does CUET say about minority colleges?**

The Standing Committee, which recommended the implementation of CUET, and whose document was finally approved by the AC, has said the new system will be applicable to minority colleges like St Stephen's and Jesus and Mary College as well. Minority colleges also include a number of Sikh colleges, including the SGTB Khalsa College, SGND Khalsa College, Mata Sundri College, etc. Unlike St Stephen's and JMC, the Sikh minority colleges so far held admissions on the basis of cut-offs like all other DU colleges. However, they had minority reservations.

### **Will holding admissions through CUET affect minority intake?**

Registrar Vikas Gupta said minority colleges will in no way be affected adversely by the implementation of CUET. "They will follow their reservation policy as they have been doing till now. The document clearly states that separate merit lists will be generated for general and minority candidates and the college will hold admissions on the basis of these," he said.

### **Does CUET allow for the holding of interviews for admissions?**

Since the detailed structure of CUET is not yet clear, there are certain doubts whether St Stephen's College will continue to be allowed to hold interviews as it had done till now. Principal John Varghese did not respond to calls and texts. However, Nandita Narain, former DU Teachers' Association (Duta) president and a teacher at the college, said this issue could become contentious.

"I don't think it is clear whether we will be able to have interviews because to have interviews, we need to call six or seven times the number of candidates, as the number of students we call will have to be 6-7 times the number of seats. We don't even know if DU will give us the complete list. While I'm personally not in favour of the interview system, it may become an issue. We'll have to see if the college goes to court over it since the interview system has earlier been upheld by the court. It may become a dispute between the college, university, and the UGC," said Narain.

Registrar Gupta said that while St Stephen's would be allowed to hold interviews for minority candidates, it would not be allowed for others. "The government has already decided how the merit list will be prepared. Why violate that by holding interviews?" he said.

**Source: The Indian Express**

## **21. When will the Common University Entrance Test admission process begin?**

### **Relevant for GS Prelims & Mains Paper II; Polity & Governance**

On Monday, the University Grants Commission (UGC) made it mandatory for all 45 Central universities to admit students to undergraduate programmes from 2022-23 based on scores obtained in the Common University Entrance Test (CUET) conducted by the National Testing Agency (NTA).

#### **What is the CUET and who will use it?**

The CUET is a computer-based test that will be conducted by the NTA in the first week of July based on the National Council of Educational Research and Training (NCERT) syllabus for Class 12. All admissions into undergraduate courses at Central universities funded by UGC will mandatorily be based on CUET scores from 2022-23, replacing institution-specific entrance examinations or the ranking policy using Class 12 scores for admission. Other universities — whether State-owned, private or deemed — are also free to use CUET scores for their own admissions as well. Technical courses already using the Joint Entrance Examination (JEE) are exempt, but skill-based professional courses like Music, Art, Theatre and Fine Arts can use a combination of the CUET score along with an interview or practical test, the UGC said.

CUET scores will be needed for admission to general category as well as reserved seats, but each university's reservation policy or seat quota for local students will not be changed. Class 12 board examination scores can still be used as a minimum qualifying mark, depending on the policies of individual universities. Application forms will be available on the NTA website from the first week of April.

#### **What is the need for a common entrance test?**

The National Education Policy, 2020 proposed a common university entrance test as a way of ensuring uniform quality while reducing the cost and efforts of all stakeholders. "The high quality, range, and flexibility of the NTA testing services will enable most universities to use these common entrance exams — rather than having hundreds of universities each devising their own entrance exams — thereby drastically reducing the burden on students, universities and colleges, and the entire education system," it said. UGC chairman M. Jagadesh Kumar added that CUET would provide an equal opportunity to students from across the country that seek admission from different boards, especially those from remote and rural areas. Since students will not have to sit for multiple entrance examinations, it will also cut their financial costs. In 2019-20, according to the All India Survey on Higher Education, undergraduate courses in Central universities saw an enrolment of 5,40,270 students.

#### **Why are some people opposed to CUET?**

One of the major complaints about mass entrance examinations such as JEE or NEET is that they spur a large-scale coaching industry. "Admission through CUET will make the terrain even more unequal. Such a filter will result in an additional expenditure of parents and students towards coaching and therefore, marginalise those coming from disadvantageous backgrounds," said a dissent note from some members of the Delhi University's

Academic Council who opposed the decision to use CUET. They pointed to the Madras High Court's recent observations that NEET has only benefited students who spend lakhs of rupees on coaching classes, putting rural students at a disadvantage. They also warned that CUET would curb the autonomy and unique characteristics of universities.

The other worry is CUET's impact on school education. "Already, entrance tests like JEE and NEET encourage students to enrol in coaching centres and totally disregard their Class 11 and 12 classes. CUET's impact will be similar, on a much vaster scale," warned former NCERT director Krishna Kumar.

"Entrance tests in this country have really badly designed questions, which do not assess a student's understanding or creativity. They use only multiple choice questions, so there is none of the space for expression allowed in board exams. The coaching industry prepares students simply by drilling them over and over," added Prof. Kumar, adding that it would take at least a year to prepare, test and validate questions for a high quality test. He also dismissed the stereotype of Class 12 board examinations which only encourage rote memorisation, saying that the CBSE as well as some State boards have undertaken examination reforms.

### **What is the format?**

The test will be conducted in two shifts. The compulsory first section will be conducted in 13 languages — Hindi, Marathi, Gujarati, Tamil, Telugu, Kannada, Malayalam, Urdu, Assamese, Bengali, Punjabi, Odia and English. Section 2 will offer 27 domain-specific subjects, of which a candidate can choose up to six, depending on the specific undergraduate programmes they are applying for. For instance, an applicant for a BA Economics programme would have to sit for the economics paper. The optional third section will be an aptitude test, which universities could require for their applicants.

**Source: The Hindu**

## **22. Who is a 'minority' in India? Here's what courts have said**

### **Relevant for GS Prelims & Mains Paper II; Polity & Governance**

The Supreme Court will on Monday (March 28) take up a petition seeking identification of minorities at the state level and granting minority status to Hindus in states and union territories where their numbers have gone below other communities.

### **What is the case about?**

The petition by Advocate Ashwini Upadhyay has contended that the 2011 census showed that Hindus have become a minority in Lakshadweep (2.5%), Mizoram (2.75%), Nagaland (8.75%), Meghalaya (11.53%), J&K (28.44%), Arunachal Pradesh (29%), Manipur (31.39%), and Punjab (38.40%), but were being denied minority benefits that are currently being enjoyed by the respective majority communities in these places.

The plea relies on the Supreme Court's 2002 ruling in the TMA Pai Foundation case (TMA Pai Foundation & Ors vs State Of Karnataka & Ors) and the 2005 decision in the Bal Patil case (Bal Patil & Anr vs Union Of India & Ors).

### **What is the definition of minority under Indian laws?**

The expression "minorities" appears in some Articles of the Constitution, but is not defined anywhere.

### **What does the Constitution say about minorities?**

\* Article 29, which deals with the "Protection of interests of minorities", says that "any section of the citizens residing in the territory of India or any part thereof having a distinct language, script or culture of its own shall have the right to conserve the same", and that "no citizen shall be denied admission into any educational institution maintained by the State or receiving aid out of State funds on grounds only of religion, race, caste, language or any of them".

\* Article 30 deals with the “right of minorities to establish and administer educational institutions”.

It says that all minorities, whether based on religion or language, shall have the right to establish and administer educational institutions of their choice. It says that “in making any law providing for the compulsory acquisition of any property of an educational institution established and administered by a minority..., the State shall ensure that the amount fixed by or determined under such law for the acquisition of such property is such as would not restrict or abrogate the right guaranteed under that clause”, and that “the state shall not, in granting aid to educational institutions, discriminate against any educational institution on the ground that it is under the management of a minority, whether based on religion or language”.

\* Article 350(A) says there shall be a Special Officer for linguistic minorities to be appointed by the President. “It shall be the duty of the Special Officer to investigate all matters relating to the safeguards provided for linguistic minorities under this Constitution and report to the President upon those matters at such intervals as the President may direct, and the President shall cause all such reports to be laid before each House of Parliament, and sent to the Governments of the States concerned”.

### **So, who is a minority in India?**

Currently, only those communities notified under section 2(c) of the National Minorities Commission Act, 1992, by the central government are regarded as minority.

### **And which are the minorities notified by the Government of India?**

In the exercise of its powers under the Section 2(c) of the NCM Act, the Centre on October 23, 1993, notified five groups — Muslims, Christians, Sikhs, Buddhists and Parsis — as ‘minority’ communities. Jains were added to the list in January 2014.

### **What have courts said on the subject?**

TMA PAI: In ‘TMA Pai’, an 11-judge bench of the Supreme Court dealt with the question of the scope of right of minorities to establish and administer educational institutions of their choice under the Constitution.

A majority ruling by six judges in 2002 referred to two other cases pertaining to the DAV College in Punjab, in which the SC had to consider whether Hindus were a religious minority in the State of Punjab.

It said, “in DAV College v. State of Punjab [1971]...the question posed was as to what constituted a religious or linguistic minority, and how it was to be determined. After examining the opinion of this Court in the Kerala Education Bill case [1958], the Court held that the Arya Samajis, who were Hindus, were a religious minority in the State of Punjab, even though they may not have been so in relation to the entire country.

“In another case, DAV College Bhatinda v. State of Punjab [1971]...the observations in the first DAV College case were explained, and at page 681, it was stated that “what constitutes a linguistic or religious minority must be judged in relation to the State in as much as the impugned Act was a State Act and not in relation to the whole of India.”

“This Court rejected the contention that since Hindus were a majority in India, they could not be a religious minority in the State of Punjab, as it took the State as the unit to determine whether the Hindus were a minority community. There can, therefore, be little doubt that this Court has consistently held that the unit to determine a religious or linguistic minority can only be the State.”

BAL PATIL: In 2005, the SC in its judgment in ‘Bal Patil’ referred to the TMA Pai ruling, and said:

“After the verdict in the eleven judges’ Bench in TMA Pai Foundation case (supra), the legal position stands clarified that henceforth the unit for determining status of both linguistic and religious minorities would be ‘state’ ....If, therefore, the State has to be regarded as the unit for determining “linguistic minority” vis-a-vis



Article 30, then with “religious minority” being on the same footing, it is the State in relation to which the majority or minority status will have to be determined.

“The minority for the purpose of Article 30 cannot have different meanings depending upon who is legislating. Language being the basis for the establishment of different States for the purposes of Article 30, a “linguistic minority” will have to be determined in relation to the State in which the educational institution is sought to be established. The position with regard to the religious minority is similar, since both religious and linguistic minorities have been put on a par in Article 30.”

**Source: The Indian Express**

## **23. The move to ease voting for overseas citizens**

### **Relevant for GS Prelims & Mains Paper II; Polity & Governance**

On March 25, Union Minister for Law and Justice Kiren Rijju in response to a question in the Lok Sabha stated that the government was exploring the possibility of allowing online voting for non-resident Indians (NRI). The minister’s statement on easing voting for NRIs comes in the wake of a proposal made by the Election Commission of India (ECI), that wrote to the Law Ministry in November 2020, to extend the facility of postal ballots to eligible NRIs for the various State Assembly elections to be held in 2021. The ECI then, had proposed amending the Conduct of Election Rules, 1961, in order to allow this facility. The postal ballots were to be sent to NRIs electronically after which they will send the ballots back, after choosing their candidate, via post.

#### **How can overseas voters currently vote in Indian elections?**

Prior to 2010, an Indian citizen who is an eligible voter and was residing abroad for more than six months, would not have been able to vote in elections. This was because the NRI’s name was deleted from electoral rolls if he or she stayed outside the country for more than six months at a stretch.

After the passing of the Representation of the People (Amendment) Act, 2010, eligible NRIs who had stayed abroad beyond six months have been able to vote, but only in person at the polling station where they have been enrolled as an overseas elector.

Just as any resident Indian citizen above the age of 18 years) is eligible to vote in the constituency where she/he is a resident, overseas Indian citizens are also eligible to do so. In the case of overseas voters, their address mentioned in the passport is taken as the place of ordinary residence and chosen as the constituency for the overseas voter to enrol in.

#### **How has the existing facility worked so far?**

From merely 11,846 overseas voters who registered in 2014, the number went up to close to a lakh in 2019. But the bulk of these voters (nearly 90%) belonged to just one State — Kerala. Of the 25,606 such voters who actually turned up, 25,534 were from Kerala (mostly from Kozhikode and Malappuram districts).

Clearly, a very low proportion of eligible overseas residents actually registered or turned up to vote. The Representation of the People Act, envisaged voters as only the “ordinary residents” in a constituency who will choose representatives to represent their local interests while mediating on larger issues in the legislature.

Some democracies that already allow absentee voting stipulate that overseas electors are eligible to vote provided they are not abroad for a specified period of time and/or if they mention an “intent to return”.

Section 20-1A, Part III of the Representation of the People Act addresses this to some extent by qualifying “a person absenting himself temporarily from his place of ordinary residence shall not by reason thereof cease to be ordinarily resident therein” and in essence provides for NRIs who are temporarily staying abroad to be eligible to vote in their local constituencies.

Yet, the proviso of having to visit the polling booth in person has discouraged eligible voters from exercising their mandate.

In the winter session of Parliament in 2017, the government proposed to remove the restriction imposed by Section 20A of the Representation of the People Act, which required them to be physically present to vote in their constituencies.

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The Bill provided for overseas voters to be able to appoint a proxy to cast their votes on their behalf, subject to conditions laid down in the Conduct of Election Rules, 1961.

The Bill was later passed in 2018, but lapsed with the dissolution of the 16th Lok Sabha. The ECI then approached the government to permit NRIs to vote via postal ballots similar to a system that is already used by service voters, (a member of the armed Forces of the Union; or a member of a force to which provisions of the Army Act, 1950 (46 of 1950) which is the Electronically Transmitted Postal Ballot System or ETPBS.

### **What is ETPBS and how does it function?**

The Conduct of Election Rules, 1961 was amended in 2016 to allow service voters to use the ETPBS. Under this system, postal ballots are sent electronically to registered service voters. The service voter can then download the ETPB (along with a declaration form and covers), register their mandate on the ballot and send it to the returning officer of the constituency via ordinary mail. The post will include an attested declaration form (after being signed by the voter in the presence of an appointed senior officer who will attest it). The postal ballot must reach the returning officer by 8 a.m. on the day of the counting of results.

The ECI proposed to extend this facility to overseas voters as well. For this to commence, the Law Ministry has to amend the Conduct of Election Rules, 1961. In the case of NRI voters, those seeking to vote through ETPBS will have to inform the returning officer at least five days after notification of the election. The returning officer will then send the ballot electronically via the ETPBS. The NRI voter can then register her/his mandate on the ballot printout and send it back with an attested declaration in a process similar to the service voter. Except in this case, the senior officer would be appointed by the Indian diplomatic or consular representative in the resident country of the NRI. The ECI has not specified whether the voter should send in the ballot through ordinary post to the returning officer or drop it off at the Indian consular office/embassy, which will then send the envelopes constituency-wise to the returning officers.

### **Will this facility be available to all overseas voters across countries?**

There were news reports that the ECI had indicated to the Ministry of External Affairs that it would want postal voting introduced on a pilot basis in non-Gulf countries. But ECI officials told The Hindu that the ECI had asked the Law Ministry to explore the possibility of extending postal ballots to overseas electors and not restrict it to any particular country.

In March 2021, the Ministry of External Affairs informed ECI that the implementation could require to overcome “huge logistical challenges” and needs “a realistic assessment of requirements”

### **Are postal ballots a viable means of voting?**

The ETPBS method allowed for greater turnout among service voters in the 2019 Lok Sabha election. With increasing mobility of citizens across countries for reasons related to work, the postal ballot method has been recognised by the International Institute for Democracy and Electoral Assistance (an intergovernmental organisation that works to support democratic processes and institutions) as a means to allow overseas voters to exercise their right, subject to certain conditions normally related to the time spent abroad or the work carried out abroad.

A postal ballot mechanism that allows for proper authentication of the ballot at designated consular/embassy offices and an effective postal system should ease this process for NRIs, but rules must be clearly framed for eligibility on the basis of time spent away from the country.

Source: The Hindu

## 24. Punjab govt's doorstep ration delivery scheme: How, why, and the numbers that matter

Relevant for GS Prelims & Mains Paper II; Polity & Governance

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Punjab Chief Minister Bhagwant Mann Monday announced home delivery of foodgrains to beneficiaries. Under the Ghar Ghar Ration Yojna, the state government would deliver wheat, packed in bags, at the doorstep of the beneficiaries.

### What is the new scheme?

Under the new Ghar Ghar Ration Yojna, as announced by Chief Minister Bhagwant Mann, the beneficiaries of the Atta-Dal Scheme of the state government, which is a tweaked version of the Centre's Food Security Act, will get ration at their doorsteps. The scheme will be optional and all those who do not want to queue up outside the fair price shops or the ration depots can opt for it.

### How many beneficiaries are there of Atta-Dal Scheme?

There are 1.54 crore individual beneficiaries (in 43 lakh families) of the Atta-Dal scheme in Punjab. The government gives 5 kg wheat to every individual beneficiary per month at Rs 2 per kg. While the scheme is named after wheat flour and pulses, the state has not been able to give pulses (ground black grams preferred in Punjab over lentils), due to lack of funds. Various political parties have also been promising tea leaves and sugar, but it could never materialise due to lack of funds.

### Who funds the scheme?

The Centre funds the scheme under the National Food Security Act (NFSA) 2013 for 1.43 lakh beneficiaries (comprising 36 lakh families). These are Centre's identified BPL families. Punjab has added its own list of beneficiaries by giving them Blue Cards. These beneficiaries' annual income is below Rs 30,000 per annum, which is more than the limit set by the Centre for BPL category. Punjab argues that the living standard of Punjabis is better than the rest of the country. Now, Centre pays for the subsidy bill of 36 lakh families worth Rs 1700 crore every year. It also pays half of the transportation charge. The bill for the remaining 7 lakh families is borne by the state government.

### How is it distributed?

The state earlier used to supply wheat flour to the beneficiaries. However, following complaints of flour turning bad or being found infested, a decision was taken to give wheat instead. Now, wheat is provided by the ration depots in cities and villages once in three months.

### How many ration depots handle the operation?

There are 26,000 ration depots in the state. They use Electronic Point of Sale (e-POS) machines for biometric verification of every beneficiary. The quarterly delivery takes about a month as about 16 depots use a single EPOS machine that delays the process of delivery. Every depot has about 300 registered beneficiaries. The machine is transported to different depots. This also results in queues.

### Is the scheme a replica of a similar one announced by the Delhi government?

Punjab is working out the logistics amidst certain concerns. The government functionaries feel that the Centre, which shot down the scheme in Delhi, will not pay for the transportation incurred upon home delivery. The state also does not have so many employees who can be assigned to deliver ration at beneficiaries' homes.

In Delhi, the Centre and the UT government have been at loggerheads over the implementation of the scheme, with the Ministry of Consumer Affairs, Food and Public Distribution writing to the AAP-led regime on several occasions, saying that a provision for delivery of ration to homes does not exist in the NFSA. It has also told the Delhi government that it had no objection to the scheme if the government buys ration from the Food Corporation of India (FCI) and distributes it, but using grain given to the state under NFSA would be illegal.



### How does the government plan to deliver the foodgrains at doorstep?

In Delhi, the millers empanelled with Delhi State Civil Supplies Corporation Ltd (DSCSC) were to be tasked with lifting wheat and rice from six godowns of the Food Corporation of India (FCI) before processing and cleaning. These were then to be sent to ration depots and the Delhi Consumer's Co-operative Wholesale Store Ltd (DCCWS), had to rope in private agencies to deliver foodgrains. In Punjab, however, the wheat is supplied by the Department of Food and Civil Supplies to the ration depots, who hand it physically to the beneficiaries.

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Source: The Indian Express

## 25. Protest in LS as Bill envisages lifting biometrics of detainees


Relevant for GS Prelims & Mains Paper II; Polity & Governance

### In the eye of storm | The Criminal Procedure (Identification) Bill, 2022

would allow the police and prison authorities to store and analyse physical and biological samples, including retina and iris scans of convicts

- The bill seeks to repeal The Identification of Prisoners Act, 1920, whose scope was limited to recording finger impressions and foot-print impressions of limited category of convicts
- The new bill expands the scope of "measurements" to include iris, retina, signature, handwriting, biological samples and their analysis

- The records can be stored for 75 years
- It also proposes to record the details of persons detained under any preventive detention law. Opposition says this can be mis-used against political adversaries
- If a person with no criminal background is released without trial or discharged or acquitted by the court, all records of measurements so taken shall be destroyed from the records



### Provisions

The Criminal Procedure (Identification) Bill, 2022 that would allow the police and prison authorities to collect, store and analyse physical and biological samples, including retina and iris scans, was introduced in the Lok Sabha on Monday amid strong protests from Opposition members, who forced a vote on the issue and termed the Bill "unconstitutional".



The Bill also seeks to apply these provisions to persons held under any preventive detention law. The National Crime Records Bureau (NCRB) will be the repository of physical and biological samples, signature and handwriting data that can be preserved for at least 75 years.

### **MPs express concern**

Opposition members argued that the Bill was beyond the legislative competence of Parliament as it violated fundamental rights of citizens, including the right to privacy. BSP member Ritesh Pandey pointed out that the Bill proposes to collect samples even from protesters engaged in political protests.

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### **Against SC order: Cong.**

Congress member Manish Tewari argued that the Bill, which implied use of force in collection of biological information, could also lead to narco analysis and brain mapping, and claimed that it violates Article 20 (3) of the Constitution as well as the Supreme Court judgment in the K.S. Puttaswamy case.

### **Government's justification**

Dismissing the apprehensions, the Minister said the Bill was required to make provisions for the use of modern techniques to capture and record appropriate body measurements.

The Bill seeks to repeal the Identification of Prisoners Act, 1920 whose scope was limited to recording finger impressions and footprint impressions of limited category of convicted and non-convicted persons and photographs on the order of a magistrate.

**Source: The Hindu**

## **26. Punjab CM's announcement barring private schools from increasing fees, and where the law stands**

### **Relevant for GS Prelims & Mains Paper II; Polity & Governance**

Punjab Chief Minister Bhagwant Mann Wednesday barred private schools from effecting any fee hike in the next academic session (2022-23) and also warned them against compelling parents to buy books, uniform or stationery items from select shops.

The move assumes significance as parents had been protesting against fee hikes by private schools for some years now, and the issue gained prominence in the past two years amid the pandemic disruption.

Parents accused private schools of hiking the fee exorbitantly even as classes were being held online. Several complaints were also filed with the state education department against private schools alleging that parents were being forced to pay fee during Covid when they were suffering heavy financial losses.

As per the latest data compiled by the education department, Punjab has 28,568 schools of which 67% (nearly 19,200) are state-run and the remaining are in private (affiliated), unaided, associated, Adarsh and other categories.

Of nearly 9,000 private schools, 6,500 are a part of Federation of Private Schools and Associations, Punjab. Majority private schools (nearly 5,400) are affiliated to Punjab School Education Board (PSEB), 1,481 are affiliated to the Central Board of Secondary Education (CBSE) and nearly a hundred with the ICSE.

### **Existing checks and balances**

The private schools in Punjab are regulated under The Punjab Regulation of Fee of Un-Aided Educational Institutions Act, 2016 which calls for setting up of a "regulatory body" headed by a chairperson and five other members to "check commercialization or profiteering". The Act also empowers the regulatory body to handle

complaints filed against private schools by the parents related to fee and other issues. The divisional commissioner of the division concerned is the regulatory body's chairperson.

The Act allows the schools to hike fees by not more than 8 per cent annually. However, Section 7 of the Act says, the regulatory body shall "(c) check that the fee structure is being kept within the limits...as to avoid profiteering; (e) to check excessive hike in fee by an Unaided Educational Institution..."

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The section 7 (f) says that the regulatory body will ensure that increase in the fee undertaken by an Unaided Educational Institution is justified and necessitated by the circumstances like increase in expenditure or because of needed developmental activities, and does not result into profiteering; "and (g) to check that funds charged from the students are not diverted to any other purpose".

The Section 5 of the Act, says that an Unaided Educational Institution shall be competent to fix its fee and it may also increase the same after taking into account the need to generate funds to run the institution and to provide facilities necessary for the benefit of the students "provided that increase in fee shall not exceed eight per cent of the fee of the previous year...provided that while fixing or increasing fee, an institution cannot indulge in profiteering and it cannot charge capitation fee".

The Act was amended in 2019 and Section 5 now also allows hiking of fee beyond 8 per cent but with a condition that the institution "shall notify and display at a conspicuous place the proposed annual fee and the funds to be charged by them one month before the start of admissions to the next academic session".

In April 2013, the Punjab and Haryana High Court had also constituted a fee regulatory committee for unaided private schools headed by Justice Amar Dutt (retired) but it remained mostly on papers with hardly any achievement on the ground.

### **On uniforms and books**

The Act says that "parents shall be at liberty to purchase such uniforms and books from any place of their choice" if schools specify purchasing of specific uniforms and books. "However the colour and design and any other specifications of the uniforms so notified, shall not be changed for at least next two years".

### **'Not a practical move'**

Speaking to The Indian Express, Jagjit Singh Dhuri, president of the Federation of Private Schools and Associations, Punjab said that they welcome the government decision but to implement them practically, the state must contribute in functioning of private schools and treat them at par with government schools in some areas. He said that the state government first needs to make education in private schools 'tax free'.

Dhuri, who is also the chairperson of Britannica International School, Ludhiana, said: "We welcome the announcements by the CM, but the state government should first see practical implementation of it. Firstly, it is not the job of the schools to provide books and uniforms to shops. We can publish the specifications of the uniform and list of books on our website but then it is upto the shopkeepers on how they provide the same".

"Secondly, during pandemic, following the High Court order, schools did not hike fee in 2020-21. Then some schools also did not do it in 2021-22 voluntarily. But then how are we supposed to give increments to teachers and other staff? The prices of the fuel are the direct indicator of how inflation has hit every sector, including the teachers," he added.

Talking about taxes, Dhuri said that while government schools are charged for electricity on 'domestic' rates, the private ones are charged 'commercial' rates, which is way costlier. "We also pay special road tax in Punjab on school buses which is not there in other states. We offer to reduce transportation charges by Rs 100 per child if the AAP government in Punjab can waive these taxes, which only private schools pay," said Dhuri.

“Whatever benefit the government will give us, we will transfer it to the parents. Moreover, even the state regulatory Act allows 8 per cent hike annually because it is not profiteering but a need to meet basic expenses of running a school. We have already sent a representation to the CM explaining all the points but before making the announcement, a meeting should have been convened with stakeholders to include our concerns,” said Dhuri.

In the recent past, the fee issue has taken an ugly turn in Punjab. In 2019, a teacher from a PSEB-affiliated school had allegedly put a ‘stamp’ on the arm of a class VII student to ‘remind’ his parents about the pending fee. The child was the son of an autorickshaw driver. In 2016, a school in Ludhiana had put ‘fee defaulter’ remark on the answer sheets of the students. Later, a High Court regulated committee had ordered the school to ‘refund’ exorbitant charges taken from the parents. The school was accused of hiking annual charges by 40 per cent and tuition fee by 27 per cent.

**Source: The Indian Express**

## International Organizations & Relations

### 1. Russian space agency’s threat on International Space Station amid Ukraine crisis

#### Relevant for GS Prelims & Mains Paper II; International Issues

A widely circulated comment by the chief of Russian space agency Dmitry Rogozin has ignited fears that the tension following Russia’s invasion of Ukraine could have consequences for the International Space Station (ISS), a permanent laboratory in space where the United States, Russia and some other countries work as partners.

In a threatening series of tweets, Rogozin said that Russia could respond to the US sanctions by letting the ISS fall from space. He said the ISS, a 420-tonne spacecraft, the largest man-made structure in space, could drop over US or Europe, or over India and China. Its orbital flight path usually does not take it over most of the Russian territory.

#### ISS

The International Space Station is the only operational space laboratory as of now, orbiting the earth in a trajectory that is about 400 km above the land surface. It is operated by more than 15 partner countries. Apart from Russia and the United States, Canada, Japan and several members of the European Space Agency are partners in the ISS.

The football-field-sized ISS travels at a speed of about 28,000 km per hour. It completes one journey around the earth in about one and a half hours. In one day, therefore, it makes about 16 trips around the world.

The ISS has been manned continuously since the start of operations in 1998. At any given time, there is a crew of six astronauts on board. Right now, seven astronauts, four from the United States, two from Russia (it prefers to call them cosmonauts) and one from Germany, are at ISS. According to NASA, 240 individuals from 19 countries have so far been to the ISS. The facility is used for carrying out a variety of zero-gravity experiments, space exploratory studies, and technology development.

The ISS is not the first space station to be built and operated. Several smaller space stations have been used earlier, the most famous of which have been the Russian Mir space station that operated in the 1980s, and the American Skylab.

The ISS has been in operation since 1998 and is expected to continue at least till 2028. Russia, however, has indicated that it might pull out of the collaboration earlier, possibly by 2024. Replacements for ISS are already being planned. Several countries including India and China have a desire to put their own space stations. China has already tested at least two prototypes.

### **The threat**

The threat from chief of Russian space agency emanates from the fact that Russia provides the propulsion system of the ISS which keeps it in the pre-defined orbit. The ISS has two broad segments, one each managed by the United States and Russia. While the US manages power and the systems that make the spacecraft habitable, Russia is responsible for keeping it in orbit.

ISS is not entirely in zero-gravity space. It does encounter a little bit of gravity. Also, it loses a bit of energy as it moves around the earth. Left to itself, the ISS would fall down. The Russians periodically send thrusters that attach themselves to the ISS and impart the required momentum to keep it going.

Rogozin's threat implied that the US and other countries would not be able to keep the ISS from falling down if Russia withdrew its support. Incidentally, Elon Musk, the billionaire owner of SpaceX, the largest private space enterprise which has been carrying both astronauts as well as cargo to the ISS, responded by saying that his company could step in and provide the propulsion to the facility in case the Russians abandoned it.

### **US-Russia space cooperation**

The ISS is the most visible part of a wide-ranging space collaboration between US and Russia. The ISS partnership has so far remained immune from geopolitical tensions that regularly prevails between the two countries. For example, the previous crisis in Ukraine, when Russia had annexed Crimea in 2014, did not have any impact on the ISS collaboration.

This time too, Rogozin's threat is not being seen as something that Russia was seriously contemplating to do, and NASA played it down. But the present conflict does have the potential to affect space cooperation in other ways.

Already, there are reports that Russia might decide to keep the United States out from a planned mission to Venus, which the two countries were working to send together. The Venera-D mission to Venus is planned for 2029, and till now it was supposed to be a joint US-Russia mission.

**Source: The Indian Express**

## **2. Saudi Arabia to get first women train driver: What it means**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

About 28,000 women have applied for 30 train-driver jobs in Saudi Arabia, the first time such a post has been advertised in a gender-neutral format in the conservative kingdom. This follows recent reformatory moves that began with scrapping the ban on women driving and allowing them to travel freely without the shadow of male guardianship in 2018.

### **What will women train drivers do?**

Successful candidates will drive high-speed bullet trains between the holy cities of Mecca and Medina after a year of training. Renfe, the Spanish train company operating the service, said it was eager to create opportunities for women in its local business. It currently employs 80 male drivers and is training 50 more.

### **What does this move mean for Saudi women?**

Saudi Arabia has had one of the world's lowest female workforce participation rates. Until recently, women in Saudi could work only in altruistic roles, like teachers and medical workers. Even then, they had to observe



strict gender segregation rules. But over the last five years, female participation in the workforce has nearly doubled to 33 per cent following a drive by Saudi Crown Prince Mohammed bin Salman to open up the kingdom and diversify the economy. So, this has opened up more opportunities for women, who are now taking up jobs once restricted to men and migrant workers.

Despite this, the proportion of women working in the kingdom was still about half that of men in the third quarter of last year, at 34.1 per cent, and female unemployment was more than three times higher than for men, at 21.9 per cent, according to a study by the US-based Brookings Institute. If Renfe hires 30 women, its new recruits will still be a fringe player in the public sector.

### **Is this a placatory move to cover up Saudi Arabia's rights record, particularly its clampdown on women activists?**

This apparent gender-neutral approach has been seen by some as an attempt by Saudi Arabia to repair its image in the Western democracies, particularly when its human rights are under scrutiny. Crown Prince Bin Salman is hoping to claim leadership of the sustainable energy economy by peddling Saudi Arabia's renewable energy potential to the West, now that fossil fuels are rapidly depleting. He is making the right reformist noises by projecting a modern Saudi Arabia in sync with the rest of the world. The lifting of the driving ban for women is part of a project to modernise some aspects of Saudi society and draw in trust and belief in his Vision 2030 programme to steer the economy away from oil. It has, therefore, set a goal of 30 per cent women's participation in the workforce by 2030.

Some observers also see this as a move to deflect attention from the arrest of women's rights activists, including that of reformist princess, Basma bint Saud, and the murder of journalist Jamal Khashoggi in 2018. Princess Saud was released early this year after being held captive for three years since March 2019. She was detained as she prepared to fly to Switzerland for medical treatment. Her family told the United Nations in a written statement in 2020 that she was held due to her "record as an outspoken critic of abuses". The prominent Saudi women's right activist, Loujain al-Hathloul, who led the movement to allow women to drive in the kingdom, was detained in 2018. She was released conditionally in 2021. She still faces a five-year travel ban and other curbs.

### **What is the ground reality?**

Despite some major reforms, Saudi women must still obtain a male guardian's approval to get married or access certain kinds of healthcare. Women are heavily discriminated against and disadvantaged when it comes to their role in family structures, divorce and custody of children. Much of the women's rights come more as a dole from existing patriarchal hierarchies. It is still the men who decide and appear as concessionaires of women's rights.

That said, there has been a gradual societal adjustment, like accepting young men and women working together and meeting in public; women wearing colourful abayas and studying abroad on their own.

### **So why are women being allowed into what Saudis would consider unconventional jobs?**

That's because Saudi Arabia, challenged by a dipping oil economy, wants its citizens to take up jobs in the service sector. Opening jobs for women, the authorities believe, would help expand the country's workforce and perk up the country's economy.

**Source: The Indian Express**

## **3. Amid Ukraine invasion, why Russia is objecting to Finland and Sweden's NATO membership**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

On the sidelines of the Ukraine-Russia crisis, the ongoing developments in Nordic Europe, related to and in response to the invasion, may just lead to further instability in the region.

On Friday, Russia's foreign ministry spokesperson Maria Zakharova announced that if Sweden and Finland were to become members of NATO, the move "would have serious military and political consequences".

Russia's response came following NATO Secretary-General Jens Stoltenberg's invitation to Sweden and Finland to attend a virtual summit regarding the situation in Ukraine. We take a look at the larger historical background at play here, one that is becoming increasingly important given the ongoing crisis.

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### **Why is Russia objecting to Finland & Sweden's NATO membership?**

Along with Austria, Ireland, Cyprus and Malta, Finland and Sweden are two EU states that are not members of NATO yet. Since the end of the Second World War, both countries remained militarily neutral.

The two countries had also consciously remained politically neutral in the 1990s, but that stance changed when they joined the European Union in 1995. This is, in part, due to their policies of military non-alignment, but over the past few years, increase in what both countries view as Russian aggression, have prompted discussions of a potential NATO membership.

In a statement, Zakharova said, "All OSCE member states in their national capacity, including Finland and Sweden, have reaffirmed the principle that the security of one country cannot be built at the expense of the security of others."

The OSCE or the Organization for Security and Co-operation in Europe, is the world's largest security-oriented intergovernmental organization with an observer status at the United Nations. "Obviously, the accession of Finland and Sweden to NATO, which is primarily a military alliance as you well understand, would have serious military and political consequences, which would require our country to make response steps," Zakharova had added.

### **How have Sweden & Finland responded to Russia's invasion of Ukraine?**

Finland has taken a strong stand against the invasion of Ukraine and several top officials of the country have openly condemned Moscow's aggression. Sweden has followed suit.

Days before the invasion started this year, Finland's President compared Russia's current treatment of Ukraine to an attempt by Soviet dictator Josef Stalin to threaten and divide his country before invading in 1939, a Reuters report said.

At a security conference in Munich, President Sauli Niinistö said, "All what happens in Ukraine, all what happens in the Western world at the moment, reminds me of what happened in Finland...." Stalin thought that he will split the nation and it's easy to go and invade Finland. Totally the opposite happened. People united, and we see the same in Ukraine."

Although Sweden does not share a border with Russia, its location in the region and the spill-over of the conflict may impact its interests. A particular bone of contention between Sweden and Russia is the island of Gotland in the Baltic Sea, which often becomes a target of Moscow's military action.

While Sweden's Prime Minister Magdalena Andersson stopped short of labelling the Russian aggression as an "invasion" on February 22, that changed two days later when she tweeted: "Sweden condemns in the strongest terms Russia's ongoing invasion of Ukraine. Russia's acts are also an attack on the European security order. It will be met by a united and robust response in solidarity with Ukraine. Russia alone is responsible for human suffering."

Both Finland and Sweden have offered various kinds of assistance to Ukraine. Hours after the invasion started, Ukraine's President Volodymyr Zelensky spoke with President Niinistö, who allocated \$50 million in aid on behalf of Finland.

Finland's foreign ministry used the 30th anniversary of diplomatic relations between the two countries to reaffirm support for Ukraine. "Today we celebrate 30 years of diplomatic relations between #Finland and #Ukraine. Finland's support to Ukraine's sovereignty and territorial integrity is firm. Wishing courage and strength to the leaders and the people of Ukraine during this difficult time," the Finnish MFA tweeted.

### **What is the historical context?**

It is necessary to note that both Finland and Sweden have deep historical, cultural and economic ties with Russia. Prior to its independence in 1917, Finland was a part of, what are now, the territories of Sweden and Russia.

Until 1809, for close to 700 years, Finland was a part of Sweden. Following the Finnish War of 1809, Finland became an autonomous part of the Russian Empire, write Robin Forsberg & Jason C. Moyer in a report for the Wilson Center.

But two wars — the Winter War of 1939 and the Continuation War of 1941-1944 — changed the relations between Finland and the Soviet Union. "The foreign policy approach adopted by President Paasikivi and President Kekkonen, the Paasikivi-Kekkonen doctrine, positioned Finland as a neutral country during the Cold War while maintaining good relations with its neighbor to the East," the authors write.

This treaty would serve as the main instrument in the Finland-Soviet relations from 1948 to 1992. The Forsberg-Moyer report adds that to honour the treaty and to not provoke the Soviet Union, Finland also declined funding from the Marshall Plan.

"It is widely held that this treaty was signed under pressure from the Soviet Union, but it granted Finland enough freedom to become a prosperous democracy," the report says. Despite its difficult history with Russia, Finland did not join the western security alliance.

The Wilson Center report has some interesting insight into Sweden's historical relations with Russia too: "Sweden has not joined a military alliance or participated in any war since 1814, a peace spanning over 200 years. After World War II, Sweden was at a crossroads in its defense policy as traditional powers fell and new powers arose. Rather than joining the U.S. side of the Cold War but with no interest in aligning with the Soviet Union, Sweden sought a third way to ensure its defense and regional stability."

In 1948, when Sweden's attempts to create a neutral Scandinavian Defense Alliance failed with Norway and Denmark choosing to align with NATO, it was compelled to return to its policy of neutrality, the report added.

### **What is the modern political context?**

In 2018, Estonia's former President Toomas Hendrik Ives wrote a paper on the Finnish-NATO membership. Hendrik's writings indicate that much has been dependent domestically and how much the countries' citizens want that membership, more than political circles. When the paper was published in 2018, Hendrik wrote that "in Finland, popular opinion (was) against membership; in Sweden it (was) up to now positive but insufficient."

When Hendrik was writing the paper, there was "a view among those opposed to Swedish/Finnish membership in NATO at (that) time, that we will join "if things get serious". In 2018, Hendrik explained that the security environment did not call for joining NATO but the sentiment was that if the situation were to change, both the countries would join.

In January this year, Finland's Prime Minister Sanna Marin had told Reuters that Finland did not plan to join NATO in the near future but would be ready to stand with its European allies and the United States by imposing tough sanctions on Russia if it were to attack Ukraine. "It would have a very substantial impact and the sanctions would be extremely tough," Marin had said.

At the same time, Marin had also stated that Finland would continue to remain firm on its stance that it has the right to join NATO if it chooses at some point to do so in the future. "Nobody can influence us, not the United States, not Russia, not anyone else," Marin had told Reuters.

#### **Do Finland & Sweden have domestic support?**

To be granted NATO membership, the countries would need to demonstrate substantial public support for the move. Page | 43

In a poll conducted recently by Finland's largest daily Helsingin Sanomat, approximately 28% of respondents wanted Finland to join NATO, while 42% were against and the rest were unsure, according to Reuters. The figures suggested that there was an 8 percentage point rise in numbers of those in favour from the last poll that had been conducted in 2019.

According to a report by The Local (Sweden), public support for the country joining NATO has increased over the past few years. In December 2020, a Swedish parliamentary majority was in favour of readiness to join NATO as a possible security policy option emerged for the first time, Reuters had reported.

However, the Swedish government remained opposed to such a move. At that time, Sweden's Foreign Minister Ann Linde had said that the government had no such plans. "These kinds of sudden changes based on fairly weak majorities, it's not good. It undermines the credibility of Swedish security policy," Linde had said.

**Source: The Indian Express**

#### **4. What is SWIFT, what shutting Russia out of it means**

##### **Relevant for GS Prelims & Mains Paper II; International Issues**

The US and European Union (EU) have decided to partially exercise the nuclear-weapon option as far as economic sanctions are concerned: cutting off a number of Russian banks from the main international payment gateway, SWIFT. The assets of Russia's central bank are also expected to be frozen, constraining Moscow's ability to access its overseas reserves.

The intention of the moves is to "further isolate Russia from the international financial system", a joint statement stated.

These joint sanctions are the harshest measures against Moscow since its forces went into Ukraine and are expected to badly hit a country that is heavily reliant on the SWIFT platform for its key natural resources trade, especially the payments for its oil and gas exports. Cutting off a country from SWIFT in the financial world is equivalent to restricting Internet access of a nation.

Prior to this, only one country had been cut off from SWIFT — Iran. It resulted in it losing a third of its foreign trade. The move against Russia is only partly implemented for now, with only some Russian banks being covered. The option of expanding it further to a pan-country ban is something that the US and its allies are holding back as a further escalatory move.

#### **What is SWIFT?**

The SWIFT system stands for the Society for Worldwide Interbank Financial Telecommunication and is a secure platform for financial institutions to exchange information about global monetary transactions such as money transfers.

While SWIFT does not actually move money, it operates as a middleman to verify information of transactions by providing secure financial messaging services to more than 11,000 banks in over 200 countries. Based in



Belgium, it is overseen by the central banks from eleven industrial countries: Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom, and the United States, besides Belgium.

### **What does the move aim to achieve?**

Excluding Russian banks from the SWIFT platform is expected to hit the country's economy hard — and in the words of the White House, it will make the country rely on “the telephone or a fax machine” to make payments.

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According to former Russian Central Bank deputy chairman Sergei Aleksashenko: “There is going to be a catastrophe on the Russian currency market on Monday”. Ursula von der Leyen, president of the European Commission, said the decision to paralyse the assets of Russia's central bank would stop the Kremlin from “using its war chest”, referring to its forex reserves.

The banks affected are “all those already sanctioned by the international community, as well as other institutions, if necessary”, a German spokesman was quoted as saying by the BBC. Targeting only some Russian banks seems to be aimed at both keeping the option of further escalation open, while ensuring that the sanctions have the maximum possible impact on Moscow, but prevent a major impact on European companies dealing with Russian banks for payments for their gas imports. Plus, the curbs on Russia's central bank will prevent it from dipping into its forex deposits to limit the effect of sanctions.

Moscow has been building up a cushion of foreign currency in the wake of the previous round of sanctions in 2014, with reserves touching a record high of \$630 billion in January 2022. The new measures will significantly decrease the reserves available to the country's central bank, according to experts.

While workarounds to SWIFT have been tried, none have proven to be effective. During the last seven years, Russia, too, has worked on alternatives, including the SPFS (System for Transfer of Financial Messages) — an equivalent of the SWIFT financial transfer system developed by the Central Bank of Russia. The Russians are reported to be collaborating with the Chinese on a possible venture which will be a potential challenger to SWIFT.

It needs to be seen if Moscow can leverage this platform to some extent to get around the partial ban, which could soon be escalated to a complete one.

While it may take a while for the ban to make an impact, what is important is that they exhibit a strong resolve from Western nations. Responding to the latest economic sanctions, Ukraine's Prime Minister Denys Shmyhal termed them a “real help during this dark time”.

**Source: The Indian Express**

## **5. A look at West's toughest sanctions yet on Russia**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

The United States joined European allies Saturday in dramatically escalating financial penalties against Russia over its invasion of Ukraine, after the West's initial rounds of sanctions failed to deter Russian President Vladimir Putin in his military offensive.

Two of the key new measures target the heart of Russia's financial system, its Central Bank, and cut an unspecified number of Russia's banks off from the SWIFT financial network. SWIFT is a vital element of global commerce and banking that moves money from bank to bank around the world.

US and European officials made clear they still were working on implementation of the sanctions, and said they would take care not to impact European purchases of Russian natural gas.

US officials said the moves would send Russia's ruble currency crashing in value, and intensify its isolation financially. It's the latest and toughest in days of new sanctions since Russian forces moved into Ukraine late last week.

A look at Saturday's measures and earlier ones. In all, they potentially amount to some of the toughest sanctions imposed on any nation in modern times.

### **Hitting at Russia's Central Bank**

The new restrictions that the United States, European Union and United Kingdom announced for Russia's Central Bank would limit the Kremlin's ability to access the more than \$600 billion in reserves there. If the West is able to implement the Central Bank restrictions as it aims to, it will cripple Russia's ability to keep the ruble from crashing in value amid the tightening Western sanctions.

The likely result, US officials told reporters Saturday: The Russian ruble goes into free fall, triggering spiraling inflation there.

Specifically, by limiting Russia's ability to sell off its international reserves, the Central Bank measures mean the Kremlin would lose its best tool to prop up Russia's currency.

Bank runs, as Russians line up at banks to try to get their ruble deposits and convert it into the safer dollar, will likely worsen, said Clay Lowery, executive vice president of the Institute of International Finance. And the run on dollars inside Russia would cause a drain on the central bank's reserves.

Combined with the new SWIFT limits announced by Europe and the United States, the Central Bank measure is "likely to cause serious damage to the Russian economy and its banking system," Lowery said.

Going after a country's central bank is a rare but not unprecedented move by the international community, and a powerful one.

### **Swift Punishment**

Saturday's move includes cutting key Russian banks out of the SWIFT financial messaging system, which daily shuffles countless billions of dollars among more than 11,000 banks and other financial institutions around the world.

Allies on both sides of the Atlantic also considered the SWIFT option in 2014, when Russia invaded and annexed Ukraine's Crimea and backed separatist forces in eastern Ukraine. Russia declared then that kicking it out of SWIFT would be equivalent to a declaration of war. The allies — criticized ever after for responding too weakly to Russia's 2014 aggression — shelved the idea back then. Russia since then has tried to develop its own financial transfer system, with limited success.

The U.S. has succeeded before in persuading the Belgium-based SWIFT system to kick out a country — Iran, over its nuclear program. But kicking Russia out of SWIFT could also hurt other economies, including those of the U.S. and key ally Germany.

The disconnection from SWIFT announced by the West on Saturday is partial, leaving Europe and the United States room to escalate penalties further later.

Western officials held off from including the SWIFT ban in the first rounds of sanctions, partly because of the collateral impact it would have on other economies that buy Russia's oil and natural gas.

Officials said they would work to limit the impact of the restrictions on other economies and European purchases of Russian energy.

**Cutting Russia's banks off from the US dollar**

Earlier sanctions last week, launched within hours of Russia's announcement of its offensive, included sanctions targeting big Russian banks holding nearly 80% of all the country's banking assets, the Treasury Department said.

That includes Russia's two biggest: state-owned SberBank and VTB. Combined, they hold almost \$750 billion in assets, the U.S. said, which is more than half of the entire total in Russia.

Thursday's sanctions on the banks wield the unique power the U.S. has through the dollar, the currency of choice in business transactions around the world.

The targeted banks normally do tens of billions of dollars in business in dollars daily. The U.S. is now cutting them off from the U.S. financial system and US dollar. The aim is to make the most ordinary business matters as well as international trade far more difficult for the banks, and Russia.

Other US measures target key state-owned and private businesses in Russia, aiming to make it harder for them to raise money to invest and operate.

The US also went after more of Russia's elites, sanctioning bankers and other powerful associates of Putin in Russia's top financial, political and security circles.

**Starving Russia's businesses, military of US high-tech**

Export controls announced by the Biden administration earlier in the week featured another especially strong piece of leverage the U.S. holds — America's semiconductors and other advanced high-tech gear.

President Joe Biden said new US export limits will deprive Russia of more than half of its current high-tech supply. It will "strike a blow" to Russia's aims to modernize its military, its vaunted aerospace industry, its space program, shipping and other industry, he declared.

By "reducing their ability to compete economically," the high-tech limits will be a "major hit to long-term strategic ambitions," Biden said.

US export controls are expected to deprive Russian industries and the military of the high-tech U.S. components that help warplanes and passenger jets fly and make smartphones smart, along with other software and advanced electronic gear that make the modern world run.

The US said the European Union, Japan, Britain and other countries were also cooperating in the move to starve Russia of high-tech components.

The US response could add Russia to the most restrictive group of countries for export control purposes, putting them with Cuba, Iran, North Korea and Syria.

They limit Russia's ability to obtain integrated circuits and products containing integrated circuits, due to the global dominance of US software, technology and equipment. The impact could extend to aircraft avionics, machine tools, smartphones, game consoles, tablets and televisions.

However, US export restrictions would risk motivating businesses to look for alternatives elsewhere, including China.

**Source: The Indian Express**

**6. Exclusion from SWIFT: what it entails What is SWIFT? Why is Russia being threatened with a ban on using its services?**

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**Relevant for GS Prelims & Mains Paper II; International Issues**

The story so far: The U.S., Europe and several other western nations are moving to exclude Russia from the Society for Worldwide Interbank Financial Telecommunication (SWIFT), an international network for banks to facilitate smooth money transactions globally. This could be the strongest economic sanction against Russia over its military moves in Ukraine, as it will potentially cut off the country from receiving international payments. What is SWIFT? SWIFT is a messaging network used by banks and financial institutions globally for quick and faultless exchange of information pertaining to financial transactions. The Belgium-headquartered SWIFT connects more than 11,000 banking and securities organisations in over 200 countries and territories. Each participant on the platform is assigned a unique eight-digit SWIFT code or a bank identification code (BIC). If a person, say, in New York with a Citibank account, wants to send money to someone with an HSBC account in London, the payee would have to submit to his bank, the London-based beneficiary's account number along with the eight-digit SWIFT code of the latter's bank. Citi would then send a SWIFT message to HSBC. Once that is received and approved, the money would be credited to the required account. SWIFT is merely a platform that sends messages and does not hold any securities or money. It provides standardised and reliable communication to facilitate the transaction. What happens if one is excluded from SWIFT? If a country is excluded from the most participatory financial facilitating platform, its foreign funding would take a hit, making it entirely reliant on domestic investors. This is particularly troublesome when institutional investors are constantly seeking new markets in newer territories. An alternative system would be cumbersome to build and even more difficult to integrate with an already expansive system. SWIFT, first used in 1973, went live in 1977 with 518 institutions from 22 countries, its website states. SWIFT itself had replaced the much slower and far less dynamic Telex. Are any countries excluded from SWIFT? Certain Iranian banks were ousted from the system in 2018 despite resistance from several countries in Europe. "This step, while regrettable, was taken in the interest of the stability and integrity of the wider global financial system, and based on an assessment of the economic situation," SWIFT states on its website. How is the organisation governed? SWIFT claims to be neutral. Its shareholders, consisting of 3,500 firms across the globe, elect the 25-member board, which is responsible for oversight and management of the company. It is regulated by G-10 central banks of Belgium, Canada, France, Germany, Italy, Japan, The Netherlands, the United Kingdom, the United States, Switzerland, and Sweden, alongside the European Central Bank. Its lead overseer is the National Bank of Belgium. The SWIFT oversight forum was established in 2012. The G-10 participants were joined by the central banks of India, Australia, Russia, South Korea, Saudi Arabia, Singapore, South Africa, the Republic of Turkey, and the People's Republic of China. In 2021, the SWIFT financial messaging platform had recorded an average of 42 million FIN messages per day, as per the data on its website. The full-year figure was an 11.4% growth on a year-over-year basis. Europe, West Asia, and Africa, combined sent approximately 4.66 billion messages. The Americas and the United Kingdom stood second with 4.42 billion interactions, with the Asia Pacific on third with an approximate 1.50 billion messages.

**Source: The Hindu**

**7. Canada's digital services tax and USTR's opposition****Relevant for GS Prelims & Mains Paper II; International Issues**

The Office of the U.S. Trade Representative (USTR) has protested against Canada's decision to impose a digital services tax of 3% on large companies that sell various services in Canada. Companies with a total annual revenue of at least \$850 million and profits of at least \$16 million will be taxed by the Canadian government under the new rules. USTR has argued that the new tax particularly targets large U.S. technology businesses and has stated that it would look into ways available under existing bilateral and other trade agreements to retaliate against Canada's actions.

**What is the issue?**

The question of how to tax large multinational corporations (MNCs) that have their business spread across countries has been a bone of contention among governments. Many MNCs draw a large share of their revenue



and profits from outside their home countries, yet they pay most of their taxes in their home country. These include large technology companies such as Facebook, Apple, and Google which do business in developing countries like India and China but pay most taxes in the US or in tax shelters such as Ireland. Many governments have tried to tax at least a part of the profits of these MNCs.

In a meeting of the Organization for Economic Cooperation and Development in October last year, a total of 136 countries including Canada and the United States came to an agreement on how to tax large MNCs. They agreed, under what is known as the OECD/G20 Base Erosion and Profit Shifting (BEPS) project, that large MNCs will have to pay tax on a certain portion of their profits to the government of the foreign country where they do business. To be particular, companies will have to allocate 25% of the residual profits, which is defined as profits exceeding 10% of revenue, as profits earned in the foreign country and pay tax on these profits. Other than this, the countries also agreed to impose a minimum corporate tax rate of at least 15% on corporations with revenues and profits above a certain threshold level. This was seen as a way to bring an end to tax competition which adversely affected the tax revenues of governments. So, Canada's new digital services tax basically comes at a time when governments are trying to implement new ground rules on how to tax companies and share revenues.

#### **Why is the USTR unhappy about the digital services tax?**

USTR has argued that Canada's digital services tax goes against the spirit and the text of the BEPS agreement signed by 136 countries in October last year. It was agreed last year that the signatory countries would not impose new unilateral taxes that work against the spirit of the BEPS agreement. Countries were instead supposed to work together on the swift implementation of the BEPS rules.

Canada has contested that the digital services tax will not come into effect if the BEPS framework is implemented on time (by the end of 2023). It has also assured the United States that it is committed to cooperating with other governments to implement the BEPS framework. It should be noted that in case there is a delay in the implementation of the BEPS agreement that was framed last year, then companies will have to pay the digital service tax from 2024 on all their accumulated profits since 2022.

#### **What lies ahead?**

The dispute over Canada's digital services tax is seen as a prelude to the various other problems that are likely to arise as governments across the world try to implement the BEPS agreement. Each government would want to maximise its share of taxes and some may even disagree on the appropriate tax rate that maximises overall revenue collection, so more disputes might be in store. Some also see Canada's decision as a sign that there may be doubts over the timely implementation of the BEPS framework.

**Source: The Hindu**

### **8. Big Oil MNCs exiting Russia**

#### **Relevant for GS Prelims & Mains Paper II; International Issues**

British energy major Shell on Monday decided to exit Russia. The company ended its joint venture energy projects with Russian energy company Gazprom including the Sakhalin-2 liquefied natural gas project and projects to develop and explore energy fields in Siberia. Shell is the latest oil company to quit Russia after British Petroleum (BP) on Sunday announced that it will be ending its joint venture with Rosneft. Many other smaller energy companies are also expected to exit Russia soon.

#### **Why is Big Oil quitting Russia?**

Russian President Vladimir Putin's decision to send military troops to invade Ukraine last week has led the U.S. and Europe to impose various economic sanctions on the country. These include cutting off a number of Russian banks from the SWIFT network for international payments as well as freezing the Russian central bank's dollar assets in order to stop the central bank from propping up the rouble.

Many, however, have called for sanctions that directly target Russia's energy sector, which contributed to more than a third of the Russian government's budget last year. It should be noted that Russia's energy sector is heavily dominated by the Russian government with major producers such as Gazprom and Rosneft, which contribute to most of Russia's energy production, being owned by the Government. These companies transfer their earnings to the Russian exchequer and also play a role in Russia's foreign policy that uses energy as a bargaining chip. The CEO of Rosneft, Igor Sechin, for instance, is seen as a close ally of Putin and so BP's collaboration with Rosneft has often been criticised. There have also been calls for western oil companies to quit Russia after the annexation of Crimea in 2014.

Doing business in Russia thus carries significant reputational risk for large western oil companies. However, the massive profits that large oil companies earn from their Russian operations has largely outweighed the reputational costs. Shell's assets in Russia were valued at over \$3 billion at the end of last year while BP derived a fifth of its total profits last year from its investment in Rosneft. This time, however, there has been greater political pressure on these oil companies. U.K.'s Energy Secretary Kwasi Kwarteng, for instance, has been strongly pushing British energy companies to sever ties with Russia.

#### **What will be the impact of Big Oil's exit from Russia?**

Most of the impact of Big Oil's exit from Russia on the country's economy is likely to be over the long-run rather than in the immediate future. Foreign companies offer important technical know-how which helps in energy exploration and production. They also bring precious capital to fund energy projects in Russia. These can turn out to be crucial determinants of energy sector efficiency in the long-run.

It is not clear, however, how exactly BP and Shell will exit their investments at the moment. The exit could involve incurring significant losses if the Russian government decides to seize their assets.

Western commodity trading houses such as Trafigura and Glencore also play an important role in the sale of Russian energy in the international market. Their exit from dealing in Russian energy assets, if it happens, can affect liquidity and lead to greater volatility in energy prices in the international market.

#### **What lies ahead?**

Given Russia's heavy reliance on the energy sector, tough energy sanctions can cripple Russia's economy and rein in the Kremlin's ability to fund the war with oil revenue. However, the West has been measured in its energy sanctions till date given Europe's heavy reliance on Russian energy supplies; Russia supplies about 40% of Europe's gas needs. At a time when energy prices are already rising in Europe due to supply-chain disruptions owing to the pandemic and Government measures to cut down the use of fossil fuels, disruptions in Russian supply can cause further pain. This will affect not only European consumers but also the entire world as everyone will have to pay a higher price when supply drops in what is a common, global energy market. In short, given the mutual dependence between Russia and Europe, the West will have to find ways to decrease reliance on Russian energy before it can seriously hurt Putin.

Further, regardless of sanctions, a prolonged war can adversely affect the Russian economy. Unlike the U.S. or Europe which are major economies in the world capable of funding long foreign military expeditions, Russia does not possess the economic might to fund a prolonged and expensive war. The 30% fall in the Russian rouble against the U.S. dollar could simply be a reflection of this fact.

**Source: The Hindu**

### **9. The controversy around the \$500 million MCC grant to Nepal**

**Relevant for GS Prelims & Mains Paper II; International Issues**

On February 27, the Nepal parliament approved the Millennium Challenge Corporation Nepal Compact — a \$500-million grant from the United States for electricity transmission and road development projects, after five years of keeping it on hold. The grant was ratified with an imperative declaration attached to it.

The declaration states that the U.S. grant is not part of the Indo-Pacific strategy and Nepal's Constitution would be above the provisions of the grant agreement. It also mentions that the grant will solely be perceived as an economic assistance. Political parties and civil society have been divided on the U.S. grant for various reasons.

The grant agreement, which was tabled in the Parliament in Kathmandu on February 20, faced demonstrations against it, which turned violent, with riot police firing tear gas shells and using water cannons to disperse the protesters outside the parliament. Protestors also hurled stones at the police and several people reported injuries on both sides.

### **What is the Millennium Challenge Corporation?**

The Millennium Challenge Corporation (MCC) is an independent U.S. foreign aid agency, which was established in 2004 by the country's Congress to offer "time-limited grants promoting economic growth, reducing poverty, and strengthening institutions," to low and lower-middle income countries through a selection process.

While this is the current official definition of the aid body, MCC was proposed by the George Bush administration post the 9/11 terrorist attack, as a tool to counter global poverty and international terrorism, citing the rationale that poverty and terrorism are linked.

MCC selects countries to award grants through a selection process, which involves evaluating the country's performance on 20 policy indicators ranging from control on corruption to government effectiveness.

The MCC offers assistance in three forms. In the form of compacts, meaning large, five-year grants; concurrent compacts or "grants that promote cross-border economic integration", and threshold programs, which are smaller grants aimed at policy reform. The aid being offered to Nepal is in the form of a compact; the MCC has so far approved about 37 compacts for 29 countries, worth a total of over \$13 billion.

### **What is the MCC Nepal Compact?**

In 2014, after meeting 16 of the 20 policy indicators on which MCC selects countries, Nepal had qualified for a compact, the agreement for which it later signed in 2017.

Under the compact, the U.S. government, through MCC, would provide a grant of \$500 million to Nepal for energy transmission and road development projects, with the latter also chipping in \$130 million from its exchequer. The power project proposed in the compact is a 300-400 km long energy transmission line with a capacity of 400 kilovolt, along a power corridor starting from the northeast of Kathmandu and ending near Nepal's border with India. The project also involves building three power substations along the line. Besides, the grant money is also intended for a 'road maintenance project' which will upgrade roads on the east-west highway, spread across 300 kms.

While the compact says the energy project is meant to augment power generation and economic growth for Nepal, it also states that it will facilitate cross-border electricity trade with India.

Before the work on the projects can begin however, the bill has to be formally accepted or ratified in the country's parliament. Both the U.S. and Nepal governments have said that it is a 'no strings attached' grant, which would not have any conditions, or require repayment and interest payment. However, section 7.1 of the agreement says it will "prevail" over the domestic laws of Nepal and section 6.8 grants immunity to MCC staff in "all courts and tribunals of Nepal." The U.S. Embassy in Nepal described the compact this month as a "gift" from the American people and a "partnership" between the two countries that will "bring jobs and infrastructure to Nepal and improve the lives of Nepalis."

**What is the dispute around the MCC grant?**

As per the initial agreement, the compact should have come into effect by 2019, but skepticism, politics and now protests, made its course rocky.

The U.S. had been increasing its pressure on Nepal to ratify the agreement, with the Biden administration's Assistant Secretary of State for South and Central Asia, Donald Lu, calling the Nepal Prime Minister Sher Bahadur Deuba on February 10, giving a deadline to ratify the MCC compact in parliament by February 28, or the U.S. would have to "review its ties with Nepal." There have been instances in the past where the U.S. has terminated such compacts with countries for different reasons.

Nepali political parties have been divided on the MCC agreement over fears it would undermine Nepal's sovereignty by pulling it into the US's Indo-Pacific Strategy (IPS), which focuses on countering China-- a country Nepal has close ties with. The compact is also seen by some observers as America's answer to China's Belt and Road initiative, a road development program that the Nepal government signed in 2016.

In May 2019, U.S. State Department's Assistant Secretary for South Asia, David J Ranz, on his visit to Nepal had said that MCC was an important part of the IPS. Besides, the US's November 2019 report clearly states that assistance under the MCC compact is a part of IPS. This further strengthened the skepticism of some of Nepal's parties, that the compact would go against its constitution, which binds the country to a strong principle of non-alignment.

After Nepal received the call from the White House about the deadline, China said it opposes "coercive diplomacy and actions that pursue selfish agendas at the expense of Nepal's sovereignty and interests." The people of Nepal are also afraid that the MCC would make profits from the power project by exporting energy to India. Besides, the call that Donald Lu made to Nepal about meeting the ratification deadline, was made when he was in Australia to attend the Quad meeting. This has led to skepticism that the MCC agreement, involving cross-border energy trade with India, would also benefit the Quad, which has often spoken about making infrastructure partnerships in India's neighbourhood, including Nepal, Maldives and Sri Lanka.

**How has the pact played out in Nepal politics?**

Nepal has been witnessing bouts of political instability after the 2017 national election, when the leader of the Communist Party of Nepal (UML), K.P Oli and Pushpa Kumar Dahal (Prachanda) of Communist Party of Nepal (Maoist) formed a coalition government, with Mr. Oli as the Prime Minister. This Government had a power sharing agreement under which Mr. Oli and Mr. Prachanda would assume the post of Prime Minister for two equal periods of time. This agreement did not work out and as a result, the country's parliament was dissolved twice -- first, in December 2020 and then in May 2021, with fresh elections scheduled for November 2022. In July 2021, however, the Supreme Court of Nepal, ordered that the parliament be reinstated with Mr. Oli's rival Sher Bahadur Deuba of the Nepali Congress as the Prime Minister. In this political backdrop, the MCC compact became politicised by parties as a device to strengthen their positions in the upcoming elections. While the two communist parties in the leading coalition, including Mr. Prachanda's party have been against the MCC compact, the PM's party is endorsing it.

**Source: The Hindu**

**10. What are cluster bombs and thermobaric weapons, allegedly used by Russia against Ukrainians?****Relevant for GS Prelims & Mains Paper II; International Issues**

Human rights groups Amnesty International and Human Rights Watch, and Ukraine's ambassador to the United States Oksana Markarova on Monday (February 28) accused Russia of using cluster bombs and vacuum bombs in the ongoing war.



“They used the vacuum bomb today,” Markarova told reporters after a meeting with members of Congress. White House Press Secretary Jen Psaki said if Russia had indeed used these weapons, “it would potentially be a war crime”.

### **What are cluster munitions?**

According to the 2008 Convention on Cluster Munitions, a cluster munition means a “conventional munition that is designed to disperse or release explosive submunitions each weighing less than 20 kilograms, and includes those explosive submunitions”.

Essentially, cluster munitions are non-precision weapons that are designed to injure or kill human beings indiscriminately over a large area, and to destroy vehicles and infrastructure such as runways, railway or power transmission lines. They can be dropped from an aircraft or launched in a projectile that spins in flight, scattering many bomblets as it travels.

Many of these bomblets end up not exploding, but continue to lie on the ground, often partially or fully hidden and difficult to locate and remove, posing a threat to the civilian population for long after the fighting has ceased. The Convention on Cluster Munitions specifically identifies “cluster munition remnants”, which include “failed cluster munitions, abandoned cluster munitions, unexploded submunitions and unexploded bomblets”.

### **And what is a thermobaric weapon?**

Thermobaric weapons — also known as aerosol bombs, fuel air explosives, or vacuum bombs — use oxygen from the air for a large, high-temperature blast. A thermobaric weapon causes significantly greater devastation than a conventional bomb of comparable size.

The weapons, which go off in two separate stages, can be fired as rockets from tank-mounted launchers or dropped from aircraft. As they hit their target, a first explosion splits open the bomb’s fuel container, releasing a cloud of fuel and metal particles that spreads over a large area.

A second explosion then occurs, igniting the aerosol cloud into a giant ball of fire and sending out intense blast waves that can destroy even reinforced buildings or equipment and vaporise human beings.

### **Is it legal to use these weapons?**

Countries that have ratified the Convention on Cluster Munitions are prohibited from using cluster bombs. As of date, there are 110 state parties to the convention, and 13 other countries have signed up but are yet to ratify it. Neither Russia nor Ukraine are signatories.

Vacuum bombs are not prohibited by any international law or agreement, but their use against civilian populations in built-up areas, schools or hospitals, could, according to a report in the BBC, attract action under the Hague Conventions of 1899 and 1907.

Amnesty International said international humanitarian law prohibits the use of inherently indiscriminate weapons such as cluster munitions, Reuters reported. Launching indiscriminate attacks that kill or injure civilians constitutes a war crime, the report said.

**Source: The Indian Express**

## **11. What is the Montreux Convention and can Turkey use it to block Russian warships?**

**Relevant for GS Prelims & Mains Paper II; International Issues**

Turkey is set to implement an international convention on naval passage through two of its strategic straits, which would allow them to limit the movement of Russian warships between the Mediterranean Sea and the Black Sea.

Mevlut Cavusoglu, Turkey's foreign minister said on Sunday that the situation in Ukraine had become a war, a declaration that authorises Ankara to activate the Montreux Convention and ban Russian war vessels from entering the Black Sea through the Bosphorus and Dardanelles straits.

"In the beginning, it was a Russian attack," Cavusoglu said in an interview with broadcaster CNN Turkish." Now it has turned into a war."

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"Turkey will implement all provisions of Montreux Convention in a transparent manner," he added.

The decision comes three days after Kyiv had asked Ankara to close the Bosphorus and Dardanelles straits to Russian ships.

### **But what does the Montreux Convention entail and how could its implementation affect the war between Russia and Ukraine?**

#### **The only passage to the Black Sea**

The Bosphorus and Dardanelles straits, also known as the Turkish Straits or the Black Sea Straits, connect the Aegean Sea and the Black Sea via the Sea of Marmara. It is the only passage through which the Black Sea ports can access the Mediterranean and beyond.

Over three million barrels of oil, about three per cent of the daily global supply, mostly produced in Russia, Azerbaijan, and Kazakhstan, pass through this waterway every day. The route also ships large amounts of iron, steel, and agricultural products from the Black Sea coast to Europe and the rest of the world.

According to the 1936 Montreux Convention Regarding the Regime of the Straits, often referred to simply as the Montreux Convention, Turkey has control over both the Bosphorus and Dardanelles straits.

In the event of a war, the pact gives Ankara the right to regulate the transit of naval warships and to block the straits to warships belonging to the countries involved in the conflict.

#### **Could Turkey block Russian warships?**

Russia's location on the Black Sea complicates the situation.

Article 19 of the treaty contains an exception for the countries on the Black Sea that can effectively undermine Turkey's power in blocking the Russian warships entering or exiting the Black Sea: "Vessels of war belonging to belligerent powers, whether they are Black Sea Powers or not, which have become separated from their bases, may return thereto," it says.

That means warships can return to their original bases through the passage and Turkey cannot prevent it.

For example, a Russian fleet registered in the Black Sea but currently located in the Mediterranean Sea, is allowed to pass through the Bosphorus and Dardanelles straits and return to its base. The condition also applies to Russian fleets currently in the Black Sea that belong to a base in the Mediterranean or Baltic Sea. Russia is free to take them out of the Black Sea.

Cavusoglu raised this point in his interview with CNN. "If this warship is to go to the base in the country that is a party to the war, then this passage cannot be prevented", he said, adding that there should be no abuse and "the ships returning to their bases should not be involved in a war after saying it will go back to the base."

The official assignment of a ship to a port determines whether it has the right to pass through the Straits or not. The official assignment, according to the International Maritime Organisation (IMO) falls under the authority of the state that owns the ships. Therefore, another possible way for Russia to exploit the Montreux Convention, would be to reassign some of its vessels to the Black Sea.

**No immediate impact, but long term consequences**

The extensive freedom that Russia enjoys due to its location on the Black Sea casts doubts on whether invoking the pact will have significant military consequences on the ongoing conflict. "This is mainly order-reinforcing; any military relevance will be minor & long-term," wrote Cornell Overfield, analyst at the Center for Naval Analyses, in a thread of tweets.

According to the treaty, vessels that Russia decides to bring into the Black Sea or take out, will have to remain there until the end of the war. In addition, "warships, including auxiliary vessels, not currently in the Black Sea and not traditionally based there, absolutely may not enter the Black Sea," Overfield wrote. "This might be irrelevant in the short term but could be big if the conflict drags on."

Sinan Ulgen, former Turkish diplomat and researcher at the Carnegie Foundation in Europe, believes that invoking the treaty will make it more complicated for Russia to balance its military presence in the Black Sea and the East Mediterranean.

"Before Russia was able to flexibly use its Black Sea fleet naval assets including submarines," he wrote on Twitter. "Now not anymore. It has to choose which asset will be in the Black Sea and which one will remain in the Mediterranean."

"What Turkey is doing is more like what countries closing their airspace to Russia flights are doing," Overfield wrote.

"Closing the Straits might never have a military impact in the Russo-Ukrainian War," he adds. "But it is Turkey's unique way of punishing Russia for its crime of aggression and showing commitment to international law."

**Source: The Indian Express**

**12. World's largest plane destroyed in Russia-Ukraine war — here's what happened****Relevant for GS Prelims & Mains Paper II; International Issues**

Amid Moscow's assault on Ukraine, the world's largest cargo aircraft, the Antonov AN-225 or 'Mriya', was destroyed by Russian troops during an attack on an airport near Kyiv, Ukrainian authorities announced Monday.

According to Ukrainian officials, the plane was extensively damaged after Russian troops entered a Ukrainian air base in Hostomel, where the aircraft was parked. While they have not confirmed the extent of damage, Ukraine has said that it will be rebuilding the legendary plane.

"This was the world's largest aircraft, AN-225 'Mriya' ('Dream' in Ukrainian). Russia may have destroyed our 'Mriya'. But they will never be able to destroy our dream of a strong, free and democratic European state. We shall prevail," Ukraine's Foreign Minister Dmytro Kuleba said.

**What do we know about the Antonov AN-225?**

With a wingspan of over 290-feet, the unique Antonov AN-225 was designed in what was then the Ukrainian USSR during the 1980s amid a tense race to space between the United States and the Soviet Union. The plane, nicknamed 'Mriya' or 'dream' in Ukrainian, is very popular in aviation circles, and is known to attract huge crowds of fans at air shows around the world.

It was initially designed as part of the Soviet aeronautical program to carry the Buran, which was the Soviet version of the US' Space Shuttle. After the collapse of the Soviet Union in 1991, when the Buran program was cancelled, the aircraft was instead used to transport massive cargo loads.

Only one AN-225 was ever built by the Kyiv-based Antonov Company, the defence manufacturers who originally designed the plane. It is essentially a large version of another design by the Antonov company — the four-engine An-124 ‘Condor’, which is used by the Russian Air Force.

The aircraft first took flight in 1988 and has been in use ever since. In the recent past, it has been used for delivering relief supplies during calamities in neighbouring nations. During the initial days of the Covid pandemic, it was used to supply medical supplies in affected nations.

### **What happened to the plane?**

Since launching its attack four days ago, Russia has been targeting airfields and military bases. On Friday, Russia claimed it had captured the Hostomel airfield, where the AN-225 was under repair.

“Russia has hit the Mriya as a symbol of Ukraine’s aviation capabilities,” Ukraine’s state-run defence manufacturer Ukroboronprom, which manages the Antonov Company, announced on Sunday.

According to a CNN report, satellite images of the air field show significant damage to the hangar in which the plane is located. NASA’s Fire Information for Resource Management System reported a fire at the airport at around 11:13 am on Sunday.

Meanwhile, Antonov Company, in a statement, said that it still “cannot report on the technical condition of the aircraft.”

### **What’s next for the Antonov AN-225?**

Ukroboronprom announced that the plane will be restored at Russia’s expense at an estimated cost of \$3 billion. “The restoration is estimated to take over \$3 billion and over five years,” the company said.

“Our task is to ensure that these costs are covered by the Russian Federation, which has caused intentional damage to Ukraine’s aviation and the air cargo sector,” it added.

**Source: The Indian Express**

## **13. The Russian invasion is making the global chip shortage situation worse**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

In October, Intel’s chief executive Pat Gelsinger, ahead of the company’s third quarter earnings, said he expects the chip shortage to extend until at least 2023. The company’s rival, AMD, was a bit more optimistic.

At last year’s Code Conference, CEO Lisa Su said the situation will likely remain ‘tight’, and would gradually get better in 2022 as more production capacity opens up.

The two CEOs predicted the supply of chipsets based on the pandemic’s effect on a component that has become a life-line for most gadgets we use every day. Now, the ongoing conflict between Russia and Ukraine is worsening the global chip shortage crisis.

### **How did the shortage crisis begin?**

After reaching its peak in 2011, the laptop market growth slowed down with the rise of alternatives such as smartphones and tablets. Then, the pandemic hit. People switched to work from home, children connected to schools through laptops, and get-togethers happened over video calls. This shift led to a surge in demand for laptops and tablets.

The stay-at-home rules also made several people pick up console-based gaming. According to a report by data analytics firm NPD Group, overall total consumer spending on video gaming in the U.S. totalled \$13.3 billion in



the September ending quarter of 2021, an increase of 7% when compared to the same period in 2020, and the highest third quarter spend in history.

These devices in high demand run on thumbnail-sized semiconductor piece (or pieces some time), performing various functions on a single device. And manufacturers produce them as 200mm or 300mm wafers. These are further split into tiny chips.

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While the larger wafers are expensive and mostly used for advanced equipment, the devices that were in high demand needed smaller diameter wafers. But the manufacturing equipment required to make them were in short supply even before the pandemic began. That's because the industry was moving in the direction of 5G, which required the expensive wafers.

But high consumer demand for low-end products, coupled with large orders from tech firms choked chip makers whose factories were also closed during lockdowns. As the industry gradually tried to pull itself out of the supply crunch, logistical complexities exacerbated the problem. And then cost of moving containers across the world drove up the price of the core component used in most electronic devices and automobiles.

### **Why is the Russian invasion impacting chip shortage?**

According to a report by Moody's Analytics, Ukraine supplies rare gases used to produce semiconductor fab lasers, and Russia exports rare metals like palladium to make semiconductors. This combination is required to build chipsets that power a range of devices, from automobiles to smartphones.

Palladium is often used as an alternative to gold in making various devices as the metal is highly malleable and resistant to corrosion. The rare metal is considered to be softer than gold, but is still much harder and durable than the yellow metal. This quality of palladium gives it more protection against an impact and a greater resistance to denting. So, automobile makers, electronics manufacturers and biomedical device producers prefer the silvery-white metal.

Russia and South Africa are the two largest producers of palladium. In 2021, Russia supplied 2.35 million ounces (66 million grams) of palladium, according to precious metals refiner Heraeus. The silvery-white market would move into a severe deficit without those supplies, pushing the price up. While platinum and rhodium could be substituted for palladium, Russia is also a leading producer of the other platinum group metals.

Palladium is used in nearly all electronic devices, and the metal is a key to make chipsets and circuit boards. It is used to make multi-layer ceramic capacitors (MLCCs), which are important to make smartphone screens, stereo systems, and power circuit breakers.

As Russia's invasion into Ukraine escalates, the country is getting hit by Western sanctions. This could disrupt the country's exports, leaving the semiconductor firms fewer options to source raw materials to make chip sets.

### **How are businesses and governments adapting to these changes?**

The global semiconductor market is projected to grow by 8.8% to US\$ 601 billion, driven by a double-digit growth of the sensors and logic category, according to data from World Semiconductor Trade Statistics (WSTS).

And with the recent trends in electric mobility, automotive safety, and Internet of Things (IoT), the demand for semiconductor is only going to grow. But this growth is coming at a time when products are being built on global supply chains. So, businesses are inversing their offshoring plans. They are considering 'reshoring' as an option to be shielded from global supply chain disruptions.

"Reshoring production can create improvements that may help in the event of a shortage. For one, it is much easier to control production aspects like quality and control processes for onshore manufacturing. There are also fewer governmental restrictions when production is held onshore. There are also benefits for the local

community when manufacturing is done locally,” according to a research paper titled by California Polytechnic State University.

Intel, one of the few companies that both designs and makes its own chipsets, announced last month, \$20 billion for two new chip fabrication facilities in the state of Ohio. The company plans to invest \$100 billion over the next decade, and build eight more fab factories in the state.

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At the other end of the spectrum is government support to provide a conducive environment for businesses to set up facilities to build semiconductor factories. India recently cleared a ₹76,000-crore scheme to incentivise companies to design and make semiconductors.

The U.S. government is looking to pass the CHIPS Act, a law that would provide semiconductor firms with \$52 billion in subsidies to advance chip making in the country.

While business strategies and government policies could help in solving the chip crunch in the long-run, the current semiconductor shortage is here to stay with us in the near-term.

**Source: The Hindu**

## **14. The fire at Ukraine’s nuclear power plant and the risks it pose**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

A fire had broken out in Europe’s largest nuclear power plant located in Zaporizhzhia following fighting between Russian and Ukrainian forces, Ukraine’s state emergency service said Friday. News agency Reuters reported that a “training building” in the plant compound caught fire, and luckily, the reactors were not hit and there was no indication of elevated radiation levels so far. We take a look at how the events unfolded and the risks that the blaze posed.

#### **How big is the nuclear plant?**

Zaporizhzhia in Enerhodar — a city in the north-western part of Ukraine, close to Kharkiv and about 550 km south-east of Kyiv — is the largest nuclear power plant in Europe and among the 10 largest in the world. It accounts for a fifth of the electricity generated in Ukraine. The plant has six VVER-1000 pressurised light water nuclear reactors (PWR), each generating 950 MWe (megawatt electric), for a total power output of 5,700 MWe. It’s nearly three times the size of the Kudankulam nuclear power station — which has a capacity of 2,000MWe, with two operational VVER-1000 units which are the same as the ones at Zaporizhzhia, but of an updated type.

#### **What risks did the blaze pose?**

A video feed from the plant verified by the Reuters showed shelling, and smoke rising near a building at the plant’s compound. “Russian army is firing from all sides upon Zaporizhzhia NPP, the largest nuclear power plant in Europe. Fire has already broke out. If it blows up, it will be 10 times larger than Chornobyl! Russians must IMMEDIATELY cease the fire, allow firefighters, establish a security zone!” Dmytro Kuleba, the Minister of Foreign Affairs of Ukraine, wrote on Twitter.

The UN’s atomic watchdog IAEA has said that local officials have informed the agency that the “essential” equipment at the Zaporizhzhia nuclear power plant is unaffected by the fire there. “Ukraine tells IAEA that the fire at the site of #Zaporizhzhia Nuclear Power Plant has not affected ‘essential’ equipment, plant personnel taking migratory actions,” the International Atomic Energy Agency said in a tweet. Background radiation levels remain unchanged at the Zaporizhzhia nuclear power plant, the RIA news agency cited a plant spokesperson as saying.

US Energy Secretary Jennifer Granholm also said there was “no indication of elevated radiation levels” at the plant. US President Joe Biden, too, spoke with President Volodymyr Zelenskyy to receive an update on the fire,

the White House has said. Biden joined Zelenskyy “in urging Russia to cease its military activities in the area and allow firefighters and emergency responders to access the site,” the statement quoted by Reuters said. Biden also received an update on the situation from the US Energy Department’s under-secretary for nuclear security, it added.

### **What are the dangers involved?**

The problem is if the fire spreads. While the power plant itself is unlikely to generate the kind of radioactivity that Chernobyl did, but given that it’s a pre-Fukushima plant, the safety features and redundancies are not as robust as in the new VVER-based plants, such as the one at Kudankulam.

Experts say that the biggest problem is if the fuel pond were to be hit or impacted. It is generally in the vicinity of the nuclear plant’s compound, where the spent — or used — fuel is stored. The safety features for the fuel pond are typically not as robust as of the plant itself.

The IAEA has urged Russian forces to stop attacking the nuclear power plant, warning of “severe danger” if the reactors were hit. “IAEA Director General @RafaelMGrossi speaks with #Ukraine PM Denys Shmygal and with Ukrainian nuclear regulator and operator about serious situation at #Zaporizhzhia Nuclear Power Plant, appeals for halt of use of force and warns of severe danger if reactors hit,” the agency tweeted.

**Source: The Indian Express**

## **15. What constitutes a war crime?**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

Since Russia invaded Ukraine on February 24, its troops have increasingly hit civilian sites with airstrikes and artillery, raising concerns that war crimes are being committed.

Amnesty International said Russia’s military was conducting “indiscriminate attacks” in Ukraine.

And Ukrainian President Volodymyr Zelenskyy has described Russia’s missile strikes in civilian areas as war crimes, most recently on Tuesday, when the Russian army launched airstrikes on Kharkiv’s Freedom Square. On Wednesday, the International Criminal Court (ICC) in The Hague announced that it would open an investigation into possible war crimes or crimes against humanity in Ukraine. In a statement, the prosecutor Karim A.A. Khan QC wrote that there was a “reasonable basis” to open an investigation and that the collection of evidence has now commenced.

### **‘Laws of war’**

There are specific international standards for war crimes, which are not to be confused with crimes against humanity.

War crimes are defined as serious violations of humanitarian laws during a conflict. The definition, established by the Rome Statute of the International Criminal Court (ICC) is derived from the 1949 Geneva Conventions and is based on the idea that individuals can be held liable for the actions of a state or its military.

The UN Office on Genocide Prevention and the Responsibility to Protect separates war crimes from genocide and crimes against humanity. War crimes are defined as occurring in a domestic conflict or a war between two states, while genocide and crimes against humanity can happen in peacetime or during the unilateral aggression of a military towards a group of unarmed people.

There is a long list of acts that can be considered war crimes. The taking of hostages, willful killings, torture or inhuman treatment of prisoners of war, and forcing children to fight are some of the more obvious examples. But, in practice, there is a lot of gray area within that list.

“The laws of war do not always protect civilians from death,” Dr. Mark Kersten, of the Munk School of Global Affairs and Public Policy at the University of Toronto, told DW. “Not every civilian death is necessarily illegal.” Raids on a cities or villages, bombing residential buildings or schools, and even the killing of groups of civilians do not necessarily amount to war crimes — not if their military necessity is justified. The same act can become a war crime if it results in unnecessary destruction, suffering and casualties that exceed the military gain from the attack.

### **Distinction, proportionality, precaution**

To decide whether an individual or a military has committed a war crime, international humanitarian law lays down three principles: distinction, proportionality and precaution.

Proportionality prohibits armies from responding to an attack with excessive violence. “If a soldier is killed, for example, you cannot bomb an entire city in retaliation,” Kersten said.

It is also illegal to target objectives that are “expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objectives, which would be excessive in relation to the concrete and direct military advantage anticipated,” according to the International Committee of the Red Cross.

Precaution requires parties to a conflict to avoid or minimize the harm done to the civilian population.

Finally, “the principle of distinction says that you have to be constantly trying to distinguish between civilian and belligerent populations and objects,” Kersten said, adding that this can be difficult.

“For example, attacking a barrack where there are people who have said they no longer participate in the conflict can be a war crime,” he said. “The same goes for bombing a military base where there are generators that supply hospitals with electricity.”

Civilian and military populations have become increasingly hard to distinguish.

“You have saboteurs, you have plainclothes officers,” Kersten said. “Combatants disguise themselves in wars all the time. These are very common tactics.”

### **Race against time**

When ICC prosecutors have reason to believe that a war crime has been committed, they start an investigation to find evidence that could point to specific individuals responsible for those crimes.

“That’s the kind of moments we’re heading to now, with regards to the war crimes conducted in Ukraine,” Kersten said.

Time is crucial though as evidence can degenerate or disappear. It is very difficult for prosecutors to successfully investigate suspected war crimes after the fact, when one party to a conflict may have tampered with evidence or witnesses are no longer around.

**Source: The Indian Express**

## **16. Why NATO isn’t sending troops to Ukraine**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

Amid Russia’s war on Ukraine, the North Atlantic Treaty Organisation (NATO) has been rapidly deploying troops to member countries across eastern Europe but has clarified that it has no plans of sending them to Ukraine itself. Last week, NATO chief Jens Stoltenberg announced that the alliance was launching its Rapid Response Force for the first time ever to bolster its defence against Russia.



The conflict could potentially escalate if NATO invokes Article 5, an agreement that ensures “collective defence”, which means that an attack on one ally will be considered an attack on all allies. This could happen if Russia shifts its target to some of Ukraine’s neighbours that are members of NATO.

### **What is Article 5 and why is it needed?**

To understand Article 5, it is important to understand the goals with which NATO was formed in the first place. In 1949, the founders of NATO—the US, Canada and several western European nations—created it as a mechanism to provide collective security against the rising threat posed by the Soviet Union.

Article 5 was a key part of the 1949 North Atlantic Treaty, or Washington Treaty, and was meant to offer a collective defence against a potential invasion of western Europe. It states: “(NATO members) will assist the party or parties so attacked by taking forthwith, individually and in concert with the other parties, such action as it deems necessary, including the use of armed force, to restore and maintain the security of the North Atlantic area.”

However, since then, it has only been invoked once, soon after the 9/11 attack in the United States. The day after al Qaeda terrorists carried out four coordinated attacks, deliberately crashing two planes into the World Trade Centre and another into the Pentagon, NATO allies got together to invoke the article and to implement a package of security measures in solidarity with the US.

### **Why has Article 5 not been invoked this time?**

The reason is simple: Ukraine is a partner of the Western defence alliance but not a NATO member. As a result, Article 5, or the Collective Defense Pledge, does not apply. Late last month, in a televised address, Ukrainian President Volodymyr Zelenskyy pleaded for Ukraine to be added as a full-fledged member of the alliance.

While NATO has said it will not be sending troops to Ukraine, it did invoke Article 4, which calls for a consultation of the alliance’s principal decision-making body, the North Atlantic Council. In its history, it has only been activated half a dozen times. But the fact that this time around eight member nations chose to invoke it was enough to demonstrate the seriousness of the situation at a global level.

After an extraordinary summit, NATO deployed its Response Force, comprising 40,000 troops from member countries, for the first time since it started.

### **What may prompt NATO to invoke Article 5?**

NATO will invoke Article 5 only if Russia launches a full-blown attack on one of its allies. Some top US officials have warned of the impact of some of Russia’s cyberattacks being felt in NATO countries, NPR reported.

“When you launch cyberattacks, they don’t recognize geographic boundaries. Some of that cyberattack could actually start shutting down systems in eastern Poland,” US Senate Intelligence Committee chairman Mark Warner said in an interview with NPR.

### **But what is NATO’s problem with Russia?**

Russia has long been opposed to Ukraine’s growing closeness with European institutions, particularly NATO. The former Soviet republic shares borders with Russia on one side, and the European Union on the other.

After Moscow launched its attack, the US and its allies were quick to respond, imposing sanctions on Russia’s central bank and sovereign wealth funds. US Secretary of the Treasury Janet Yellen said in a statement, “The unprecedented action we are taking today will significantly limit Russia’s ability to use assets to finance its destabilizing activities, and target the funds Putin and his inner circle depend on to enable his invasion of Ukraine.”

**Source: The Indian Express**

## 17. Not taking sides in UN General Assembly: On India and the Ukraine conflict

**Relevant for GS Prelims & Mains Paper II; International Issues**

### **Voting in UNGA over Russia's attack on Ukraine**

With a convincing majority of 141 of 193 countries, the UN General Assembly voted on Wednesday for a resolution that deplored in the "strongest terms" Russia's attack on Ukraine and demanded an immediate withdrawal of Russian troops.

The resolution, which was discussed in a rare special emergency session and under the rubric of the "Uniting for Peace" resolution invoked after decades, came as a result of an aborted resolution at the UN Security Council, which Russia, as a permanent member, had vetoed.

### **Significance of UNGA Resolution**

While the UNGA resolution carries little teeth, it does represent a common stand taken by the international public commons, with 96 countries signing up as co-sponsors of the resolution.

Russia rejected the outcome as a political vote that came of severe "pressure" from the U.S. and European countries that were the drivers of the resolution, but it seemed clear that it was isolated on the global stage. Belarus, Eritrea, North Korea and Syria voted against the motion, and 35, including India, abstained.

While the resolution also decried the Russian decision to recognise Donetsk and Luhansk as independent states, representatives of member states made it clear that it was the relentless bombing of Ukrainian cities that they could not turn a blind eye to.

### **India's abstention to the resolution**

India's abstention, not a surprise, disappointed many western countries that have been lobbying for a shift in the Indian position. In the past week, India has abstained from three votes (including two procedural ones) at the UNSC where it is an elected member, one at the UN Human Rights Council, and another at the IAEA on resolutions critical of Russia.

In an explanation of vote (EOV), India's UN representative said that India is calling for dialogue, while officials say that India's abstention has given it room to play a role in diplomacy with Russia and Ukraine. In a sign of some discomfort with Russian actions, the EOV also dropped the earlier references to the "legitimate security interests", and included language on respecting the "territorial sovereignty" of members.

India has also sent humanitarian aid to Ukraine although its vote of abstention indicates the Modi government still has many reasons not to vote against Russia, a strategic and defence partner that has stood by India.

### **Pressure on India**

As the conflict continues, and the global community expresses its disapproval, however, India's desire to remain an "abstentionist" power is being called into question. The Government has also said that it needs to remain on good terms with both sides as its primary focus remains the safe exit of Indians from the conflict zone.

**Source: The Hindu**

## 18. Why a no-fly zone is unlikely in Ukraine

**Relevant for GS Prelims & Mains Paper II; International Issues**

### **Attack on Zaporizhzhia nuclear power plant**

Russia's attack on Ukraine's Zaporizhzhia nuclear power plant has renewed calls for NATO to impose a no-fly zone over Ukraine, despite the repeated rejection of the idea by western leaders concerned about triggering a wider war in Europe.

Ukrainian President Volodymyr Zelenskyy on Friday asked the people of Western Europe to demand that their leaders change course because the shelling of a nuclear power plant in Ukraine threatens the security of the entire continent.

"Immediate closure of the skies over Ukraine is needed," he said. "Take to the streets and say that you want to live, to live on earth without radioactive contamination. Radiation does not know where the Russian border is."

The attack did not, as initially feared, result in radiation release.

But military analysts say there is no chance that the US, Britain and their European allies will impose a no-fly zone because it could easily escalate the war in Ukraine into a nuclear confrontation between NATO and Russia. Here's a more detailed explanation about the situation.

### **What is a no-fly zone?**

A no-fly zone would bar all unauthorized aircraft from flying over Ukraine. Western nations imposed such restrictions over parts of Iraq for more than a decade following the 1991 Gulf War, during the civil war in Bosnia and Herzegovina from 1993-95, and during the Libyan civil war in 2011.

### **Why won't NATO take this step in Ukraine?**

In simple terms, because it would risk a direct military conflict with Russia that could escalate into a wider European war with a nuclear-armed superpower.

While the idea may have captured the public imagination, declaring a no-fly zone could force NATO pilots to shoot down Russian aircraft.

But it goes beyond that. In addition to fighter planes, NATO would have to deploy refueling tankers and electronic-surveillance aircraft to support the mission. To protect these relatively slow, high-flying planes, NATO would have to destroy surface-to-air missile batteries in Russia and Belarus, again risking a broader conflict.

### **What would a no-fly zone achieve?**

Ukrainian authorities and people cowering night after night in bomb shelters say a no-fly zone would protect civilians — and now nuclear power stations — from Russian air strikes.

But analysts say it's Russia's ground forces, not aircraft, that are causing most of the damage in Ukraine.

What Ukrainians actually want is a broader intervention like the one that occurred in Libya in 2011, when NATO forces launched attacks on government positions. That's not likely to happen when the opponent is Russia.

### **What is happening in the skies over Ukraine?**

Predictions that Russia would quickly control the skies over Ukraine have not come to fruition.

Military experts are wondering why Russia has chosen to leave most of its fixed-wing combat aircraft on the ground during this massive land offensive. One explanation may be that Russian pilots aren't well trained in supporting large-scale land operations, engagements that require coordination with artillery, helicopters and other assets in a fast-moving environment.

"I think that maybe they're a little bit worried that that is a very constrained area. It's not like the Middle East, where there's all kinds of space to roam around in the air," said Robert Latif, a retired US Air Force major general who now teaches at the University of Notre Dame.

"They could very easily stray over borders," he explained. "With both Ukrainian and Russian air defense systems and Ukrainian, what little they have, and Russian airplanes all flying around — that could be a very confusing. I think maybe they're a little bit worried about actually being able to pull it off."

**Source: The Indian Express**

## **19. How dangerous was Russia's nuclear plant strike?**

**Relevant for GS Prelims & Mains Paper II; International Issues**

Europe's largest nuclear power plant was hit by Russian shelling early Friday, sparking a fire and raising fears of a disaster that could affect all of central Europe for decades, like the 1986 Chernobyl meltdown.

### **Situation under control**

Concerns faded after Ukrainian authorities announced that the fire had been extinguished, and while there was damage to the reactor compartment, the safety of the unit was not affected.

But even though the Zaporizhzhia nuclear plant is of a different design than Chernobyl and is protected from fire, nuclear safety experts and the International Atomic Energy Agency warn that waging war in and around such facilities presents extreme risks.

### **What are the concerns?**

One major concern, raised by Ukraine's state nuclear regulator, is that if fighting interrupts power supply to the nuclear plant, it would be forced to use less-reliable diesel generators to provide emergency power to operating cooling systems. A failure of those systems could lead to a disaster similar to that of Japan's Fukushima plant, when a massive earthquake and tsunami in 2011 destroyed cooling systems, triggering meltdowns in three reactors.

The consequence of that, said Ukrainian President Volodymyr Zelenskyy, would be widespread and dire.

### **What could have happened?**

The reactor that was hit was offline, but still contains highly radioactive nuclear fuel. Four of the other six reactors have now been taken offline, leaving only one in operation.

The reactors at the plant have thick concrete containment domes, which would have protected them from external fire from tanks and artillery.

Another danger at nuclear facilities are the pools where spent fuel rods are kept to be cooled, which are more vulnerable to shelling and which could cause the release of radioactive material.

Perhaps the biggest issue, however, is the plant's power supply. The loss of off-site power could force the plant to rely on emergency diesel generators, which are highly unreliable and could fail or run out of fuel, causing a station blackout that would stop the water circulation needed to cool the spent fuel pool.

### **What concerns remain?**

Ukraine is heavily reliant on nuclear energy, with 15 reactors at four stations that provide about half the country's electricity.



In the wake of the attack on Zaporizhzhia, U.S. President Joe Biden, British Prime Minister Boris Johnson and others called for an immediate end to the fighting there.

Following a conversation with Ukrainian Prime Minister Denys Shmyhal, IAEA Director Grossi appealed to all parties to “refrain from actions” that could put Ukraine’s nuclear power plants in danger.

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Ukraine is also home to the former Chernobyl nuclear plant, where radioactivity is still leaking, which was taken by Russian forces in the opening of the invasion after a fierce battle with the Ukrainian national guards protecting the decommissioned facility.

In an appeal to the IAEA for help earlier this week, Ukrainian officials said that Chernobyl staff have been held by the Russian military without rotation and are exhausted.

**Source: The Indian Express**

## **20. India abstains from Human Rights Council vote to probe Russian actions**

**Relevant for GS Prelims & Mains Paper II; International Issues**

### **UN Human Rights Council Vote**

India abstained on a vote at the UN Human Rights Council in Geneva as the Council decided to set up an international commission of enquiry into Russia’s actions in Ukraine.

The resolution, the strongest one to be adopted by the UN system yet, “strongly condemned” aggression by Russia, and said it was “gravely concerned” about reports of human rights violations by Russian forces, civilian casualties and the forced displacement of 6,60,000 refugees due to Russian “bombing and shelling” in populated areas.

India was among 13 countries of the 47-member council elected from UN members that abstained from the resolution, along with China, Pakistan, Kazakhstan, Sudan, Uzbekistan and Venezuela.

32 countries, or nearly two-thirds of the Council voted for the resolution that asked the HRC President to appoint three human rights experts for a year and mandated them to “investigate all alleged violations and abuses of human rights and violations of international humanitarian law, and related crimes, in the context of the Russian Federation’s aggression against Ukraine”.

Only Russia and Eritrea voted against the resolution.

### **Response of Russia**

Russia has denied targeting civilian areas, and Russian President Putin had accused the Ukraine government of attacks and human rights violations in the Eastern Donbas region to justify military operations in Ukraine.

### **India’s position**

India’s position at the HRC adds to a string of abstentions at the United Nations and multilateral groups since the start of Russian military operations in Ukraine on February 24, even as the continuing Russian military advances in Ukraine have seen more and more countries vote for resolutions that criticise Moscow.

The Modi government has decided to abstain from three votes at the UN Security Council, two at the UN General Assembly in New York, two at the Human Rights Council in Geneva, and one at the International Atomic Energy Agency (IAEA) in Vienna.

### **IAEA Vote**

The IAEA vote was particularly significant as it related to safety at four nuclear power stations and a number of nuclear waste sites including Chernobyl, as the Russians seized control of them. On Friday, Russian troops captured another nuclear power plant in Zaporizhzhia after bombing the area, which triggered more worries. IAEA Director General Rafael Grossi said he was “deeply concerned” with the situation at the Zaporizhzhia Nuclear power plant and was in touch with senior Ukrainian officials, as the UN Security Council planned to discuss the issue on Friday. India’s vote on the issue, as well as an upcoming vote on a resolution demanding humanitarian access, due to be presented at the UNSC next week, will be watched closely.

**Source: The Hindu**

## **21. FATF retains Pakistan on its terror funding ‘grey list’**

**Relevant for GS Prelims & Mains Paper II; International Issues**

### **Pakistan retained on Grey List**

The global money laundering and terrorist financing watchdog FATF has retained Pakistan on its “grey list”. Pakistan has been on the grey list of the Paris-based Financial Action Task Force (FATF) since June 2018 for failing to check money laundering, leading to terror financing, and was given a plan of action to complete it by October 2019.

### **Progress by Pakistan**

Since then, the country continues to be on that list due to its failure to comply with the FATF mandates. The plenary on Friday decided against exiting Pakistan from the category despite the country meeting 32 out of 34 action points.

However, Pakistan’s robust progress on its global commitments to fight financial crimes was appreciated at the concluding session of its hybrid plenary meeting, which noted that Pakistan had completed 26 of the 27 action items in its 2018 action plan of the FATF and of the seven action items of the 2021 action plan of the watchdog’s Asia Pacific Group on Money Laundering (APG).

The plenary noted that since June 2018 — when Pakistan made a high-level political commitment to work with the FATF and APG to strengthen its anti-money laundering/combating the financing of terrorism (AML/CFT) regime and to address its strategic counter-terrorist financing-related deficiencies — its continued political commitment had led to significant progress across a comprehensive CFT action plan.

The FATF encouraged Pakistan to continue making progress to address, as soon as possible, the one remaining item by continuing to demonstrate that terror financing investigations and prosecutions target senior leaders and commanders of the U.N.-designated terrorist groups.

In response to additional deficiencies later identified in Pakistan’s 2019 APG Mutual Evaluation Report in June 2021, Pakistan provided further high-level commitment to address these strategic deficiencies pursuant to a new action plan that primarily focuses on combating money laundering.

“Since June 2021, Pakistan has taken swift steps towards improving its AML/CFT regime and completed six of the seven action items ahead of any relevant deadlines expiring, including by demonstrating that it is enhancing the impact of sanctions by nominating individuals and entities for U.N. designation and restraining and confiscating proceeds of crime in line with Pakistan’s risk profile,” the FATF said.

Officials said Pakistan now aimed to fully comply with the 2021 action plan on anti-money laundering and combating terror financing by the end of January 2023.

The country had two concurrent action plans with 34 action points, of which 30 had either been fully or largely addressed to curb money laundering and terror financing.

The most recent action plan of 2021 from the APG had largely focused on money laundering.

The completion of the APG's action plan for the effectiveness of AML/CFT is also a structural benchmark of the International Monetary Fund (IMF) for end-March.

Recently, the IMF asked Pakistan to complete the last remaining item in the 2018 AML/CFT action plan on the effectiveness of terror financing investigations and prosecutions of senior leaders of U.N.-designated terrorist groups, and promptly address the deficiencies identified in the APG's Mutual Evaluation Report under the 2021 action plan.

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Pakistan has so far avoided being on the black list with the help of close allies like China, Turkey and Malaysia.

#### **About FATF**

The FATF is an inter-governmental body established in 1989 to combat money laundering, terrorist financing and other related threats to the integrity of the international financial system.

The FATF has 39 members including two regional organisations — the European Commission and the Gulf Cooperation Council. India is a member of the FATF consultations and its Asia Pacific Group.

**Source: The Hindu**

## **22. What is the impact of Visa, Mastercard and American Express block in Russia?**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

American card network operators Visa, Mastercard and American Express have suspended their services in Russia in light of the sanctions imposed on Moscow by the US owing the ongoing conflict in Ukraine. We take a look at the effects of this suspension.

#### **Can you use Visa or Mastercard in Russia?**

The suspension means that any cards issued by banks globally on these networks will not work in Russia at point-of-sale terminals or ATMs. Further, cards issued by Russian banks on these networks will also stop working outside the country.

#### **Is there an alternative to Visa and Mastercard in Russia?**

In the aftermath of similar US sanctions in 2014, where card networks like Visa and Mastercard had denied services to Russian banks, Moscow formalised its own payments system Mir, which was launched in 2015. Additionally, according to a Reuters report, Russia's central bank said that many banks plan to issue cards using China's UnionPay, a payments system it said was enabled in 180 countries.

#### **What is the likely impact of the ban?**

While Russian banks have downplayed the impact so far, suggesting that shoppers will be able to use cards issued by Visa or Mastercard till expiry, the networks have said that any cards issued abroad won't work in Russia. Globally, barring China, Visa and Mastercard control nearly 90% of credit and debit card payments.

**Source: The Indian Express**

## **23. The weapons used in the Russia-Ukraine war**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

The Russian invasion of Ukraine is the largest conflict that Europe has seen since World War II, with Russia conducting a multi-pronged offensive across the country. The Russian military has pummeled wide areas in

Ukraine with airstrikes and has conducted major rocket and artillery bombardments, resulting in large numbers of casualties.

Here is a look at some of the weapons being used in the conflict.

### **Warplanes and missiles**

The Russian military has used warplanes and Kalibr (Caliber) cruise missiles to hit facilities throughout the country. The Kalibr is a precision weapon, but Ukrainian military facilities and government buildings apparently targeted by those missiles in Kyiv and Kharkiv are located close to residential areas, resulting in civilian casualties.

The same applies to missiles carried by Russian warplanes, which targeted military infrastructure in strikes that also involved collateral damage.

To hit key targets, the Russian military also has used Iskander missiles that have a range of up to 500 kilometers (around 300 miles) and carry a much more powerful warhead that can destroy big buildings and some fortified facilities. Some Iskander missiles were reportedly fired from the territory of Russian ally Belarus, which has served as a staging ground for the Russian invasion.

### **Rocket and artillery**

Ukrainian President Volodymyr Zelenskyy and other officials have accused the Russian military of indiscriminately shelling residential buildings, schools and hospitals around the country.

Images from Ukraine's second-largest city of Kharkiv that were verified by The Associated Press showed what appeared to be a barrage of Russian rockets hitting residential buildings in an attack that killed and wounded scores of civilians.

The Soviet-designed Grad (Hail), Smerch (Tornado) and Uragan (Hurricane) multiple rocket launchers are designed to fire a salvo of powerful rockets to destroy concentrations of troops or military equipment. Their use against populated areas inevitably causes heavy casualties and major damage to civilian infrastructure.

The Russian military also has a wide range of powerful Soviet-designed artillery units, which were bizarrely named after flowers, such as self-propelled 203-mm Peony and 152-mm Hyacinth and Acacia self-propelled howitzers.

Moscow has claimed it was only targeting military bases and infrastructure, but the AP has documented massive damage to civilian infrastructure and residential areas in Kyiv, Kharkiv and numerous other cities and towns across Ukraine. Russian officials have alleged that Ukrainian forces have widely deployed heavy weapons in residential areas to use civilians as shields, a claim that couldn't be independently verified.

The U.N. human rights chief, Michelle Bachelet, speaking at the Human Rights Council in Geneva on Thursday, said "most civilian casualties were caused by the use of heavy artillery, multi-launch rocket systems and air strikes in populated areas, with concerning reports of use of cluster munitions striking civilian targets." She didn't specify which side may have used them.

### **Cluster munitions and thermobaric weapons**

Ukrainian officials have accused Russia of using cluster munitions, accusations the Kremlin has denied. Such weapons are designed to target enemy troops and weapons over a broad area, and their use in populated areas inevitably would lead to mass casualties among civilians.

Cluster bombs, rockets and artillery shells open in the air, releasing submunitions, or "bomblets," that are dispersed over a large area and simultaneously hit multiple targets.



Beyond the initial impact, bomblets have a high rate of failure to explode, posing a long-time threat of killing and maiming people for a long time after they were fired.

Thermobaric weapons consist of a fuel container and two separate explosive charges, with the first detonating to disperse the fuel particles and the second igniting the dispersed fuel and oxygen in the air, creating a blast wave of extreme pressure and heat that creates a partial vacuum in an enclosed space. That makes the weapon particularly deadly for people in an enclosed space. The Pentagon has said that Russian mobile launchers for thermobaric weapons were spotted inside Ukraine, but couldn't confirm their use.

### **Ukraine's arsenal**

The Ukrainian military has relied on the same assortment of Soviet-built multiple rocket launchers and howitzers that the Russian military has.

It doesn't possess sophisticated long-range precision weapons like Russia's Iskander ballistic missiles and Kalibr cruise missiles.

The Ukrainian military has Soviet-era Tochka-U short-range ballistic missiles, which have a powerful warhead but poor precision compared to the latest Russian weapons.

In addition to its aging Soviet-made arsenals, Ukraine has received large shipments of Western weapons, such as U.S.-made Javelin anti-tank missiles and shoulder-launched Stinger anti-aircraft missiles. Ukrainian officials said the country's military has used them to inflict heavy casualties to the invading Russian forces.

**Source: The Indian Express**

## **24. Will sanctions against Russia impact long-term supply of wheat, oil, metals and other goods?**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

Commodity prices have gone into a tizzy after Russian forces invaded Ukraine last month. The Bloomberg Commodity Index recorded its biggest weekly rally since 1960 last week with gains of 13%. Many fear that a drop in the supply of essential commodities such as oil, metals, and agricultural goods could negatively affect the global economy that is still recovering from the pandemic. The price of Brent crude oil on Thursday almost hit \$120 per barrel, the highest in a decade.

### **Why are commodity prices shooting up?**

The military conflict between Russia and Ukraine has led to disruptions in the global commodity supply chain. Commodity traders have been unwilling to purchase oil and other commodities from Russia fearing that they may be unable to sell them in the global market due to sanctions imposed by Western governments. The United States and European Union have been taking measures to debilitate Russia's economy by cutting Russian banks off the SWIFT payment messaging system and freezing Russia's foreign reserves.

There are also logistical difficulties in transporting commodities from war zones. Exports from the region have already been affected and are likely to be further hit going forward, and this risk has been priced in by traders. It should be noted that in 2020 Russia produced about 12% of the world's oil and about 16% of the world's natural gas. It also produced nearly half of the world's palladium (the shiny white metal which is a critical component in catalytic converters — a part of a car's exhaust system that controls emissions, for example). Ukraine, on the other hand, supplies about 12% of global wheat exports and 13% of global corn exports. In fact, the country supplied almost 90% of China's corn imports in 2019. Disruptions in such significant commodity supplies can affect global commodity prices.

At the same time, suppliers in other parts of the world have failed to increase their production to make up for the loss of output in Russia and Ukraine. The Organisation of the Petroleum Exporting Countries (OPEC), for instance, has made no effort to increase its output despite repeated calls by various world leaders to ensure energy security. In fact, the OPEC meet last week was wrapped up in minutes.

### **Is commodity inflation just about the Russia-Ukraine war?**

No. Commodity prices have risen significantly since at least 2021 when lockdowns were slowly lifted by governments and economies were allowed to open up. It should be noted that, owing to various frictions in the global economy, it took a while for supply chains disrupted by lockdowns to return to normalcy. The supply of goods was limited and this scarcity was reflected in the form of higher prices. Some analysts have also blamed policies in several countries to replace fossil fuels with renewable energy as a possible reason behind the increase in commodity prices. The emphasis on renewable energy, they argue, has discouraged investors from investing in the production of traditional fossil fuels. Meanwhile, the pandemic also witnessed major global central banks such as the U.S. Federal Reserve and the European Central Bank injecting massive amounts of fresh money into their economies. This led to an increase in the demand for all goods and services and caused their prices to rise. In short, too much money printed by central banks chasing too few goods has led to a rapid increase in commodity prices.

Global commodity prices, as measured by the Bloomberg Commodity Index, have risen by over 60% since the start of 2021. Meanwhile, the price of an essential commodity like oil has risen even more.

### **What lies ahead?**

The course of the Russia-Ukraine war, which is unpredictable at the moment, will naturally affect the price of commodities going forward. The hit to commodity supplies could be greater the longer the war lasts and the uglier it gets. It should be noted that cutting off Russia's economy from the rest of the world can affect not just Russia but also affect businesses and consumers that depend on the Russian economy. Countries like Germany, for instance, rely heavily on energy supplies coming from Russia. This could be why the West is yet to impose sanctions on Russia's export of crude oil and natural gas. It is not just Russia that will suffer from the war and sanctions but also the rest of the world. Also, as the global economy struggles to grow while prices rise fast, analysts have warned about the risk of stagflation, which is marked by high price inflation and low growth.

**Source: The Hindu**

## **25. The effects of the Russia-Ukraine conflict on maritime trade**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

As Russia continues its military onslaught on Ukraine, the Western economies and its allies have taken retaliatory steps, in the form of heavy sanctions, to effectively paralyse the Russian economy. One industry which is going to be heavily affected is the shipping industry as delays and shipping costs are expected to rise due to disruptions in the global supply chain.

### **What has been the impact on maritime trade so far in Ukraine?**

When the war started, some 15 sea ports in Ukraine were shut down. The loading and discharging of cargo ceased. Around 140 ships that were berthed in the Ukrainian ports at that time have stayed in the ports since then. None of the ports or the ships berthed in these ports has been attacked so far. Two ships were attacked while in anchorage leading traders to avoid Black Sea routes for their ships.

For seafarers, the safest place in case of any accident is always the ship which has power, food and means to make water. Bunkers in ports have been identified for safely housing seafarers but ship crew have not moved out of their ships, says Sanjay Prashar, managing director of VR Maritime Services. One of the company's ships is stranded at a Ukrainian port. Some of the stranded ships in Ukrainian ports have Indian crew on board.

Barring occasional attacks, ports and nuclear facilities, as strategic assets have not seen much fighting or attacks. So far, the war has involved the Russian Army and Air Force, not so much Naval attacks except a small operation in Kerch, says Pritam Banerjee, a logistics expert. Port cities such as Mariupol have been attacked from land but as Ukrainians hold out and resist the invasion, Ukrainian president has warned of an imminent attack on the Odessa port by Russian warships. This would be a major escalation of the war. All the merchant ships will be under threat. As a direct consequence of the war, insurance premiums will go up for ships serving Black Sea ports.

### **What has been the impact globally?**

Crude oil prices have gone up 20% over the last week in-part due to fears and also due to possible disruptions in supply since Russia is a major supplier of oil and gas through pipelines as well as ships. Black Sea is home to the few warm water ports the country has and is the theater of the war. As crude oil prices go up, the price of ship fuel, called Bunker fuel, is going up as well. Fuel cost is the biggest contributor to the operating costs of a ship and the increase will have a cascading effect on shipping costs and freight.

The pandemic drove up container freight rates which have seen a further escalation. Pritam Banerjee however, says the escalation may only be short-term and is largely due to the oligopolistic control some firms have over container shipping. He explains that Russia or even Ukraine matter little in container trade, so global container freight rates should not be affected greatly.

Bulk shipping including oil and gas tankers will be significantly affected. Russia and Ukraine are major traders in grain, minerals and oil. High insurance premiums, disruption in supply will rile the sector. In case of escalation, the Baltics and the North Sea shipping traffic may also be affected. War risk will hike insurance premiums.

While Russia may not attack in the Mediterranean, insurance costs may go up for ships serving those routes also, which are the hub of European trade.

### **What is the role of Turkey in this conflict?**

Turkey controls the entry and exit of Black Sea and hence has a say over ship traffic in the Black Sea. It has banned Russian naval ships from passing through the Bosphorus Strait. Turkey is not a signatory to the United Nations Convention on the Law of the Sea which sees the oceans as commons and allows even warships innocent passage through territorial waters of a nation.

Turkey abides by the Montreaux convention which gives it greater control over the straits. Free passage is guaranteed for merchant vessels belonging to belligerents in war, especially if Turkey is not a belligerent. The convention also lays down clearly what is a warship and what is not. Having said that, any interpretation to curb Russian merchant ship movement will be a significant escalation and inflame the scenario.

### **The pandemic saw a disruption in crew change in merchant ships. Will this conflict have a similar impact?**

A less discussed impact of the war is the share of Ukrainian and Russian seafarers in the global seafarer workforce. China, Philippines and India contribute significantly to the international seafarer workforce. Pritam Banerjee estimates that Russia and Ukraine together supply nearly 15% of the seafarers. It is common for Russian and Ukrainian seafarers to serve together on merchant ships. Their joining and disembarking merchant ships will be severely affected, mounting a challenge to the manning requirements of global shipping. The pandemic had disrupted the free movement of crew and things were just about settling down.

- Western economies and its allies have taken retaliatory steps, in the form of heavy sanctions, to effectively paralyse the Russian economy. One industry which is going to be heavily affected is the shipping industry

- Crude oil prices have gone up 20% over the last week in-part due to fears and also due to possible disruptions in supply since Russia is a major supplier of oil and gas through pipelines as well as ships.
- A less discussed impact of the war is the share of Ukrainian and Russian seafarers in the global seafarer workforce. China, Philippines and India contribute significantly to the international seafarer workforce.

**Source: The Hindu**

## **26. Where does India rank in the latest democracy report from the V- Dem Institute? By what variables are governments measured in this report?**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

According to the latest report from the V-Dem Institute at Sweden's University of Gothenburg, the level of democracy enjoyed by the average global citizen in 2021 is down to 1989 levels, with the democratic gains of the post-Cold War period eroding rapidly in the last few years. The study, titled 'Democracy Report 2022: Autocratisation Changing Nature?' states that more than twice as many countries (32) are undergoing autocratisation as are witnessing democratisation (15). Noting that India is one of the top ten 'autocratisers' in the world, the V-Dem (Varieties of Democracy) report classifies India as an autocracy ('electoral autocracy') rather than a democracy, ranking it 93rd on the liberal democracy index, out of 179 countries.

### **What is the V-Dem report's methodology?**

Since key features of democracy, such as, judicial independence, are not directly measurable, and to rule out distortions due to subjective judgments, V-Dem uses aggregate expert judgments to produce estimates of critical concepts.

It gathers data from a pool of over 3,700 country experts who provide judgments on different concepts and cases. Leveraging the diverse opinions, the V-Dem's measurement model algorithmically estimates both the degree to which an expert is reliable relative to other experts, and the degree to which their perception differs from other experts to come up with the most accurate values for every parameter.

### **What parameters were used to assess the status of a democracy?**

V-Dem's conceptual scheme takes into account not only the electoral dimension (free and fair elections) but also the liberal principle that a democracy must protect "individual and minority rights against both the tyranny of the state and the tyranny of the majority". The V-Dem report classifies countries into four regime types based on their score in the Liberal Democratic Index (LDI): Liberal Democracy, Electoral Democracy, Electoral Autocracy, and Closed Autocracy. The LDI captures both liberal and electoral aspects of a democracy based on 71 indicators that make up the Liberal Component Index (LCI) and the Electoral Democracy Index (EDI). The LCI measures aspects such as protection of individual liberties and legislative constraints on the executive, while the EDI considers indicators that guarantee free and fair elections such as freedom of expression and freedom of association. In addition, the LDI also uses an Egalitarian Component Index (to what extent different social groups are equal), Participatory Component Index (health of citizen groups, civil society organisations), and Deliberative Component Index (whether political decisions are taken through public reasoning focused on common good or through emotional appeals, solidarity attachments, coercion).

### **What are the main findings of the report?**

While Sweden topped the LDI index, other Scandinavian countries such as Denmark and Norway, along with Costa Rica and New Zealand make up the top five in liberal democracy rankings. Autocratisation is spreading rapidly, with a record of 33 countries autocratising. Signaling a sharp break from an average of 1.2 coups per year, 2021 saw a record 6 coups, resulting in 4 new autocracies: Chad, Guinea, Mali and Myanmar. While the number of liberal democracies stood at 42 in 2012, their number has shrunk to their lowest level in over 25 years, with just 34 countries and 13% of the world population living in liberal democracies. Closed autocracies, or dictatorships, rose from 25 to 30 between 2020 and 2021. While the world today has 89 democracies and



90 autocracies, electoral autocracy remains the most common regime type, accounting for 60 countries and 44% of the world population or 3.4 billion people. Electoral democracies were the second most common regime, accounting for 55 countries and 16% of the world population.

**What does the report say about India?**

The report notes that India is part of a broader global trend of an anti-plural political party driving a country's autocratisation. Ranked 93rd in the LDI, India figures in the "bottom 50%" of countries. It has slipped further down in the Electoral Democracy Index, to 100, and even lower in the Deliberative Component Index, at 102. In South Asia, India is ranked below Sri Lanka (88), Nepal (71), and Bhutan (65) and above Pakistan (117) in the LDI.

**What does the report say about the changing nature of autocratisation?**

One of the biggest drivers of autocratisation is "toxic polarisation" — defined as a phenomenon that erodes respect of counter-arguments and associated aspects of the deliberative component of democracy — a dominant trend in 40 countries, as opposed to 5 countries that showed rising polarisation in 2011. The report also points out that "toxic levels of polarisation contribute to electoral victories of anti-pluralist leaders and the empowerment of their autocratic agendas". Noting that "polarisation and autocratisation are mutually reinforcing", the report states that "measures of polarisation of society, political polarisation, and political parties' use of hate speech tend to systematically rise together to extreme levels."

The report identified "misinformation" as a key tool deployed by autocratising governments to sharpen polarisation and shape domestic and international opinion. Repression of civil society and censorship of media were other favoured tools of autocratising regimes. While freedom of expression declined in a record 35 countries in 2021, with only 10 showing improvement, repression of civil society organisations (CSOs) worsened in 44 countries over the past ten years, "putting it at the very top of the indicators affected by autocratisation". Also, in 37 countries, direct government control over CSOs' existence moved in an authoritarian direction — "evidence of the far-ranging weakening of civil society around the world."

Significantly, the report also found that decisive autonomy for the electoral management body (EMB) deteriorated in 25 countries.

**Source: The Hindu**

**27. What prompts students to pick countries like Russia, Ukraine and China? Will setting up more private colleges help?****Relevant for GS Prelims & Mains Paper II; International Issues**

The war in Ukraine has turned the spotlight on something that has been the trend for about three decades now. When students from India studying in Ukraine cried out for help, it became clear that there were a large number of them trapped in a war zone. According to estimates from Ukraine, reported in the media, around 18,000 Indian students are in Ukraine. It may be safe to assume they are pursuing medicine, at least anecdotally, going by interviews with students who have returned. Hundreds of students are still stuck in several regions of Ukraine, while for those who have returned, an uncertain future threatens, unless the Government finds a solution soon.

**Which countries do Indian students prefer?**

For about three decades now, Indian students have been heading out to Russia, China, Ukraine, Kyrgyzstan, Kazakhstan, the Philippines to pursue a medical degree. The medium of education for these students is English, a language they are comfortable with, and the amount spent on living and the medical degree are far more affordable than paying for an MBBS seat in private medical colleges in the country.

The desire to study medicine still holds a lot of value in the Indian community. While it retains the prestige of an honourable profession, there is a great deal of aspirational zeal in taking up medicine. The lack of equal opportunities exacerbated by the caste factor in the Indian context, has a great deal of impact on the prestige still associated with being a doctor, says G.R. Ravindranath, of the Doctors' Association for Social Equality. "For years, certain communities were denied the opportunities, and finally they do have a chance at achieving significant educational status. People still think it is good to have a 'Dr.' attached to their name, even if they do not specialise. In many rural areas, people still look at doctors as god's incarnate."

### **Doesn't India have enough colleges?**

There are certainly far more MBBS aspirants than there are MBBS seats in India. In NEET 2021, as per a National Testing Agency press release, 16.1 lakh students registered for the exam, 15.4 lakh students appeared for the test, and 8.7 lakh students qualified. Bharati Pravin Pawar, Union Minister of State for Health, told the Lok Sabha in December 2021, that as per data from the National Medical Commission (NMC), in 2021-22, there were 596 medical colleges in the country with a total of 88,120 MBBS seats.

While the skew is in favour of Government colleges, it is not greatly so, with the number of private medical institutions nearly neck-to-neck with the state-run ones. That means over 50% of the total seats are available at affordable fees in Government colleges. Add the 50% seats in the private sector that the NMC has mandated must charge only the government college fees. Assuming each one of these seats is also available at this reduced fee structure, that could be another 20,000 odd seats. In effect, roughly 65,000 seats are available within the affordable fee segment.

Additionally, these colleges are also not distributed evenly across the country, with States such as Maharashtra, Karnataka, Tamil Nadu and Kerala having many more colleges.

### **What about costs?**

The cost factor on both sides of an MBBS degree is significant. The costs of an MBBS degree in a Government college tot up to a few lakhs of rupees for the full course, but in a private medical college, it can go up to ₹1 crore for the five-year course. In case it is a management seat, capitation fees can inflate the cost by several lakhs again.

Whereas, an MBBS course at any foreign medical university in the east and eastern Europe costs far less. Students from Tamil Nadu who returned from Ukraine said on an average they had to spend close to ₹30lakh-₹40 lakh, inclusive of lodging and boarding. A majority of the students had written NEET at least twice, and only decided to move after they could not get an MBBS seat. On return, the requirement is to clear the Foreign Medical Graduates Examination, a licensure examination held for students who have studied medicine abroad, and for most countries, also a house surgery stint.

Dr. Ravindranath explains that in India the disparities in income of doctors, and others, like nurses and allied health professionals, is also a key factor in making an MBBS degree alluring. People are willing to leave their home to study far away in much colder places and with completely alien cultures and food habits. The ability to practise as a doctor, in Government and private sectors simultaneously, and the scope of earning a life-long income are also powerful incentives, in addition to the social status it confers.

### **Is the solution more private medical colleges?**

While Prime Minister Modi emphasised that more private medical colleges must be set up in the country to aid more people to take up MBBS, medical education experts have called for pause on the aspect.

If the aim is to make medicine more accessible to students of the country, the path ahead is not in the private sector, but in the public sector, with the Central and State governments' involvement, they point out. From 2003, the Centre's Pradhan Mantri Swasthya Suraksha Yojana has been working to augment facilities for quality medical education in the country.

“Starting private medical colleges by reducing the strict standards set for establishing institutes may not actually be the solution to this problem, if we think this is a concern,” says Dr. Ravindranath. Going overseas to study does have advantages, it could broaden students’ mind and thinking, expose them to a whole range of experiences, and their approach to issues and crises is likely to be far better.

However, creating more medical colleges will be beneficial for the country, if access and availability can be ensured. This will not be possible by resorting to private enterprise only. He adds that State and Central governments can start more medical colleges, as recommended by NITI Aayog, by utilising district headquarters hospitals, and expanding the infrastructure. This way, students from the lower and middle socio-economic rung, who are otherwise not able to access medical seats, will also benefit.

- For about three decades now, Indian students have been heading out to Russia, China, Ukraine, Kyrgyzstan, Kazakhstan, the Philippines to pursue a medical degree.
- The cost factor on both sides of an MBBS degree is significant. The costs of an MBBS degree in a Government college tot up to a few lakhs of rupees, in a private medical college, it can go up to ₹1 crore for the five-year course. An MBBS course at any foreign medical university in the east and eastern Europe costs far less.
- If the aim is to make medicine more accessible to students of the country, the path ahead is not in the private sector, but in the public sector, with the Central and State governments’ involvement

**Source: The Hindu**

## **28. Why North Korea’s satellite launches are so controversial**

**Relevant for GS Prelims & Mains Paper II; International Issues**

North Korea appears preparing to launch a reconnaissance satellite, a move that may prove as controversial as the nuclear-armed country’s weapons tests, because they use the same banned ballistic missile technology, experts say.

North Korea conducted a record number of missile launches in January, and has suggested it could resume testing of nuclear weapons or its longest-range intercontinental ballistic missiles (ICBMs) for the first time since 2017.

After a test of satellite-related systems during a missile launch on Sunday – the second such test in a week – some experts think it is just a matter of time before North Korea attempts to put a satellite in orbit.

Here’s what we know about North Korea’s race for space, and why it’s so controversial:

### **History of launches**

Since 1998 North Korea has launched five satellites, of which two appeared to have been successfully placed in orbit, including its last in 2016. International observers said the satellite appeared to be under control, but there was lingering debate over whether it had sent any transmissions.

Experts at the time of the 2016 launch said that North Korea had used a three-stage rocket booster like the Unha-3 of previous launches, but that a new launch pad was clearly built for a larger rocket.

A senior official at North Korea’s space agency said after the launch that it planned to put more advanced satellites into orbit by 2020 and eventually “plant the flag of (North Korea) on the moon”. The country has not launched any more satellites since then, however.

During a party congress in January 2021, leader Kim Jong Un revealed a wish list that included developing military reconnaissance satellites.

### **Dual-use technology**

The United States and its allies called North Korea's latest tests of satellite systems clear violations of United Nations Security Council resolutions, which prohibit any development of technology applicable to North Korea's ballistic missile programmes.

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North Korea has said its space programme and defence activities are its sovereign right.

At the time of the 2016 space launch, North Korea had yet to fire an ICBM. The satellite launch was condemned by governments in the United States and South Korea as a disguised test of ballistic missile technology capable of striking the continental United States.

"The obvious concern is that North Korea is testing ballistic missiles and only pretending to care about satellites," the US-based monitoring program 38 North said in a report at the time. The report said the Unha-3 system would be ungainly to use as a weapon because it required a fixed launching site and a long period for preparation, and predicted that North Korea would not develop an operational road-mobile ICBM until some time after 2020.

North Korea launched its first road-mobile ICBM the next year, and later test fired several more.

North Korea has not test fired an ICBM since 2017, but now officials in Washington and Seoul fear a new satellite launch could help the country further improve its ballistic missiles.

"In the future, if North Korea launches intercontinental ballistic missiles under the pretext of launching a satellite, it will face stronger pressure from the international community," Yoon Suk-yeol, the main conservative candidate in Wednesday's presidential election in South Korea, said in a statement after the latest launch.

**Source: The Indian Express**

## **29. The complexities for implementing a No-Fly zone**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

The North Atlantic Treaty Organization (NATO) Secretary General Jens Stoltenberg stated that the organisation would not designate the Ukrainian airspace as a 'No Fly Zone' which he said would lead to a full-fledged war in Europe, involving many more countries and resulting in greater human suffering. In response, Ukrainian President Volodymyr Zelensky said the move amounted to giving a "green light" for further bombing of Ukrainian cities and villages.

Associated Press reported on Saturday that Russian President Vladimir Putin said any third-party declaration of a non-fly zone over Ukraine would be seen as "participation in the armed conflict".

### **What is a No-Fly Zone?**

In simple terms, a No-Fly Zone refers to a particular airspace wherein aircrafts, excluding those permitted by an enforcement agency, are barred from flying.

Articles under Chapter VII of the United Nations Charter dealing with 'Action with Respect to Threats to the Peace, Breaches of the Peace, and Acts of Aggression' are invoked to authorise a potential no-fly zone.



Article 39 dictates the United Nations Security Council (UNSC) to determine the probable existence of any threat to peace or an act of aggression. It suggests further measures, if required, are to be carried out in accordance to Article 41 and 42 to restore international peace and security.

No fly zones have been implemented without UN mandate too. In 1991 after the first Gulf War, U.S. and its coalition partners imposed two no fly zones over Iraq to prevent Saddam Hussain from attacking ethnic groups. In non-combat situations, No fly zones can be imposed permanently and temporarily over sensitive installations or for high profile events like Olympics.

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#### **What is the feasibility of 'No fly zone' over Ukraine?**

The Foreign Policy magazine states that no-fly zone declarations are essentially a compromise in situations demanding a response to ongoing violence, but full military intervention is politically untenable.

NATO has previously imposed No-Fly Zones in non-member states like Libya and Bosnia. With Russia it fears a full-fledged war in Europe. It has been demanding that NATO scale back to the pre-1997 arrangements. Both Russia and Ukraine are not members of NATO.

Due to this, the idea of imposing a 'no fly zone' over Ukraine has been rejected outright. In addition, a 'No fly zone' needs to be implemented meaning NATO deploying aircraft and assets which would result in a direct confrontation with Russia as it may require NATO shooting down Russian fighters or taking down its air defence systems. While Russia has an overall superiority over Ukraine air space, it has not demonstrated that so far in its offensive in Ukraine.

The NATO General Secretary has stated that NATO would continue to provide significant support to Ukraine and impose heavy sanctions but not involve NATO forces directly or indirectly in the Ukrainian conflict, neither on ground or in space.

In addition, a 'No fly zone' would achieve very little as majority of the Russian attacks on Ukraine are coming from ground attacks rather than air strikes.

**Source: The Hindu**

### **30. The lists of the FATF and Pakistan's position**

#### **Relevant for GS Prelims & Mains Paper II; International Issues**

The global financial crime watchdog Financial Action Task Force (FATF) in its latest plenary meeting, decided to retain Pakistan on its terror financing 'grey list', asking it to expeditiously address the remaining deficiencies in its financial system. It has also added UAE to the list this time, which has promised to take "robust" actions in countering terror financing and money laundering.

#### **What is the FATF?**

The Financial Action Task Force is an international watchdog for financial crimes such as money laundering and terror financing. As per the official definition, it is an inter-governmental body that sets international standards that aim to prevent these illegal activities and the harm they cause to society.

The FATF was established at the G7 Summit of 1989 in Paris, over concerns of the member countries about growing money laundering activities. The heads of G7 countries and the president of the European Commission brought together a Task Force for addressing loopholes in the global financial system.

Later, in the aftermath of the 9/11 terror attack on the United States, FATF also added terror financing as a main focus area. This was broadened in 2012, to include restricting the funding of weapons of mass destruction.

The FATF currently has 39 members. The decision-making body of the FATF is known as its plenary, which meets thrice a year. Its meetings are attended by 206 countries of the global network, including members, and observer organisations, such as the World Bank, some offices of the United Nations and regional development banks.

### How does the FATF do its work?

The FATF sets standards or recommendations for countries to achieve in order to plug the holes in their financial system and make them less vulnerable to illegal financial activities. According to the last update in 2012, FATF has 49 consolidated recommendations for countries to follow in order to set up an Anti-Money Laundering/Combating the Financing of Terrorism (AML/ CFT) regime.

The FATF conducts regular peer-reviewed evaluations called Mutual Evaluations (ME) of countries, starting with member countries, to check their performance on standards prescribed by it. The reviews are carried out by FATF and FATF-Style Regional Bodies (FSRBs), which then release Mutual Evaluation Reports (MERs). For the countries that don't perform well on certain standards, the FATF and FSRBs draw up time-bound action plans to fight financial crimes.

The FATF recommendations for countries range from assessing risks of crimes to setting up legislative, investigative and judicial mechanisms to pursue cases of money laundering and terror funding.

### What are FATF's 'grey' and 'black' lists?

While the words 'grey' and 'black' list do not exist in the official FATF lexicon, they designate countries that need to work on complying with FATF directives and those who are non-compliant, respectively.

At the end of every plenary meeting, FATF comes out with two lists of countries.

Grey countries are those that are "actively working" with the FATF to counter criminal financial activities. In their cases, the watchdog does not tell other members to carry out due-diligence measures vis-a-vis the listed country but does tell them to take into account the risks such countries possess.

Currently, there are 23 countries on the grey list, with one new addition and one removal. The United Arab Emirates was added to the list at the end of this plenary meet while Zimbabwe was taken off it. Besides, some of the other countries on the list are Pakistan, Myanmar, Morocco, Philippines, Panama, Senegal, Albania, Jamaica and Turkey.

As for the black list, it means countries designated by the FATF as 'high-risk jurisdictions subject to call for action'. In this case the countries have considerable deficiencies in their AML/CFT regimens. For such countries, the body calls on members and non-members to apply enhanced due-diligence and in the most serious cases, apply counter-measures such as sanctions. Currently, two countries- North Korea and Iran are on the black list.

Being listed under the FATF's two lists makes it difficult for countries to get aid from organisations like the International Monetary Fund (IMF), Asian Development Bank (ADB) and the European Union. According to an IMF study, it may also affect capital inflows, foreign direct investments and portfolio flows in the country.

### Why is Pakistan on the grey list?

The case of Pakistan is significant as it has found itself on the grey list frequently since 2008, for weaknesses in fighting terror financing and money laundering. Through 2009, the FATF reaffirmed its designation of Pakistan in the grey list, as the country began to cooperate with the FATF-like regional body, Asia Pacific Group (APG), for a Mutual Evaluation (ME) process.

On completion of the ME in June 2010, Pakistan made a "high level political commitment" to the FATF and APG to address its strategic AML/CFT deficiencies. At the time the country did come up with a permanent legislation against money laundering, but was prescribed an action plan which required demonstrating adequate

criminalisation of money laundering and terrorist financing as well as showing adequate measures to identify, freeze and confiscate terrorist assets.

Due to significant progress made by the country, by early 2015, Pakistan was no longer on the grey list. However, it came back to the list in 2018, and was given an action plan to restrict terror financing activities and monitor the actions of UN designated terrorists in the country.

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In October 2019, Pakistan was warned by FATF for addressing only five out of the 27 tasks given to it in controlling funding to terror groups like the Lashkar-e-Taiba, Jaish-e-Mohammad and Hizbul Mujahideen, responsible for a series of attacks in India. The country was then given a February 2020 deadline. It got two extensions in 2020 due to the coronavirus pandemic and by October 2021, it had checked off 26 of the 27 points. The remainder was about continuing to show that terror financing cases targeted commanders of UN designated terrorist groups, such as Jama' at-ud-Da' wah chief Hafiz Saeed and Jaish-e-Mohammad head Masood Azhar.

In June 2021, however, Pakistan was given another seven-point action plan by the APG, focused specifically on combating money laundering. During the latest meeting that concluded on March 4, Pakistan informed that it had completed 32 of the total 34 action items in the two plans and was told to complete the rest at the earliest. The FATF appreciated Pakistan's commitment to fight financial crimes and said that the country now aims to complete the 2021 action plan by January 2023.

**Source: The Hindu**

### **31. What is the Temporary Protection Directive of 2001, and why has the EU invoked it for refugees of Ukraine war?**

#### **Relevant for GS Prelims & Mains Paper II; International Issues**

Over 1.5 million people fled Ukraine in the first 10 days of fighting, according to the United Nations High Commissioner for Refugees, which has described the displacement as the "fastest growing refugee crisis since the Second World War".

Responding to the crisis, EU Member States on March 3 made the unprecedented decision to activate the European Union's Council Directive 2001/55/EC of 20 July 2001, known as the Temporary Protection Directive (TPD). At a meeting, European interior ministers unanimously agreed to establish a temporary protection mechanism for the waves of people displaced from Ukraine because of the war.

#### **What is temporary protection?**

The European Commission describes "temporary protection" under the TPD as an "exceptional measure to provide immediate and temporary protection to displaced persons from non-EU countries and those unable to return to their country of origin".

The directive applies when "there is a risk that the standard asylum system is struggling to cope with demand stemming from a mass influx risking a negative impact on the processing of claims".

#### **Why establish standards?**

The Commission gives two reasons for doing so. "First, it reduces disparities between the policies of EU States on the reception and treatment of displaced persons in a situation of mass influx. Second, it promotes solidarity and burden-sharing among EU States with respect to receiving large numbers of potential refugees at one time."

Article 1 of Council Directive 2001/55/EC of 20 July 2001 underlines that the purpose of the Directive is to both "establish minimum standards for giving temporary protection" to displaced persons as well as to

“promote a balance of effort between Member States in receiving and bearing the consequences of receiving such persons”.

### **What obligations does the TPD place upon EU states?**

According to the European Commission, the TPD “foresees harmonised rights for the beneficiaries of temporary protection”, which include:

- \* a residence permit for the duration of the protection (which can last from 1-3 years),
- \* appropriate information on temporary protection,
- \* access to employment,
- \* access to accommodation or housing,
- \* access to social welfare or means of subsistence,
- \* access to medical treatment,
- \* access to education for minors,
- \* opportunities for families to reunite in certain circumstances, and
- \* guarantees for access to the normal asylum procedure.

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The TPD also contains provisions for the return of displaced persons to their country of origin, unless they have committed serious crimes or they “pose a threat to security from the benefit of temporary protection”.

### **How did the TPD come to be?**

As the USSR disintegrated, the 1990s saw multiple instances of armed conflict and ethnic strife in Europe. Yugoslavia disintegrated into its constituent republics amid fighting; Croats and Serbs fought bloody wars in Bosnia; Azerbaijan and Armenia fought over the territory of Nagorno-Karabakh; the North Caucasus Russian republics of North Ossetia-Alania and Ingushetia clashed over the eastern part of the former territory's Prigorodny district; and Transnistria, which made a bid for independence from Moldova as the Soviet Union collapsed, saw a short war.

As large numbers of people were displaced by these conflicts, the EU felt the need to put in place special procedures to deal with mass influxes of displaced persons. The 2001 Temporary Protection Directive provided a tool for the EU to address such situations.

The war in Ukraine is the first time that the EU has invoked the TPD. It is being seen as another sign of European unity against Russia.

**Source: Indian Express**

## **32. Despite extensive experience in conducting evacuation operations of its citizens abroad, India still needs to institutionalise best practices**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

As Operation Ganga comes to a halt, the process by which the Union Government evacuated stranded students from the conflict ridden areas of Ukraine have come under scrutiny. This article by Constantino Xavier, dated February 8, 2017, outlines the procedures and guidelines the country has to follow while taking steps to evacuate citizens from war torn regions.

On January 26, 1986, as New Delhi celebrated its Republic Day, South Yemen was being engulfed in a civil war that threatened the lives of thousands of foreigners living there. While Britain, France and the Soviet Union coordinated to jointly evacuate their nationals, the 850 Indians in the country were forced to wait for several more days until New Delhi finally managed to convince a merchant ship to pick them up.

Fast forward almost 30 years, to April 2015, when Yemen was on fire once again. This time, however, the Indian government successfully conducted Operation Raahat to evacuate almost 5,000 Indians and nearly 1,000



citizens from 41 other countries. Besides Air India aircraft, the Indian Navy deployed vessels, and the Indian Air Force C-17 Globemasters for strategic airlift. Such unprecedented efforts and resources reflect New Delhi's new drive to protect the lives and assets of its citizens abroad in times of crisis.

The increasing size and complexity of the diaspora requires the government to expand capacity and improve procedures. More than 11 million Indians now reside abroad and 20 million travel internationally every year. As political instability rattles the West Asian region, which hosts more than seven million Indians, the government can no longer rely on heroic efforts by individual officials or quick-fix solutions.

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First, the government will need to build on its rich experience in conducting more than 30 evacuation operations since the 1950s. Studying India's history, best practices and lessons learned will help institutionalise them and avoid the need to reinvent the wheel every time a crisis erupts. By supporting policy-oriented research at universities and think tanks to document the memory of senior officials, the government would also facilitate the transmission of their expertise to younger officials.

### **Preparing a manual**

Second, the government must avoid the jugaad approach. Every evacuation case is unique, given the specific nature and location of the crisis, but this should not preclude an analytical attempt to formulate a blueprint that lists core tasks for all operations. An inter-ministerial committee should prepare a manual with guidelines that establish a clear chain of command and division of competencies; identify regional support bases, assembly points and routes for evacuation; develop country-specific warden systems to communicate with expatriates; and establish evacuation priority and embarkation criteria.

Third, India's diplomatic cadre must be given specific training to operate in hostile environments. As a senior government official told me, when it comes to operating in complex theatres, "practice and preparedness make perfection".

To achieve this, the government could instruct the police or army to train Indian Foreign Service probationers to operate in war zones; conduct frequent evacuation simulations and emergency drills; and create rapid reaction teams of Indian security personnel to be deployed to protect diplomatic staff and installations abroad.

Fourth, the success of future operations will also rely on New Delhi's willingness to work together with friendly governments. India will have to invest in cooperative frameworks that facilitate coordination among countries that have large expatriate populations in West Asia, in particular Nepal, Bangladesh and Sri Lanka, and among leading powers with evacuation capacity in the Indian Ocean region.

Fifth, the government will have to assign a greater role to its armed forces, in particular by strengthening the Navy and Air Force's capacity to operate in tandem with civilian authorities. It should, for example, direct the military to develop a non-combatant evacuation (NEO) doctrine, designate the Integrated Defence Staff as the nodal organisation to improve inter-services and civil-military coordination, direct the services to conduct more multilateral NEO exercises, and adapt military modernisation plans to increase capacity for out-of-area deployment and evacuation.

### **Using technology**

Sixth, to minimise redundancies, the government must institutionalise a permanent inter-ministerial coordinating mechanism for emergency evacuations, incentivise inter-agency cross-posting of officials dealing with diaspora affairs, and encourage State governments to create regional contingency plans.

Seventh, to avoid cost inflation and delays, the government must establish a permanent civil reserve air fleet that pools aircraft from all Indian airlines based on pre-established requisition and reimbursement procedures.

Eighth, the government will have to invest in new technologies to better monitor the diaspora's profile and mobility. This can be achieved by encouraging more diplomatic missions to provide online consular

registration forms, developing an online registration system for overseas travellers, utilising social media, and by making the Aadhaar card compulsory to facilitate biometric identity verification and reduce identity fraud during evacuation.

Finally, the government must expand efforts to manage public opinion and be able to conduct a quiet diplomacy that is crucial to safely extricate Overseas Indians from conflict zones. To reduce domestic pressures, it should embed media representatives more frequently in such missions, reassure the diaspora by ensuring that high-level political representatives are personally engaged, and avoid raising expectations by clearly distinguishing Indian citizens from people of Indian origin.

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India has extensive experience in conducting evacuation operations, but to secure the lives and assets of Indians abroad, the government must avoid an ad hoc approach and seek to institutionalise best practices, bolster diplomatic and military capabilities, and improve coordination.

Constantino Xavier is a research fellow at the Centre for Social and Economic Progress.

**Source: The Hindu**

### **33. What we know about South Korea's new president Yoon Suk-yeol, and his proposed policies**

#### **Relevant for GS Prelims & Mains Paper II: International Issues**

Yoon Suk-yeol, a conservative former prosecutor, is all set to become South Korea's next president after his win in the country's presidential election on Thursday, defeating his liberal rival. The 61-year-old won by a slim margin, edging out Lee Jae-myung. The results were the closest in the country's democratic history, with the final vote count separated by less than 1 per cent.

These elections were particularly polarised and marked by scandals, but also had a high turn-out, with approximately 77 per cent of the eligible population casting their votes. Political analysts had observed that these elections had been the most negative in terms of the way they were fought: with a focus on mudslinging and personal verbal attacks rather than a criticism of policies and plans.

Yoon served as the prosecutor general of South Korea from 2019 to 2021 under President Moon Jae-in. He also played a major role in the conviction of former President Park Geun-hye as the chief prosecutor of South Korea. His entry into the race last year was relatively late and only gained prominence during the political campaigning.

#### **Polarised elections**

There have been several observers and some publications that have drawn parallels between former US president Donald Trump and Yoon, particularly his style of speaking, which many found difficult to comprehend and follow during the campaigning.

Domestically in South Korea, there was a deep desire to see political change, analysts believe. But some experts believe that the slim margins by which Yoon won are indicative of just how deeply polarised South Korea's political spectrum has really become.

There are several reasons why Yoon's victory has caused concern among some sections in South Korea, and a lot has to do with the comments he made during the campaign and his proposals for the path forward.

During the campaign, one of the most severely criticised remarks by Yoon involved what many observers, including voters, interpreted as praise of former president Chun Doo-hwan, a military dictator who was known

for his brutal treatment of pro-democracy protesters in the 1980s, for which Chiun never apologised till his death last year at age 90.

A Korea Herald report cited Yoon saying during the campaigning that there were many people who believe that Chun “did well in politics” except for the “military coups” and what he did on May 18, 1980, when he brutally suppressed a pro-democracy uprising. Yoon was later forced to apologise for these remarks.

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### **Gender policies**

During the campaigning, Yoon had pledged to abolish the Ministry of Gender Equality and blamed the rise of feminism and women being more assertive about their rights in South Korea for the country’s low birth rate.

South Korea is a country with one of the worst records on women’s rights in the developed world, and women in the country face violence and abuse in various forms inside their home as well as outside. Experts say that the country’s laws do not provide sufficient punishments for crimes against girls and women and that South Korea’s judicial system’s approach to crimes against women is linked to gender roles in the country’s patriarchal society.

The stigmatisation of calls for greater emphasis on women’s rights by Yoon’s campaign has been popular with his voter base, many of them young men, who believe that he speaks for them.

### **Foreign policy**

As far as foreign policy is concerned, Yoon is more hawkish in his approach, particularly in comparison with President Moon Jae-in. Unlike President Moon, Yoon supports harsh sanctions on North Korea, in line with US foreign policy, with Washinton being Seoul’s main diplomatic ally. Yoon has gone as far as to advocate for the development of military technology that would be capable of preemptive strikes on North Korea. Yoon had criticised Moon Jae-in’s policies towards North Korea as a “complete failure”.

While India did not directly find mention in Yoon’s foreign policy plans, he has proposed that South Korea should support and cooperate with the Quad security alliance between US, Australia, India and Japan. However, he has not openly stated whether South Korea has any hopes to join this alliance.

In November last year, Yoon had hinted at his potential plans for South Korea’s relations with Japan, in context of the country’s colonial history. “The issues between the two countries are not easy, but they are not impossible to solve....If the two countries approach them in a forward-looking manner, they can be solved for sure,” Yoon had stated.

During the campaign trail, Yoon’s critics had particularly attacked him for a lack of experience in party politics, foreign policy and other issues related to the state. This was one of the talking points, where comparisons were repeatedly drawn between Trump and Yoon. At that time, Yoon had said that he would let experienced officials handle matters that required expertise, but observers have questioned how much of that would be executed in actuality.

### **Domestic policies**

On the domestic front, a report by The Korea Herald says that one of Yoon’s top agenda is dealing with Covid-19. The election process occurred at a time the country has been facing one of its worst waves of the coronavirus pandemic, pushed by the Omicron variant.

Yoon has pledged to establish a presidential committee dedicated to Covid-19 compensation immediately after his inauguration, and has promised to introduce new laws and revise related regulations to launch compensation programmes across the country.

Jobs and housing have been two main talking points of Yoon's campaign, where he plans on setting up a government body overseeing regulatory reform to facilitate corporate investment. He also plans on easing labour regulations that he says will give companies and workers more flexibility.

A major point of concern, particularly for South Korea's youth, has been housing and Yoon has stated that he has plans to stabilise the real estate market, which includes supplying 2.5 million new homes by 2026, a report by The Korea Herald said. This plan focuses on the capital Seoul and its surrounding regions, with up to 1.5 million homes being built in Greater Seoul, of which 500,000 will be located inside the capital, the report added.

**Source: The Indian Express**

### **34. What are the Geneva Conventions guidelines during wartime?**

**Relevant for GS Prelims & Mains Paper II; IOBR**

Russia's armed invasion of Ukraine starting February 24 has set off a steady escalation in hostilities on Ukrainian soil, and in many cases civilian infrastructure and non-combatants have been impacted. As the Russian military continues to sweep through the country marching on to the capital, Kyiv, presumably in a bid to destabilise the seat of Ukrainian government, there is growing concern surrounding the issue of human rights violations. Russian President Vladimir Putin and his administration have steadfastly denied any responsibility for harm to civilians. However, as the evidence of casualties in the civilian population continues to mount, the world will increasingly look to the Geneva Conventions, a set of principles outlining norms for combatant behaviour during a war, for standards to which the invading Russian forces can be held. Ultimately, if there is a compelling case for prosecuting combatants for war crimes, crimes against humanity, genocide, and the crime of aggression, it is not inconceivable that evidence would be collected for an investigation and trial at the International Criminal Court (ICC).

#### **What are the Geneva Conventions guidelines during wartime?**

The Geneva Conventions are a set of four treaties, formalised in 1949, and three additional protocols, the first two of which were formalised in 1977 and the third in 2005, which codify widely accepted ethical and legal international standards for humanitarian treatment of those impacted by any ongoing war. The focus of the Conventions is the treatment of non-combatants and prisoners of war, and not the use of conventional or biological and chemical weapons, the use of which is governed respectively by the Hague Conventions and the Geneva Protocol.

The First Geneva Convention protects wounded and sick soldiers on land during war. This convention extends to medical and religious personnel, medical units, and medical transport. While recognising distinctive emblems of these organisations, the convention has two annexes containing a draft agreement relating to hospital zones and a model identity card for medical and religious personnel.

The Second Geneva Convention protects wounded, sick and shipwrecked military personnel at sea during war. This convention also extends to hospital ships and medical transports by sea, with specific commentary on the treatment of and protections for their personnel.

The Third Geneva Convention applies to prisoners of war, including a wide range of general protections such as humane treatment, maintenance and equality across prisoners, conditions of captivity, questioning and evacuation of prisoners, transit camps, food, clothing, medicines, hygiene and right to religious, intellectual, and physical activities of prisoners.

The Fourth Geneva Convention, which most imminently applies to the invasion of Ukraine by Russian military forces, protects civilians, including those in occupied territory. The other Geneva Conventions were concerned mainly with combatants rather than civilians. However, based on the experience of World War II, which



demonstrated the horrific consequences of having no convention for the protection of civilians in wartime, the Fourth Convention comprising 159 articles outlines the norms for this critical dimension of conflict.

Along with the Additional Protocols of 1977, the Fourth Convention expounds upon the general protection of populations against certain consequences of war, the conduct of hostilities and the status and treatment of protected persons, distinguishing between the situation of foreigners on the territory of one of the parties to the conflict and that of civilians in occupied territory. This convention also spells out the obligations of the occupying power vis-à-vis the civilian population and outlines detailed provisions on humanitarian relief for populations in occupied territory. As the International Committee for the Red Cross, a key medical intermediary in such situations, explains, this convention also contains a specific regime for the treatment of civilian internees, including three annexes on hospital and safety zones, and model regulations on humanitarian relief.

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### **Which countries are signatories?**

The Geneva Conventions have been ratified by 196 states, including all UN member states. The three Protocols have been ratified by 174, 169 and 79 states respectively. In 2019, perhaps anticipating the possibility of its invading Ukraine in the near future, Russia withdrew its declaration under Article 90 of Protocol 1, which states that “The High Contracting Parties may at the time of signing, ratifying or acceding to the Protocol, or at any other subsequent time, declare that they recognize ipso facto and without special agreement, in relation to any other High Contracting Party accepting the same obligation, the competence of the [International Fact-Finding] Commission to enquire into allegations by such other Party, as authorized by this Article.” By withdrawing this declaration, Russia has pre-emptively left itself with the option to refuse access by any international fact-finding missions to Russian entities, individuals or resources that might potentially, in Moscow’s reckoning, find Russia responsible for violations of the Geneva Conventions standards.

Further, the four conventions and first two protocols of the Geneva Conventions were ratified by the Soviet Union, not Russia, hence there is a risk of the Russian government of the day disavowing any responsibility under the Conventions in toto.

### **What would be the steps for potential prosecution under the Conventions?**

Under Article 8 of the Rome Statute of the ICC, it is the ICC that has jurisdiction in respect of war crimes, in particular “when committed as part of a plan or policy or as part of a large-scale commission of such crimes.” Under the statute, ‘war crimes’ refers to “Grave breaches of the Geneva Conventions... [including] wilful killing, torture or inhuman treatment, including biological experiments; wilfully causing great suffering, or serious injury to body or health; extensive destruction and appropriation of property, not justified by military necessity and carried out unlawfully and wantonly; compelling a prisoner of war or other protected person to serve in the forces of a hostile Power; wilfully depriving a prisoner of war or other protected person of the rights of fair and regular trial; unlawful deportation or transfer or unlawful confinement; taking of hostages.”

The statute goes beyond these crimes directed against individuals to include within the definition of ‘war crimes’ broader acts that occur within armed conflict, including intentionally directing attacks against the civilian population or against individual civilians not taking direct part in hostilities, such as attacking or bombarding towns, villages, dwellings or buildings which are undefended and which are not military objectives; and intentionally directing attacks against personnel, installations, material, units or vehicles involved in a humanitarian assistance or peacekeeping mission in accordance with the Charter of the United Nations, especially when it is in the knowledge that such attack will cause incidental loss of life or injury to civilians or damage to civilian objects or widespread, long-term and severe damage to the natural environment.

### **What evidence of war crimes has been accumulated so far?**

Speaking in Poland, U.S. Vice President Kamala Harris called for an investigation into allegations of Russia committing war crimes in Ukraine, citing as example the bombing of a maternity hospital in the southern city of Mariupol, including scenes of bloodied pregnant women being evacuated. Similarly, there has been photographic and video evidence of lethal firing on civilians trying to escape across a damaged bridge in Irpin,

near Kyiv; and hours of cell phone videos of bombed-out schools, houses, and apartment buildings across Ukraine.

However, analysts have argued that much of such evidence, while corroborating the allegation of attack on non-combatants and civilian infrastructure, does not answer the central question of any war crime prosecution: who ordered which crime? The evidence that is required to answer this question, if it is recoverable, will come from the mobile phones and other communications equipment of Russian soldiers, which would typically include information on orders received from commanding officers, and video or audio evidence of attacks executed and the aftermath. To examine any such evidence emerging, on February 28 the ICC opened a war crimes investigation under its prosecutor, Karim Khan.

### **To what extent have the Geneva Conventions been upheld worldwide in recent years?**

On the 70th anniversary of the Conventions' adoption, Amnesty International, a human rights advocacy group, noted in 2019 that there has been a "blatant disregard for civilian protection and international humanitarian law in armed conflicts where four of the five permanent members of the UN Security Council are parties — Russia, the U.S., the U.K. and France." Specifically, Amnesty cited the U.S.-led coalition's bombing of Raqqa in Syria, which left more than 1,600 civilians dead; destruction of civilian infrastructure and lives in Aleppo and Idlib by Russian forces, leading to mass displacement of millions; and the war in Yemen where the Saudi Arabia and the UAE-led coalition, backed by the West, killed and injured thousands of civilians, fuelling a full-blown humanitarian crisis. These cases underscore the grim fact that the Geneva Conventions, even when backed by rulings of the ICC, cannot be enforced by third parties to any conflict. However, they have in the past proved effective at raising global awareness of human rights violations across conflict zones, and in some cases led to sanctions or trade embargoes against the belligerents.

**Source: The Hindu**

## **35. Can Putin be prosecuted for war crimes in Ukraine?**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

Amid mounting calls to prosecute Russian president Vladimir Putin, the International Criminal Court (ICC) earlier this month launched an investigation into the alleged war crimes committed following Russia's invasion of Ukraine.

The West has collectively condemned the invasion, imposing a gamut of aggressive sanctions in a bid to compel Moscow to reverse course. Undeterred, Russia has continued its attack on Ukraine, resulting in thousands of deaths and an unprecedented refugee crisis.

But experts say despite the growing list of allegations, a full-blown conviction in a situation like this could prove to be elusive. If the ICC's track record is anything to go by, it is likely to take years, if at all. In the last two decades, the ICC has convicted merely 10 individuals.

### **What is a war crime?**

Following requests from 40 member states, the ICC's Chief Prosecutor Karim Khan on March 2 announced that he would be launching an investigation into possible war crimes committed in Ukraine.

The ICC lays down clear definitions of what qualifies as a genocide, war crime, crimes against humanity and the crime of aggression. These definitions are included in a treaty called the Rome Statute, which forms the foundation of the ICC.

As per its guidelines, targeting civilian populations, violating the Geneva Conventions, and targeting specific groups of people all qualify as war crimes. War crimes also include murder, mutilation, cruel treatment, taking hostages, rape and sexual slavery, the ICC's guidelines state.

International humanitarian law also prohibits the use of weapons that can cause indiscriminate suffering, such as anti-personnel landmines and chemical or biological weapons.

### **How does the ICC function?**

The ICC, which is based in the Hague in the Netherlands, operates independently and can prosecute individuals for four primary offences: war crimes, crimes against humanity, genocide, and the crime of aggression.

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Nearly every country in the world — 123 in all — fall under the ICC's jurisdiction and have signed the Rome Statute. But there are some notable exceptions. Around 31 countries — including the US, Russia and Ukraine — have signed the treaty but have not ratified it. Russia pulled out of the court in 2016 after the ICC's verdict on Russia's occupation of Crimea in 2014.

The court tries individuals and not countries. Any individual accused of a crime from a country that falls under the ICC's jurisdiction can be tried. The ICC generally tries top officials and leaders who hold the most responsibility.

In the case of the war in Ukraine, investigators will look into both past and present allegations. This is likely to include the war crimes that Putin ordered during Russia's annexation of Crimea from Ukraine.

If there is enough evidence, ICC judges will issue arrest warrants to bring the accused to trial. It cannot conduct a trial in absentia. Since Russia is not a member of the court, it is unlikely that he will show up on his own. He would either have to be handed over by Russian forces or taken into custody outside Russia.

Either a national government or the UN Security Council can refer cases to the ICC for investigation. Since Russia is a permanent member of the UNSC, it has veto power and can thus stall its actions.

### **What Russian actions are being called war crimes?**

Ukrainian President Zelenskyy has accused Russian fighter jets of indiscriminately opening fire on civilian targets across the country. The US has also called the attack on the Zaporizhzhia nuclear power plant a "war crime."

Earlier this month NATO Secretary General Jens Stoltenberg said that Russia was using cluster bombs in Ukraine. Human rights organisations have long condemned the use of cluster bombs due to the risk of harm to civilians.

Russia has also been accused of striking a maternity hospital in Mariupol. "People, children are under the wreckage," Ukrainian President Volodymyr Zelensky tweeted after the incident, calling it an "atrocities."

**Source: The Indian Express**

## **36. The functioning of the International Space Station after sanctions**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

After Russia invaded Ukraine on February 24, the U.S. imposed sanctions on Russia including a ban on transfer of technology and on Russian banks. Following this, on March 3, the Russian space agency Roscosmos tweeted the following, "The State Corporation will not co-operate with Germany on joint experiments in the Russian segment of the International Space Station. Roscosmos will conduct them independently. The Russian space programme against the backdrop of sanctions will be adjusted, the priority will be creation of satellites in the interests of defence. Roscosmos will not service the remaining 24 R-180 engines in the United States, and stop supplying the R-181. "

According to a Reuters report, this was followed by a statement from the head of the Russian Space Agency — Roscosmos — Dmitry Rogozin on Telegram, where he demanded the lift of the sanctions, some of which predate Russia's invasion of Ukraine. He said that the sanctions could disrupt the functioning of the Russian spacecraft that serviced the International Space Station. This could lead to the Russian segment of the ISS, which helps in correcting the orbit of the ISS being affected. He said that this meant the ISS could fall into the sea or on the land. He further said that the Russian segment ensures that the space station's orbit is corrected to keep it away from space debris, roughly 11 times a year. He pointed out, publishing a map, that the ISS would likely crash down on some country, but most probably not Russia itself.

### **What is Russia's role in maintaining the ISS?**

The ISS is built with the co-operation of scientists from five international space agencies — NASA of the U.S., Roscosmos of Russia, JAXA of Japan, Canadian Space Agency and the European Space Agency. Each agency has a role to play and a share in the upkeep of the ISS. Both in terms of expense and effort, it is not a feat that a single country can support. Russia's part in the collaboration is the module responsible for making course corrections to the orbit of the ISS. They also ferry astronauts to the ISS from the Earth and back. Until SpaceX's dragon spacecraft came into the picture the Russian spacecrafts were the only way of reaching the ISS and returning.

### **Why does the orbit of the ISS need to be corrected?**

Due to its enormous weight and the ensuing drag, the ISS tends to sink from its orbit at a height of about 250 miles above the Earth. It has to be pushed up to its original line of motion every now and then. This is rather routine, even for smaller satellites, says Dr. Mylswamy Annadurai, former director of ISRO and presently Vice President of Tamil Nadu State Council for Science and Technology.

Approximately once a month this effort has to be made. It is not necessarily a regular operation, and may be missed once and compensated for later.

The other reason for altering the path of the ISS is to avoid its collision with space debris, which can damage the station.

These manoeuvres need to be done as and when the debris is encountered.

### **What is the extent of effort and expense involved in this?**

Manoeuvring the ISS is expensive. In a year, 7-8 tonnes of fuel may need to be spent, with each manoeuvre costing nearly a tonne of fuel. If a manoeuvre is put off for later, the ISS may sink a little more and the delayed operation would cost more as a larger correction needs to be made.

### **If Russia should back out of the effort, are there spacecrafts that can substitute?**

There are right now two possibilities. SpaceX's dragon module and Boeing's Starliner can dock with the ISS. Starliner also has the capacity to carry, say, ten tonnes of fuel.

### **What is the likelihood of Russia backing out?**

Though there have been previous occasions when conflicts have risen between Russia and the U.S., the operation of the ISS has not been interrupted. Dr. Annadurai points out that there are two missions planned for March 18, and one astronaut is already there on site. The mission means to take up two Russians and an American astronaut, and the preparatory work is in progress. On March 30, it is planned that the mission will return an American astronaut to Earth from the ISS. These seem to be going on as per plan.

"Going by the scientists' mindset and that such a significant global effort must not go down the drain, my feeling is that scientists from both sides will work together and that this effort will not be in vain," says Dr. Annadurai.

### **Is it true that Russia does not have the risk of the ISS crashing down on their country?**



The orbit of the ISS does not fly over the Russian territory mostly. Places that are closer to the equator run a greater risk of it falling in their domain. The orbit is at about 50 degrees and so most probably, the ISS will fall in that level. But this is only a probability, as it can move or disintegrate. But in case of this eventuality, people in the ISS will be brought back, modules can be detached thereby making it much smaller which will ensure that it disintegrates before touching the earth.

**Source: The Hindu**

### **37. A new deal: on reviving the JCPOA**

**Relevant for GS Prelims & Mains Paper II; International Issues**

#### **Iran nuclear deal stalled**

The Vienna talks aimed at reviving the Joint Comprehensive Plan of Action (JCPOA), also known as the Iran nuclear deal, have hit a wall after Russia sought sanctions exemptions for its future trade and defence ties with Iran. European negotiators say “a good deal” is on the table. But Russia, which has been slapped with a barrage of sanctions by the United States and its allies over the Ukraine invasion, seeks written guarantees that those curbs would not “in any way harm” its ties with Iran.

#### **Need for urgent deal**

The nuclear deal, reached in 2015, started unravelling in 2018 as the Trump administration unilaterally pulled the U.S. out of the agreement despite international certification that Iran was fully compliant with its terms. After the U.S.’s withdrawal, Iran started enriching uranium to a higher purity and installing advanced centrifuges at its nuclear plants. Now, nuclear experts believe Iran is just months away from having enough high purity uranium to make a nuclear bomb, though the Iranian leadership has repeatedly claimed that it has no plan to make one. Western officials say the growing nuclear capability of Iran demands urgent steps to conclude the deal and curb its nuclear programme. Removing sanctions on Iran and letting Iran’s oil enter the global market could also ease oil and gas prices, which shot up after the Russian attack on Ukraine.

#### **Future of deal in Russian hands**

The West’s push to conclude the deal gives Russia added leverage in the negotiations, at a time when relations between Moscow and western capitals are at their lowest point since the end of the Cold War. The U.S. and Europe are reportedly looking for alternatives to revive the deal without Russia. But it would not be easy. Russia, an original signatory of the JCPOA, is a member of the joint commission that supervises Iran’s compliance. Under the agreement, Russia is also required to take control of Iran’s excess enriched uranium and work with Tehran to turn its Fordow nuclear plant into a research facility. In theory, the deal can be revived if other signatories take up Russia’s responsibilities. But it is not clear whether Iran and China would be ready to go ahead without Russia. While the Iranians have publicly said they would not allow any “external factors” to impact their national interests, Tehran is unlikely to ignore the sensitivity of Russia, an ally, and reach an agreement with the U.S., whose exit scuttled the original deal. This leaves the future of the nuclear deal in Russian hands. Russia’s invasion of Ukraine and the West’s response to it have already sent commodity prices soaring and shaken the global economy, which is yet to come out of the COVID-19 shock. A further delay or a total collapse of the Iran deal would not only deepen the security crisis in West Asia but also add pressure on global oil and gas prices. The signatories should not hold the Iran deal to ransom. They should continue to push for a collective agreement that could curb Iran’s nuclear programme and take the country into the global economic mainstream.

**Source: The Hindu**

### **38. Why Australia, Netherlands are taking legal action against Russia over 2014 MH17 crash**

**Relevant for GS Prelims & Mains Paper II; International Issues**

Amid the Russian invasion of Ukraine, Australia and the Netherlands will launch a new legal case against Moscow over its alleged role in the downing of Malaysia Airlines flight MH17 that crashed in eastern Ukraine's Donetsk region in 2014, when Crimea was annexed by Russian forces.

All 298 passengers and crew on board were killed when the plane crashed on 17 July 2014, after it was hit by a missile, alleged to be Russian. The plane was flying between Amsterdam and Kuala Lumpur and was over eastern Ukraine when it got hit by a missile. At the time, a civil war was being fought in the region, between Ukrainian forces and pro-Russian separatist rebels. There were 38 Australian nationals, 196 Dutch nationals, 43 Malaysians on board.

The government of the Netherlands has denied that the legal action is a result of the war between Russia and Ukraine, saying it is a result of consultations between the two countries after Russia withdrew from negotiating further.

Australian Prime Minister Scott Morrison recently said that Russia's "unprovoked" and "unjustified" invasion of Ukraine "underscores the need to continue our enduring efforts to hold Russia to account for its blatant violation of international law and the UN Charter, including threats to Ukraine's sovereignty and airspace."

Russia and the Netherlands have initiated legal proceedings before the International Civil Aviation Organisation (ICAO) under Article 84 of the Convention on International Civil Aviation. Both the countries first held Russia responsible for the plane crash in 2018, but Russia, in 2020, unilaterally pulled out from negotiations.

#### **MH17 crash: What happened in 2014?**

A series of events led to Russia's annexation of the Crimean peninsula in 2014. The previous year, in November 2013, anti-government protests started in Ukraine's capital Kyiv.

The protesters were unhappy with pro-Russian president Viktor Yanukovich's decision to forego a deal that would have led to increased integration of Ukraine and the European Union. Russia supported Yanukovich, while Europe and the US expressed support for the protesters.

By February 2014, the situation had escalated, with state repression encouraging more people to join the protests. The same month Yanukovich fled Ukraine, which made Russia anxious about losing influence in Europe's largest country, which was part of the Soviet Union until the Berlin Wall fell in 1989.

To address this, Russian troops wasted little time in annexing Crimea. By March 2014, the troops had taken control of the peninsula. Russian President Vladimir Putin justified the annexation by saying that the decision was taken to protect the rights of Russian speakers and Russians living there.

A controversial referendum was held, which the US and EU called illegal. More than 90 percent of the voters voted to join Russia in this referendum. Shortly after, in regions of eastern Ukraine called Donetsk and Luhansk, pro-Russian separatists held referendums and declared independence from Ukraine. This was the beginning of fighting between the separatist rebels and Ukrainian forces that have led to the deaths of at least 15,000 people.

It was during this fighting that the Malaysia Airlines plane MH17 was hit by a missile and crashed in eastern Ukraine. A number of ceasefire deals have been announced since then but none have been effective in resolving the territorial conflict.

#### **On what grounds are Australia and the Netherlands making their case against Russia?**

In a recent statement, Morrison highlighted that both Australia and the Netherlands will rely on "overwhelming evidence" to hold Russia responsible. The evidence includes the downing of MH17 by a Russian surface to air missile system, the transportation of the missile system from Russia to an agricultural field in eastern Ukraine, and the fact that the missile system was returned to Russia after the plane was downed.

“The Russian Federation’s refusal to take responsibility for its role in the downing of Flight MH17 is unacceptable and the Australian Government has always said that it will not exclude any legal options in our pursuit of justice,” Morrison said.

The legal proceedings initiated by the two countries are governed by Article 84 of the Convention on International Civil Aviation, which deals with settling disputes in case of disagreement between two or more states. In such cases, the Council takes a vote to settle issues.

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### **What have investigations into the MH17 crash found?**

Russia has repeatedly denied playing a role in the MH17 plane crash. In 2020, Dutch investigators said that the plane was indeed hit by a surface-to-air missile operated by pro-Russian rebels in eastern Ukraine. The Dutch Safety Board (OVV) conducted three investigations into the downing of the flight.

It said that the flight crashed after the detonation of a 9N314M-type warhead launched from the eastern part of Ukraine using a Buk missile system. The missile detonated to the left and above the cockpit of the plane because of which the forward section of the aircraft was penetrated by hundreds of high-energy objects coming from the warhead.

Because of this impact and subsequent blast, three crew members were killed immediately and the plane broke up in mid-air, one of the OVV investigations said. The debris from the plane fell in an area of 50 sq. kilometers.

The OVV also said, “Ukraine had sufficient reason to close the entire airspace over the eastern part of Ukraine as a precaution. Instead, on military grounds flying at lower altitudes was restricted.” On the day this plane crashed over 160 commercial planes flew over the area.

After a Dutch-led joint investigation (which included Australia, Belgium and Malaysia) concluded in May 2018 that the missile system came from a Russian base, the Netherlands and Australia decided to hold Russia responsible. Russia has not only denied the allegations but has called the Dutch investigations “biased, superficial and politicised”.

The BBC notes that four days after the crash, two of Russia’s senior generals accused the Ukrainian government of deliberately pushing MH17 off its flight path and into the war zone. It also says that Russians highlighted a blip on the Russian radar, which showed a Ukrainian fighter jet instead of a commercial plane.

In 2019, Dutch prosecutors charged four individuals including three Russians and one Ukrainian who they said were responsible for targeting the plane.

**Source: The Indian Express**

## **39. What is Ukraine’s new law on cryptocurrencies?**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

Ukraine, which is at war with Russia, has decided to establish a legal framework through which cryptocurrencies can be operated in the country in a regulated ecosystem. The country’s parliament had in February passed the law to legalise cryptocurrencies, and its President Volodymyr Zelenskyy signed it into a law Wednesday.

### **What is Ukraine’s new law on cryptocurrencies?**

According to CoinDesk, the new Ukrainian law on cryptocurrencies determines the legal status, classification, ownership and regulators of virtual assets, in addition to establishing registration requirements for cryptocurrency service providers. In a tweet, Ukraine’s digital ministry said: “From now on, foreign and

Ukrainian cryptocurrencies exchanges will operate legally and banks will open accounts for crypto companies. It is an important step towards the development of the VA (virtual assets) market in Ukraine”.

### **How will cryptocurrencies be regulated in Ukraine?**

The cryptocurrency market in Ukraine will be regulated by its National Securities and Stock Market Commission — the equivalent of India’s Sebi. The Ukrainian securities regulator will also have powers, under the new law, to determine policies on digital assets, issue licenses to businesses dealing with cryptocurrencies, and act as a financial watchdog.

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### **Why has Ukraine legalised cryptocurrency?**

Ukrainians have been one of the most active retail users of cryptocurrencies, and there had been discussions in the country earlier to legalise these digital assets, but the latest trigger has been Russia’s military action in Ukraine. In light of the war, Ukraine has reportedly received more than \$100 million in donations in the form of cryptocurrencies since the crisis began last month.

A report by TechCrunch said that with the new law in place, Ukraine’s first crypto exchange, Kuna, will no longer be limited to helping the country spend the donations directly with crypto-friendly suppliers, but help convert crypto to much-needed fiat. It added that the country has also partnered with the Bahamas-based exchange FTX to convert crypto contributions to Ukraine’s war effort into fiat for deposit at the National Bank of Ukraine.

Incidentally, an earlier law to legalise cryptocurrencies was passed by Ukrainian parliament back in September as well, but was vetoed by Zelenskyy saying the country couldn’t afford a new regulatory body.

### **What are the global experiences in legalising cryptocurrencies?**

The most significant example of legally adopting crypto into a nation’s economy has been that of El Salvador, which made Bitcoin a legal tender in September 2021. But the initiative has since been marred with problems such as technical glitches and identity fraud, in addition to a conflict between the decentralised nature of Bitcoin and an authoritarian government in El Salvador.

Other than the Central American country, several other jurisdictions are attempting to legalise private cryptocurrencies, like Bitcoin and Ethereum, or are launching Central Bank Digital Currencies (CBDC) that are digital currencies backed by the state.

### **Where does India stand on cryptocurrencies?**

In the Union Budget for 2022-23 presented last month, the Centre proposed a 30 per cent tax on virtual assets, including cryptocurrencies, effectively legitimising trading of private cryptocurrencies and non-fungible tokens. This was broadly in line with the Centre’s plans to have a fiat digital currency, while disallowing use of private virtual coins as legal tender.

The government is also separately working on a law to regulate private cryptocurrencies, while the Reserve Bank of India is planning to launch the pilot of its CBDC — the Digital Rupee — this year.

Like many other jurisdictions, India is also faced with the question of who would regulate cryptocurrencies in the country — the central bank, the securities watchdog, or a new regulatory body.

**Source: The Indian Express**

## **40. Who is a war criminal, and who gets to decide?**

**Relevant for GS Prelims & Mains Paper II; International Issues**



President Joe Biden on Wednesday flatly called Russia's Vladimir Putin a "war criminal" for the unfolding onslaught in Ukraine, where hospitals and maternity wards have been bombed. But declaring someone a war criminal is not as simple as just saying the words. There are set definitions and processes for determining who's a war criminal and how they should be punished.

The White House had been avoiding applying the designation to Putin, saying it requires investigation and an international determination. After Biden used the term, White House press secretary Jen Psaki said the president was "speaking from his heart" and renewed her statements that there is a process for making a formal determination.

In popular usage, though, the phrase has taken on a colloquial meaning as a generic term for someone who's awful.

"Clearly Putin is a war criminal, but the president is speaking politically on this," said David Crane, who has worked on war crimes for decades and served as chief prosecutor for the UN Special Court for Sierra Leone, which tried former Liberian President Charles Taylor.

The investigations into Putin's actions already have begun. The U.S. and 44 other countries are working together to investigate possible violations and abuses, after the passage of a resolution by the United Nations Human Rights Council to establish a commission of inquiry. There is another probe by the International Criminal Court, an independent body based in the Netherlands.

"We're at the beginning of the beginning," said Crane, who now heads the Global Accountability Network, which works with the international court and United Nations, among others. On the day of the invasion, his group set up a task force compiling criminal information for war crimes. He's also drafting a sample indictment against Putin. He predicted an indictment of Putin could happen within a year. But there is no statute of limitations.

### **Here's a look at how this all works:**

#### **Who is a war criminal?**

The term applies to anyone who violates a set of rules adopted by world leaders known as the law of armed conflict. The rules govern how countries behave in times of war.

Those rules have been modified and expanded over the past century, drawn from the Geneva Conventions in the aftermath of World War II and protocols added later.

The rules are aimed at protecting people not taking part in fighting and those who can no longer fight, including civilians like doctors and nurses, wounded troops and prisoners of war. Treaties and protocols lay out who can be targeted and with what weapons. Certain weapons are prohibited, including chemical or biological agents.

#### **What specific crimes make someone a war criminal?**

The so-called "grave breaches" of the conventions that amount to war crimes include willful killing and extensive destruction and appropriation of property not justified by military necessity. Other war crimes include deliberately targeting civilians, using disproportionate force, using human shields and taking hostages.

The International Criminal Court also prosecutes crimes against humanity committed in the context of "a widespread or systematic attack directed against any civilian population." These include murder, extermination, forcible transfer, torture, rape and sexual slavery.

The most likely way that Putin could come into the picture as a war criminal is through the widely recognized legal doctrine of command responsibility. If commanders order or even know or are in a position to know about crimes and did nothing to prevent them, they can be held legally responsible.

### **What are the paths to justice?**

Generally, there are four paths to investigate and determine war crimes, though each one has limits. One is through the International Criminal Court.

A second option would be if the United Nations turns its work on the inquiry commission over to a hybrid international war crimes tribunal to prosecute Putin.

A third would be to create a tribunal or court to try Putin by a group of interested or concerned states, such as NATO, the European Union and the U.S. The military tribunals at Nuremberg following World War II against Nazi leaders are an example.

Finally, some countries have their own laws for prosecuting war crimes. Germany, for example, is already investigating Putin. The U.S. doesn't have such a law, but the Justice Department has a special section that focuses on acts including international genocide, torture, recruitment of child soldiers and female genital mutilation.

### **Where might Putin be put on trial?**

It's not clear. Russia does not recognize the jurisdiction of the International Criminal Court and would not send any suspects to the court's headquarters in The Hague, Netherlands. The U.S. does not recognize the authority of the court, either. Putin could be tried in a country chosen by the United Nations or by the consortium of concerned nations. But getting him there would be difficult.

### **Have national leaders been prosecuted in the past?**

Yes. From the post-World War II tribunals in Nuremberg and Tokyo to more recent ad hoc tribunals, senior leaders have been prosecuted for their actions in countries including Bosnia, Cambodia and Rwanda.

Former Yugoslav leader Slobodan Milosevic was put on trial by a U.N. tribunal in The Hague for fomenting bloody conflicts as Yugoslavia crumbled in the early 1990s. He died in his cell before the court could reach a verdict. His Bosnian Serb ally Radovan Karadzic and the Bosnian Serb military leader, Gen. Ratko Mladic, were successfully prosecuted and are both now serving life sentences.

Liberia's Taylor was sentenced to 50 years after being convicted of sponsoring atrocities in neighboring Sierra Leone. Chad's former dictator Hissene Habre, who died last year, was the first former head of state to be convicted of crimes against humanity by an African court. He was sentenced to life.

**Source: The Indian Express**

## **41. Why could India and Russia consider the use of Chinese currency to facilitate oil trade?**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

India and Russia are said to be considering the use of the Chinese yuan as the reference currency to facilitate oil trade between the two countries. This news comes in the backdrop of economic sanctions imposed by the West against Russia after the Russian military invaded Ukraine late last month.

### **Why is Russia trying to sell oil to India?**

Russia has been trying to sell oil at a significant discount to India as demand for Russian oil has dropped since the U.S. and Europe imposed sanctions last month. Although there is no outright ban yet on the purchase of Russian energy exports, many energy traders have been reluctant to purchase Russian energy and sell them. Traders fear that the United States may impose further sanctions if the war in Ukraine intensifies and that this may leave them holding energy inventory that they cannot sell.

As part of Western sanctions, certain Russian banks were removed from the SWIFT payments system, thus affecting Russia's ability to trade with the rest of the world. Russian businesses have been unable to pay for imports and Russian consumers have been unable to purchase goods. The Russian central bank's foreign reserves were also frozen, which in turn has dented the Bank of Russia's ability to use its foreign reserves to defend its currency. The Russian rouble has lost about a quarter of its value against the U.S. dollar since the invasion. U.S. President Joe Biden, earlier this month, also banned Russian energy imports into the United States.

### **Why use the Chinese yuan instead of the U.S. dollar for oil trade?**

Major oil producers have for decades sold their produce to foreign buyers in exchange for U.S. dollars. Oil sellers have been willing to accept U.S. dollars for their oil because the currency is widely accepted in the global market for goods and services. It should be noted that the value and the acceptability of any currency depend mainly on its purchasing power, that is, the amount of goods and services that can be bought using it. For a long time, the U.S. has been an economic powerhouse creating valuable goods and services. So, people around the world have been willing to sell their goods and services for U.S. dollars in the hope that they can use these dollars to purchase valuable American goods and services.

The U.S. government has made use of this economic advantage to further its foreign policy goals. Since global trade that is carried out using dollars is cleared by banks located in the United States, the U.S. government has the power to freeze dollars that belong to its adversaries which then debilitates economies.

To avoid this risk, many countries have been looking at alternatives to the U.S. dollar to carry out international trade. Of late, China has emerged as a significant economic power and this in turn has boosted the value of the yuan in the eyes of people and made it an increasingly acceptable currency for global trade. However, it should be noted that only about 3% of global trade is facilitated by the Chinese yuan while almost 90% of global trade still happens through the use of U.S. dollars.

### **What lies ahead?**

It is unclear at the moment what using the Chinese yuan as reference currency would entail. It could simply just mean that the value of trade that happens between Russia and India will be quoted in terms of the yuan without the Chinese currency actually being used in bilateral trade. Or it could mean the yuan is actually used to facilitate trade between the two countries. Since neither the rouble nor the Indian rupee is widely accepted as a global currency for trade, this can lead to problems when there is a trade imbalance. In 2021, Russia's exports to India were valued at \$6.9 billion while India's exports to Russia stood at only \$3.3 billion. This represents a trade surplus of over \$3 billion in favour of Russia. If Russia were to accept the rupee instead of the dollar in bilateral trade, it would be hard for it to get rid of its excess rupee holdings. This is since the rupee's acceptability in global trade is minuscule compared to that of the dollar. The use of the yuan, which is more widely accepted, can help solve the problem.

The use of the dollar as a financial weapon against Russia, as was evident with the freezing of dollar assets held by the Bank of Russia last month and other sanctions on Russian banks, can also accelerate efforts by countries to reduce their dependence on the U.S. dollar. Countries may want to hold fewer dollars and euros and instead opt for alternative trade arrangements that involve the use of emerging currencies such as the yuan.

This could portend a fall in the status of the dollar over time unless the U.S. manages to maintain its current status as the most dominant economic superpower.

- As part of Western sanctions, Russian banks were removed from SWIFT payments and energy imports from the country have also reduced. Thus, Russia has been trying to sell oil at a significant discount using the yuan as a reference currency.
- The U.S. is using its economic advantage to freeze dollars that belong to its adversaries. To avoid this risk, many countries have been looking at alternatives to the U.S. dollar.



- For oil trade between India and Russia, neither the rouble nor the Indian rupee is suitable as a global currency for trade. Therefore, the yuan can become an alternate option.

**Source: The Hindu**

## **42. Can the International Court of Justice mandate a ruling in the current crisis happening in Eastern Europe?**

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### **Relevant for GS Prelims & Mains Paper II; International Issues**

The ongoing conflict between Ukraine and Russia has entered its fourth week. It has led to one of the most severe humanitarian crises in Europe since World War II. Russia has sought to justify its “special military operation” as a response to the alleged act of genocide of the Russian speaking people in the territories of Donetsk and Luhansk. Ukraine on February 26 approached the International Court of Justice (ICJ), the principal judicial organ of the United Nations (UN), requesting the ICJ among other things, to hold that no acts of genocide defined under the Genocide Convention 1948 and as claimed by Russia have been committed by Ukraine in Donetsk and Luhansk. Additionally, Ukraine also requested the court to indicate certain provisional measures, such as directing the Russian Federation to “immediately suspend military operations” in Ukraine, and to ensure that Russia will not aggravate or extend the dispute. The ICJ on March 16, rendered its order directing the Russian federation inter alia to immediately suspend all military operations in Ukraine.

#### **Where does the ICJ’s jurisdiction lie?**

Article 36(1) of the Statute of the ICJ provides that the ICJ shall have jurisdiction in all matters relating to the UN Charter, or other treaties or conventions in force. The Genocide Convention 1948 under Article IX provides that disputes between states relating to the interpretation, application or fulfilment of the Genocide Convention, as well as those relating to the responsibility of a state for genocide shall be submitted to the ICJ at the request of any of the parties to the dispute. Russia and Ukraine are both parties to the Genocide Convention. The ICJ held that there exists a prima facie dispute between Ukraine and Russia over the question of whether the acts of genocide have been committed in Ukraine, and accordingly it has the jurisdiction.

#### **What do the ICJ’s powers to indicate provisional measures entail?**

The Statute of the International Court of Justice, under Article 41 empowers the ICJ to indicate provisional measures in any case before it in order to preserve the rights of the parties involved. When the ICJ indicates such provisional measures, the parties to the dispute and the UN Security Council have to be notified. Until 2001, there was uncertainty as to whether the provisional measures indicated by the ICJ were binding. However, in the LaGrand (2001) case between Germany and the U.S. relating to the denial of consular access to a German national in the U.S., the ICJ made it clear that provisional measures are binding in character and create international legal obligations. Further, provisional measures may be indicated by the ICJ either on the request of a state party or proprio motu i.e., on its own motion. The ICJ has also held in the Tehran Hostages Case (1980) that the non-appearance of one of the parties concerned cannot itself be an obstacle to indication of provisional measures. In the present case, the Russian Federation chose not appear in the oral proceedings before the court. Notwithstanding, the ICJ proceeded to decide the case.

#### **Under what conditions can the ICJ’s powers be exercised?**

The power to indicate provisional measures is subject to certain conditions.

In the Gambia v. Myanmar (2020) case dealing with genocide of Rohingyas in Myanmar, the ICJ held that it may exercise the power to indicate provisional measures only if it is satisfied that rights which are being asserted by the party which is requesting provisional measures is “at least plausible”. The ICJ in the present case held that Ukraine indeed has a plausible “right of not being subjected to military operations by the Russian Federation for the purpose of punishing and preventing alleged acts of genocide.” The ICJ expressed doubt regarding the use of unilateral military force against another state for preventing and punishing genocide, as a means under the Genocide Convention 1948. It highlighted that the Genocide Convention provides for other



means such as resort to other UN organs under Article VIII, and for peaceful dispute settlement by ICJ under Article IX. It is important to note here that the ICJ at the stage of provisional measures does not engage in a definitive analysis of whether rights which are claimed by the applicant actually exist. That analysis is for the merits phase.

Second, there must exist a link between the provisional measure which has been requested and the plausible right that is to be preserved by such measure. Page | 96

Third, there must be “real and imminent risk” of “irreparable prejudice” to the rights claimed before the ICJ. The court observed that the mounting loss of human lives, harm to environment, and the refugee crisis are all instances of irreparable harm and prejudice justifying the indication of provisional measures.

#### **What lies ahead?**

The provisional measures indicated by the ICJ are binding, and non-compliance certainly entails the breach of an international legal obligation. However, the ICJ does not have the means or mechanism to secure the enforcement of the judgment itself. Indeed, the UN Charter under Article 94(2) provides that if any state fails to perform obligations pursuant to an ICJ decision, the UN Security Council (UNSC) may take measures necessary to give effect to the judgment. However, the possibility in the present case is bleak given that Russia has veto power in the UNSC.

Additionally, if there is an impasse in the Security Council, the UN General Assembly (UNGA) is empowered under Article 14 of the UN Charter to recommend measures for the peaceful adjustment of any situation “which it deems likely to impair the general welfare or friendly relations among nations.” In *Nicaragua v U.S.* (1984) when the U.S. refused to comply with the ICJ decision, and the Security Council was deadlocked, the UNGA adopted several resolutions deploring the behaviour of the U.S.. Further, the Uniting for Peace Resolution adopted in 1950 by the UNGA in the context of the Korean War, authorises the UNGA to consider any matter which may threaten international peace and security, and to make appropriate recommendations to the members for collective measures, including the use of armed force. The power of the UNGA to ‘recommend measures for peaceful adjustment’ has been affirmed by the ICJ in several cases including the *Certain Expenses Advisory Opinion* (1962), and *Wall Advisory Opinion* (2004). Russia’s non-participation in the oral proceedings has already reflected its disrespect for international law and international institutions. If Russia does not comply with the provisional measures of the ICJ, the reputational harm to its regime will only be compounded. Moreover, non-compliance with provisional measures will legitimise and justify counter-measures against Russia. Interestingly enough, Russia has been kicked out of the Council of Europe with immediate effect on the same day as ICJ’s provisional measures were indicated.

**Source: The Hindu**

### **43. India extends billion dollar credit line to Sri Lanka**

**Relevant for GS Prelims & Mains Paper II; Bilateral Relations**

#### **Assistance to Sri Lanka**

India on Thursday extended a \$1 billion credit facility to Sri Lanka to assist the island nation through its worst foreign exchange crisis and enable it to procure food, medicines and other essential items.

An agreement to this effect was signed between the State Bank of India and the Government of Sri Lanka, during a visit of the country’s Finance Minister Basil Rajapaksa to New Delhi.

Mr. Rajapaksa, who met Prime Minister Narendra Modi on Wednesday morning to discuss Indian assistance amid Sri Lanka’s extraordinary economic crisis, also interacted with Finance Minister Nirmala Sitharaman and External Affairs Minister S Jaishankar on Thursday. An official statement from the Finance Ministry said issues of mutual interest and economic cooperation were discussed by the Ministers.

“Neighborhood first. India stands with Sri Lanka. US\$ 1 billion credit line signed for supply of essential commodities. Key element of the package of support extended by India,” Mr. Jaishankar tweeted.

In 2022, so far India has extended \$1.4 billion support to Sri Lanka, through a \$400 million RBI currency swap, deferral of a \$0.5 billion loan and another half a billion as a line of credit for the country to sustain its essential fuel imports.

Sri Lanka is facing its worst financial crisis, and had declared an emergency in August last in the face of a crippling foreign exchange crunch. The nation is still facing significant fuel and gas shortages, and high inflation in essential goods as well as food items. The situation has triggered a series of protests by the political Opposition and citizens’ groups, who blame the Rajapaksa government for the crisis.

### **Foreign exchange shortage**

In a televised address to the nation on Wednesday, President Gotabaya Rajapaksa vowed to work with the International Monetary Fund to resolve the fiscal imbroglio. He said its root cause was the foreign exchange shortage due to a large \$10 billion trade deficit.

Sri Lanka is due to repay foreign debt totalling nearly \$ 7 billion this year, amid a persisting shortage of dollars to import food, medicines and other essentials. It has already sought China’s help to restructure its loans that amount to 10 % of its total foreign debt. Much of Sri Lanka’s external borrowings are through sovereign bonds in the international money market.

During Mr. Basil Rajapaksa’s talks with the Indian side, New Delhi and Colombo agreed to set up a “framework for short, medium and long-term economic cooperation” between the two countries aimed at addressing Sri Lanka’s present economic challenges, according to a media release issued by the Sri Lankan High Commission in New Delhi.

With this objective, Mr. Basil Rajapaksa, Mr. Jaishankar and Ms. Sitharaman agreed to stay “in regular contact”, while a coordinating mechanism comprising senior officials from both sides was set up to maintain regular dialogue, the Sri Lankan mission said.

**Source: The Hindu**

## **44. Could Ukrainian ‘neutrality’ help end Russia war?**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

In talks between Russia and Ukraine toward a possible cease-fire after three weeks of intense fighting, negotiators are exploring prospects of possible “neutrality” for Ukraine, a former Soviet republic that has been moving closer to NATO in hopes of membership — infuriating Moscow.

The discussions this week have brought a glimmer of hope of a possible way out of the bloody crisis in Ukraine — and followed an acknowledgement from Ukrainian President Volodymyr Zelenskyy in the most explicit terms yet that Ukraine is unlikely to realize its goal of joining the Atlantic alliance.

An official in Zelenskyy’s office said the talks have centered on whether Russian troops would remain in separatist regions in eastern Ukraine after the war and where borders would be. Ukraine also wants at least one Western nuclear power involved in the talks, and a legally binding document on security guarantees.

In exchange, Ukraine was ready to discuss a neutral military status, the official told The Associated Press on condition of anonymity to discuss the sensitive matter.

Russian Foreign Minister Sergey Lavrov and Vladimir Medinsky, the chief Russian negotiator, first mentioned publicly on Wednesday that the issue of a “neutral” status for Ukraine was on the table, sparking a guessing-game about what that might mean.

But even should a deal be struck, there’s no assurance it would hold: Russia, many critics say, has gravely violated international law and its own commitments by invading Ukraine in the first place. In the view of Russian President Vladimir Putin, the West has breached what he considered its obligation not to expand NATO into Eastern Europe.

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### **WHAT IS NEUTRALITY TODAY?**

It’s about not picking sides, keeping out of binding alliances, and trying to stay out of conflict — but even supposedly “neutral” nations have their limits. European countries often mentioned when the concept of neutrality comes up are Switzerland — which like Austria has codified neutrality into its constitution — as well as Sweden, Finland, Ireland and, once upon a time, Belgium, which is today the home of NATO.

Switzerland has generally resonated as the leading emblem of neutrality. The Swiss have shunned alliances, refused to join the European Union, acted as an intermediary between opposing countries, and only joined the United Nations 20 years ago \_ even though it has hosted the UN’s European headquarters for decades.

But the Swiss lined up with European Union sanctions against Russia after the invasion of Ukraine. Other countries too have strayed from neutrality in the strictest sense: Swedish forces are taking part in NATO’s winter-weather exercises in neighbouring Norway; Finland has long resisted joining NATO, but Moscow’s actions in Ukraine have been changing the dynamic.

Some countries — particularly those close to Russia in Central and Eastern Europe — have gravitated close to NATO and become members, and eschewed neutrality out of concern it would convey weakness and vulnerability, and that Moscow could seize on that.

### **WHAT ALTERNATIVES ARE ON THE TABLE FOR UKRAINE AND RUSSIA?**

Historian Leos Muller held up Austria — which has kept its distance from NATO — as a conceivable model for Ukraine.

After World War II, Austria — which before the war had been united with Nazi Germany — was occupied by forces from four Allied powers: Britain, France, the United States and the Soviet Union. In 1955, those four powers decided to pull out their occupying forces and let Austria be independent, but only after Moscow insisted that Austria’s parliament first write into its constitution a guarantee of neutrality.

“I think that’s the solution that they are thinking about at the moment, because it worked for Austria,” said Muller, a history professor at Stockholm University and author of the book, “Neutrality in World History”. Still, Muller doubted whether a diplomatic exit ramp can be found just yet, after so much blood has spilled on both sides in the conflict.

### **WOULD ‘NEUTRALITY’ OFFER AN EXIT ROUTE TO THE CRISIS?**

Enshrining the “neutrality” of Ukraine into any deal could help diminish the military threat that Russia perceives from it \_ especially as a possible NATO member. Ukraine insists it has no hostile intent toward Russia, but has been sidling up to the alliance to ensure its security.

For years, Russian authorities, from Putin on down, have bristled about NATO’s gradual creep eastward after the Cold War, when the Soviet-led Warsaw Pact alliance disappeared. Estonia, Latvia and Lithuania are the former Soviet republics now in NATO.

A brief war in 2008 between Russia and Georgia, which led to the de facto excision of two Georgian territories from its national map, put Georgia’s own ambitions to join NATO into a deep freeze.

As Ukraine gravitated closer to the West, in 2014, Russia annexed the Black Sea peninsula of Crimea and pro-Russian separatists seized control of parts of eastern Ukraine in 2014 \_ boosting Kyiv's desire to join NATO, even if it was admittedly a long way off. After a continued cozying-up between NATO and Ukraine, including with weapons and advisers, Russia reached a boiling point last year.

### HOW DID OTHER COUNTRIES COME TO ACCEPT NEUTRALITY?

The European countries that are most associated with neutrality got to that in different ways. Sometimes it was made easier by geography — such as in the case of Sweden and other Nordic states that were above the fray of wars south of the Baltic Sea. Sometimes, it was imposed.

Muller noted Finland. During the Cold War, Finland — which had sided with Nazi Germany during World War II and has a 1,340-kilometer (830-mile) border with Russia — was strong-armed by the Soviet Union into not opposing its foreign policy rules.

"They always had to take in consideration what Soviet reactions would be," Muller said.

Switzerland, at the end of the wars of conquest by French emperor Napoleon in the early 19th century, had its neutrality guaranteed by the great powers of the day in Europe at the Vienna Congress in 1815 \_ who recalled many armies were "tromping across" Swiss territory during those wars that followed the French Revolution, Muller said.

Over subsequent generations, Swiss neutrality became ingrained and has now become "part of the national identity", he added.

### JUST HOW FAR BACK DOES THE IDEA OF NEUTRALITY GO?

While the concept traces its origins back millennia, such as when some Greek city-states sought to avoid getting entangled in the Peloponnesian War in the 5th century BC, neutrality in the modern sense in Europe dates to the 18th century, after the Treaty of Westphalia — which ended the Thirty Years War and exemplified the emergence of international law, said Muller.

Some countries began choosing neutrality out of self-interest, but also as a moral choice, he said.

When it's not clear how to choose "who is the good guy, and who is the bad guy," said Muller, "then, it's morally OK to be in between".

**Source: The Indian Express**

## 45. What is the UK's 'Homes for Ukraine' refugee scheme?

### Relevant for GS Prelims & Mains Paper II; International Issues

Nearly three million people have fled Ukraine, to neighbouring countries, as a result of Russian aggression, and the numbers are steadily rising, according to the United Nations High Commissioner for Refugees (UNHCR).

The UK government this week introduced the 'Homes for Ukraine' scheme, which allows residents to host displaced Ukrainians in their own homes or independent accommodation for six months to a year. Michael Gove, secretary of state for levelling up, housing and communities, launched the webpage for sponsors to register for the scheme, which opens visa applications on March 18.

While Gove himself has said he would be willing to be a host, British actor Benedict Cumberbatch too said he would play his part. At the recent British Academy Film Awards, the Doctor Strange star said, "There's been a record number of people volunteering to take people into their homes, I hope to be part of that myself and also donating to charities who can help people in a very real way on the ground."



**How the 'Homes for Ukraine' scheme works**

The scheme allows individuals, charities, communities groups and businesses in the UK, across nationalities, to bring in Ukrainians. In Phase One of this scheme, the sponsor can choose whom to support, be it an individual, more than one adult or adults with children. Hosts will be subject to safeguard and security checks, so will the guests. While they are expected to give rent-free rooms, the UK government will offer "an optional thank-you payment of £350 a month", which can continue till 12 months of sponsorship. Local authorities will be given £10,000 for helping each Ukrainian refugee through this new scheme, besides funds for providing education to school children.

**How it works for Ukrainians**

UK's home secretary Priti Patel informed that Ukrainians with international passports can directly apply online for entry without the need to visit a visa application centre. They can remain in the UK for three years and will have "full and unrestricted access" to state benefits, healthcare, schooling, and employment. They will need to be vetted before entry and biometric checks will be made in the UK after arrival.

**The criticism**

Opposition parties in the UK have called it a "do-it-yourself" asylum plan. Until now the Gateway Protection Programme, a UK refugee resettlement scheme, partnered with UNHCR has been in action since 2004, where local authorities have provided for housing. They either use empty buildings or repurpose vacant houses.

The NGO, Refugee Council, working with the Gateway Protection Programme, has also raised concerns about the trauma support women and children needed in such a crisis. They have called for "robust checks, training and having a social worker in place" to support asylum seekers.

The other concern is what happens to them after the six-month stay, if they cannot find jobs or employment. And should the Russia-Ukraine conflict last longer than three years (when their visa expires) what would their future be?

Lastly, the visa process appears to be long-drawn and time-consuming, at this crucial point. As on March 14, of the 17,600 total applications only 4,600 visas have been issued ([www.gov.uk](https://www.gov.uk)).

**Through history**

The UK has, in the past, devised historic processes for refugees. In 1938, the British government conducted a nine-month rescue operation for Jewish children fleeing the Nazi pogrom. Called Kindertransport (Children Transport), the parents or relatives had to provide a £50 bond, to be "assured of their ultimate resettlement", and it was assumed they could reconnect with their families once the crisis was over. The children had temporary travel documents; they were taken on trains to Belgian or Dutch borders and then to England on ship. However, most children never saw their parents again.

Almost a year later, in 1939, the UK again wore its worker gloves to help refugees soon after the passing of Norwegian statesman and polar explorer Fridtjof Nansen. The Nansen passports, recognised internationally as refugee travel documents, from 1922 to 1938, issued by the League of Nations, were discontinued. The Office International Nansen, too, was closed. It then resumed as the Office of the High Commissioner for Refugees, with its headquarters in London. Many famous people have been Nansen passport holders including the composers Igor Stravinsky and Sergei Rakhmaninov and the dancer Anna Pavlova.

**Source: The Indian Express**

**46. What are MANPADS, the missiles securing Ukraine's airspace?**

**Relevant for GS Prelims & Mains Paper II; International Issues**

The West in its continuous support to Ukraine has been supplying the besieged country with military aid in the form of arms as well as anti-aircraft and anti-tank defence systems.

Hours after Ukrainian President Volodymyr Zelenskyy made an impassioned speech at US Congress asking for support, his American counterpart Joe Biden Wednesday said the US will be sending an additional \$800 million in military assistance to Ukraine.

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Among other weapons and drones, the assistance would include 800 Stingers – a type of man-portable air defence system (MANPADS) – and 2,000 Javelin anti-armour systems.

### **What are MANPADS?**

According to news agency AP, prior to Biden's announcement, the US had already sent Ukraine more than 600 Stinger missiles and 2,600 Javelins. Additionally, it had authorised the Baltic states of Estonia, Lithuania, and Latvia to transfer Javelins and Stingers to the war-hit country in January this year.

Germany, Norway, and the Netherlands among other countries have also supplied Stingers to Ukraine.

The FIM-92 Stingers were characterised as "fire and forget" MANPADS by a 2019 RAND Corporation report commissioned by the US Department of State.

MANPADS are "short-range surface-to-air missiles used to intercept fixed- and rotary-wing aircraft in flight." They are designed to be fired while mounted on a person's shoulder or a tripod. Among such weapons, Stingers – made by the US – have an infrared seeker which detects the target through its radiation emissions. They can be used to shoot down aircraft and drones. Another example of such missiles is the Russian Igla-S.

While MANPADS are deployed for air defence, US-made Javelins are used to destroy tanks and armour. They, too, come equipped with an infrared sensor so the missile can make adjustments mid-air to find its target.

Similarly, Next generation Light Anti-tank Weapon (NLAW) systems are also shoulder-mounted short-range missiles, which have been supplied by the UK to Ukraine. They are jointly made by Britain and Sweden. However, they do not have an infrared sensor – hence, lighter to carry – and require the operator to pre-determine the missile's path.

### **How have the MANPADS helped Ukraine?**

According to experts, MANPADS have been at the forefront of the Ukrainian defence, keeping the Russians from dominating the air space. "These MANPADS are very useful because they make Russian air strikes less effective. If you deploy them in large numbers, you certainly won't shoot down every Russian jet and helicopter, but Russia would have to pay a steep price for an attack," Mykola Bielieskov of the National Institute for Strategic Studies in Kyiv told DW.

Videos show Russian helicopters and jets being shot down by surface-to-air missiles.

According to a BBC report, researchers had confirmed that at least 20 Russian aircraft had been shot down by missiles by Ukraine as of March 8. However, Ukrainian defence has pegged the number at significantly higher. The latest figures shared by the Ukrainian Ministry of Defense on March 17 show that it has destroyed 86 Russian aircraft and 108 helicopters. The Russians have not disclosed their losses so far.

In fact, analysts have told The Economist that Russian stock of high-precision munitions is likely running low, due to which they are relying on older weapons that require them to fly lower and hence, within the range of MANPADS.

On the ground, Javelins have become a symbol of the Ukrainian fight against Russia. 'St Javelin' – a female saint cradling a Javelin missile, a play on Virgin Mary – has been circulating on social media as Russian tanks suffer

losses. NLAWs and Javelins allow operators to hit the tank from the top, where its most vulnerable, and the short-range make them effective in urban combat, experts have said. As of March 17, Ukraine claims to have destroyed 444 tanks.

### **Are MANPADS enough?**

Zelenskyy doesn't think so. As talks for a ceasefire have yielded no significant breakthrough yet, Zelenskyy has repeatedly called upon the US and its allies to institute a no-fly zone over Ukraine. In his address to the US Congress, he added that the alternative was to provide them with aircraft that can help Ukraine defend its skies.

The US has been mulling sending over longer-range S-300 surface-to-air missile systems that can shoot down aircraft. Since they are Soviet-designed, they would be familiar to Ukrainian forces.

Ukraine has also appealed for Soviet-made MiG-29 and Su jet fighters, saying that it is outnumbered by Russians in air defence. The US and its allies, however, have been wary of sending jets or implementing a no-fly zone, fearing that it may escalate the war.

### **A short history of MANPADS and concerns over proliferation**

The first MANPADS developed by the US were called 'Redeye' and declared operational in 1968, according to a report by the Australian Government. An updated version, the Stinger, was released in 1970s. They were provided to Mujahideen in Afghanistan to fight Soviet aircraft in the 1980s. The Soviets too have developed their own MANPADS – Strela and Igla.

Around 20 countries, including the US, UK, Russia, Sweden, North Korea, Poland, and others, produce MANPADS. However, over the years, governments have expressed concerns over the illicit proliferation of MANPADS, with the missiles landing in the hands of terrorist organisations like Al Qaeda, the US State Department has said.

In 2004, New York Times had reported that at least 4,000 MANPADS were unaccounted for from the stockpile in Iraq following Saddam Hussein's fall, according to US officials.

The RAND report states that as many as 60 civilian aircraft have been struck by MANPADS since 1975, taking over 1,000 lives. At least 57 non-state armed groups (NSAG) are thought to possess MANPADS.

For instance, the report specifies, "One of the states believed to be involved in such illicit transfers is Iran; several of the NSAGs Iran supports are known to or suspected to have acquired MANPADS, including Hezbollah, Hamas, Palestinian Islamic Jihad, and the Houthis." It adds that Qatar is believed to have purchased MANPADS for non-state actors in Syria via Sudan.

The US State Department has said that the country is carrying out a massive coordinated effort to counter this proliferation, such as securing the excess missile systems as well as financially blocking terrorists from acquiring MANPADS.

**Source: The Indian Express**

## **47. Japan to invest \$42 billion in India over five years**

**Relevant for GS Prelims & Mains Paper II; International Relations**

### **Investment Target**

India and Japan set an investment target of "five trillion yen" (\$42 billion) in the next five years, the leaders announced after a meeting in New Delhi for the 14th annual summit, where several agreements were signed. Mr. Shringla said India and Japan had surpassed their previous target of 3.5 trillion yen Japanese investment between 2014-2019, and the new target of 5 trillion yen was a "measure of their performance in the past". The

two sides also concluded a “roadmap for competitive partnership” for the MSMEs and the small-scale sector companies.

#### **Agreements on other items**

The two sides also exchanged six agreements on cybersecurity, economic partnerships, waste-water management, urban development, a clean energy partnership and an agreement on promoting bamboo-based products from the northeast region.

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#### **Bullet Train Project**

Mr. Shikata also said Japan hoped to accelerate efforts to complete the Mumbai–Ahmedabad Shinkansen Bullet train project, that has run into troubles over land acquisition in Maharashtra and is now expected to be delayed to about 2026. He said Japan hopes that when one such high-speed rail project is completed, Indians will see the benefits — not only the convenience [of the train] but how environmentally friendly it is, new smart cities can be built and more investment will come.”

The “2+2” meeting of Foreign and Defence Ministers in the next few months is due to take forward agreements on the strategic partnership and PM Modi is expected to visit Tokyo in May or June, where he will hold another bilateral summit with Mr. Kishida and attend the Quad summit with the U.S. President and the Australian Prime Minister.

This was the first India–Japan annual summit since 2018, which had been postponed due to protests against the Citizenship (Amendment) Act and then due to the pandemic.

**Source: The Hindu**

### **48. Ukraine war: What are humanitarian corridors, and how safe are they?**

#### **Relevant for GS Prelims & Mains Paper II; International Issues**

Amid the Ukraine war, Russia has announced ‘humanitarian corridors’ to allow citizens to flee from the cities of Chernihiv, Sumy, Kharkiv, Mariupol and Kyiv. These corridors also allow food and medical aid to be brought to the areas of conflict. According to a United Nations estimate, over 3.1 million people have fled Ukraine to neighbouring countries in the last three weeks. Poland has accepted the move number of refugees, pegged at close to two million people.

**So, how safe are these corridors? Do they work? Where else have they been used? Take a look:**





## HUMANITARIAN CORRIDORS: HOW SAFE ARE THEY?

With concern mounting over civilians caught in the crossfire over its war with Ukraine, Russia has announced 'humanitarian corridors' to allow civilians to flee the Ukrainian cities of Chernihiv, Sumy, Kharkiv, Mariupol and Kyiv

**#QUIXPLAINED**

1

*How safe are humanitarian corridors?*



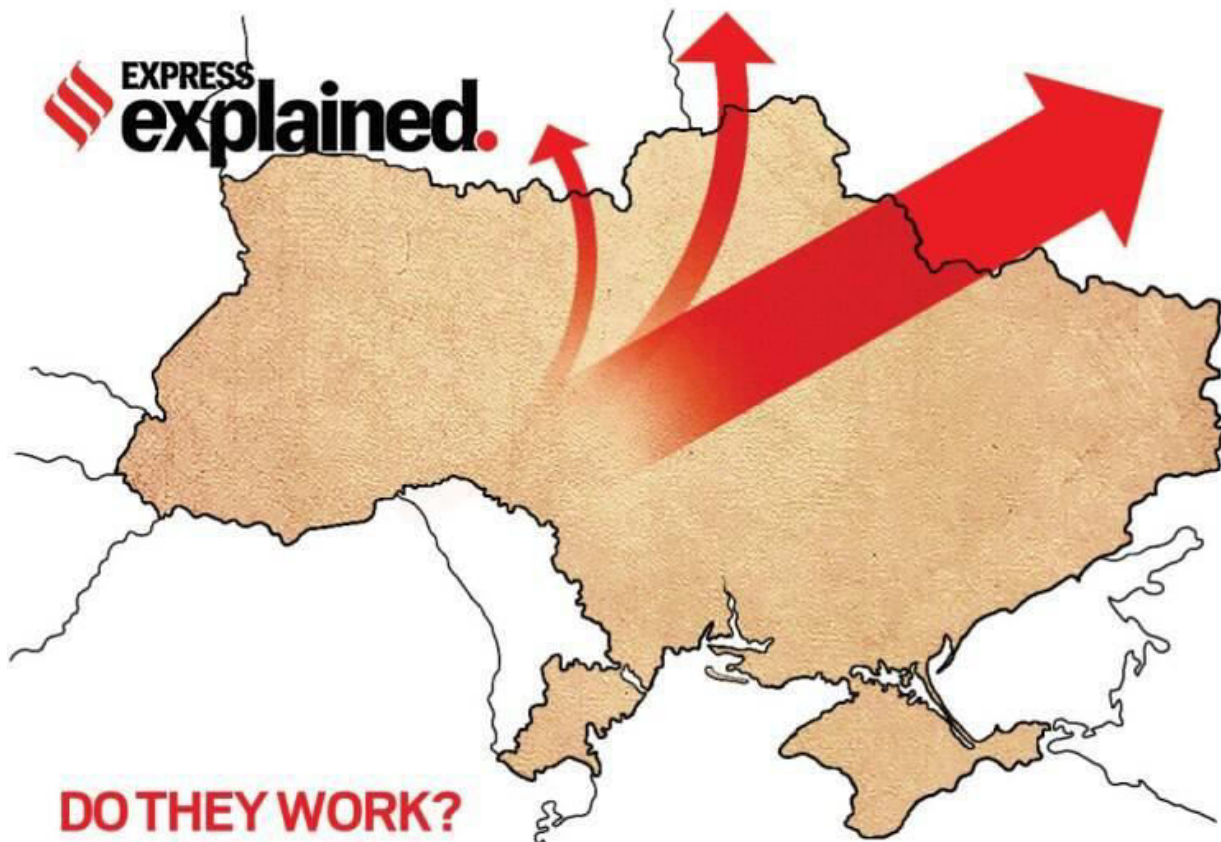
## WHAT ARE THESE CORRIDORS?

- These are safe passages that are created in a war zone by halting hostilities for a certain time – either to allow civilians to flee using designated routes or to allow urgent humanitarian aid to enter for civilians who remain

#QUIXPLAINED

2

*What are humanitarian corridors?*



## DO THEY WORK?

- While these corridors help people flee combat zones, the idea of the aggressor setting up safe passages is always looked upon with suspicion. For instance, the evacuation routes led mostly to Russia and its ally Belarus

- There are also instances of the ceasefire being breached. Mariupol said the evacuation had been postponed because Russian troops continued to bomb the city. Russia, however, said their troops came under firing

#QUIXPLAINED

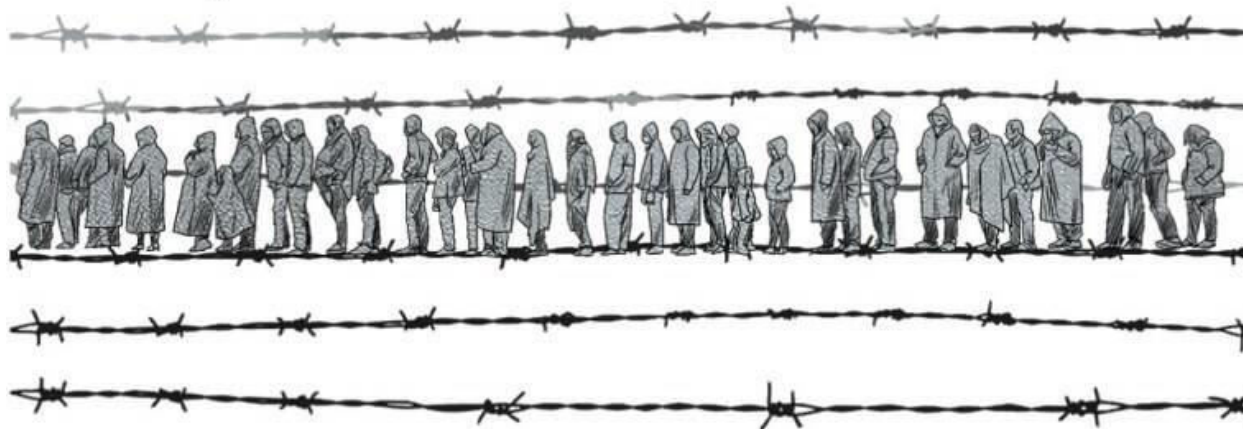
3

*Do they work?*



## EXPRESS explained.

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### WHERE ELSE HAVE THEY BEEN USED?

- During the Bosnian War in the 1990s, when the UN set up 'safe areas'. But the fleeing civilians came under attack nonetheless

- In Syria, where the Russian and Syrian militaries said they would temporarily halt shelling

on rebel-held territories and create corridors for people to flee. The largest such corridor was for eastern Aleppo in late 2016. Most of those fleeing were funneled into the northwest province of Idlib, the last opposition-held enclave in Syria

TEXT: AP/DEUTSCHE WELLE; ILLUSTRATION: SUVAJIT DEY

#QUIXPLAINED

4

*Where else have they been used?*

Source: The Indian Express

Website: [www.prepmate.in](http://www.prepmate.in)

Prepmate Cengage Books Preview: <https://prepmate.in/books/>

Telegram Channel: [@upscprepmate](https://t.me/upscprepmate)

Youtube channel: [PrepMateEduTech](https://www.youtube.com/PrepMateEduTech)



## 49. 5 reasons why Japanese PM Fumio Kishida's India visit is important

### Relevant for GS Prelims & Mains Paper II; Bilateral Relations

Japanese Prime Minister Fumio Kishida arrived in India on Saturday for his first visit to the country as the head of government. He will meet PM Narendra Modi for bilateral talks on Saturday evening, and leave Delhi on Sunday morning.

In an exclusive piece for The Indian Express, published on Saturday, Kishida wrote, "Today, I am visiting India, making my first bilateral visit since my appointment as Prime Minister. Linked by universal values such as freedom, democracy, human rights, and the rule of law, which have been shared through a long history of exchange, Japan and India are "Special Strategic and Global Partners," which share strategic interests. In this milestone year, marking the 70th anniversary of the establishment of diplomatic relations between Japan and India, I am dearly looking forward to this visit, the first by a serving Prime Minister of Japan in four and a half years, and to be able to feel for myself the tremendous dynamism of India."

Here are five reasons why Kishida's India visit is important.

#### 1. Though new to the job, PM Kishida is an experienced leader

Kishida, a native of Hiroshima, was sworn in as the Prime Minister of Japan on October 4, 2021. He has been an MP from Hiroshima as well.

He was Japan's Foreign Minister earlier. He has met PM Modi in that capacity four times. He also met the PM as Liberal Democratic Party's Policy Research Council's Chairman. He also visited India when he was the foreign minister.

#### 2. The context of the visit

This is Kishida's first visit to India as the Prime Minister. It is also his first bilateral visit (he visited Glasgow for Cop26). This is also the first incoming visit at the level of Head of government/Head of State level to India this year.

The Summit between the Indian and Japanese PMs is taking place three and a half years after the last Summit in Japan in 2018.

This year also marks the 70th anniversary of the establishment of India-Japan diplomatic relations (28 April 1952).

Prime Minister Modi had spoken to PM Kishida on phone in October 2021 soon after the latter assumed office. Both sides expressed a desire to further strengthen Special Strategic and Global Partnership. Given the evolving geo-political and economic situation, both sides are looking to deepen their partnership.

#### 3. The strategic reasons for the Japanese PM's visit are important

- o There will be talks on convergence on free, open and inclusive Indo-Pacific,
- o Talks on progress in defence and security and in regional context.
- o India and Japan signed a Reciprocal Provision of Supplies and Services Agreement (RPSS).
- o The inaugural 2+2 ministerial meeting was held in November 2019.
- o Act East Forum: A decision was taken in the 2017 Summit to establish the India-Japan Act East Forum. The objective is to coordinate developmental projects in North-East India in areas of connectivity, forest management, disaster risk reduction and capacity building.
- o Several projects including upgradation of highways in Meghalaya, Tripura and Mizoram are underway. The PM had last year laid the foundation stone of a 20 km-long bridge over the Brahmaputra River between Assam and Meghalaya.
  - Supply Chain Resilience Initiative (SCRI) – The Trade and Economy Ministers of India, Japan and

Australia launched the (SCRI) on 27 April 2021. The initiative seeks to enhance the resilience of supply chains in the Indo-Pacific Region and to develop dependable sources of supply and to attract investment. As initial projects (i) sharing of best practices on supply chain resilience; and (ii) holding of a matching event have been completed.

#### 4. The economic component of ties with Japan

Since PM Modi's visit to Japan in 2014, tremendous progress has been made on implementation of several important decisions which have been taken by the PMs.

The two countries have achieved the target of 3.5 trillion Japanese Yen in public and private investments in India which was announced by PM Modi and former Japanese PM Shinzo Abe in 2014 (Investment Promotion Partnership).

- Today, there are 1,455 Japanese companies in India. Eleven Japan Industrial Townships (JIT) have been established, with Neemrana in Rajasthan and Sri City in Andhra Pradesh having the maximum number of companies.
- Japan is the 5th largest source of FDI; largest supplier of ODA (development partner of India)
- Several infrastructure projects are underway through Japanese assistance including Mumbai-Ahmedabad High Speed Rail, Dedicated Freight Corridor, metro projects, DMIC etc
- Last year, PM Modi inaugurated the Varanasi Convention Centre (Rudraksh), while the then PM Yoshihide Suga sent a video message.
- The two sides had signed a Digital Partnership in October 2018. Collaboration in startups has emerged as a vibrant aspect under this Partnership. Till date Indian startups have raised more than USD 10 billion from Japanese VCs. India and Japan have also launched a private sector driven fund-of-funds to invest in technology startups in India which has raised USD 100 million so far.
- Both countries also have cooperation in the field of ICT, in areas such as 5G, under-sea cables, telecom and network security. A workshop on 5G was also held.
- Progress has also been made in the area of skill development. The total number of Japan-India Institutes of Manufacturing (JIM) now stands at 19 (it was 8 in 2018). These institutes are established by Japanese companies based in India for training skilled workers. Japanese companies have also set up 7 Japanese Endowed Courses (JEC) at various colleges.
- 220 Indian youth are placed in Japan as interns under Technical Intern Training Programme (TITP). Last year India had also signed a Specified Skilled Workers Agreement. The Japanese side has since January this year started examinations for nursing care under this programme.

#### 5. Things to look forward to during Kishida's visit

According to Japanese media outlet Nikkei Asia, Kishida is likely to announce a plan to invest 5 trillion yen (\$42 billion) in India over five years.

Kishida and Modi are also expected to agree to convene a two-plus-two meeting between the two countries' Foreign and Defence ministers at the earliest.

Kishida is also likely to agree to an approximately 300-billion-yen loan.

Besides, an energy cooperation document concerning carbon reduction is expected to be signed.

The Ministry of External Affairs' official spokesperson Arindam Bagchi said the Japanese PM would pay a two-day visit to India beginning Saturday for the 14th India-Japan summit.

India and Japan have multifaceted cooperation within the ambit of their 'Special Strategic and Global Partnership', he said. The situation in Ukraine is also likely to figure during the talks.

“The summit will provide an opportunity for both sides to review and strengthen the bilateral cooperation in diverse areas as well as exchange views on regional and global issues of mutual interest so as to advance their partnership for peace, stability and prosperity in the Indo-Pacific region and beyond,” Bagchi said.

In his piece for The Indian Express, Kishida also said, “Today, the international community faces a situation that is undermining the very foundation of the global order. Russia’s invasion of Ukraine is a clear violation of international law as well as an attempt to unilaterally change the status quo by force, and it is totally unacceptable. Upholding the core principles of the international order is indispensable from the perspective of diplomacy and security in the Indo-Pacific, where the situation has been rapidly worsening. Japan will unite with the international community and take resolute actions. In the recent Japan-Australia-India-US (Quad) Leaders’ Video Conference, in which Prime Minister Modi and I participated, we concurred that any attempt to unilaterally change the status quo by force, such as this time, must not be tolerated in the Indo-Pacific region, and that it is precisely because of this situation that it is critical to further promote efforts toward the realisation of a “Free and Open Indo-Pacific”.”

The India-Japan summit could not be held in 2020 as well as in 2021 primarily due to the Covid-19 pandemic. Japan is set to hold an in-person summit of Quad leaders this year and Modi is expected to attend it.

**Source: The Indian Express**

## **50. Mounting pressure: On India’s options on Ukraine**

**Relevant for GS Prelims & Mains Paper II; International Issues**

### **Dignitaries visting India**

It is certainly no coincidence that a string of foreign leaders, Ministers and officials are descending on New Delhi this month, as the Russian invasion of Ukraine continues for its fourth week, and without a clear end in sight.

There are summits with the Prime Ministers of Japan and Australia (virtual), and one soon with the Israeli Prime Minister, and visits by the U.S. Under Secretary of State, Victoria Nuland, as well as European Foreign Ministers and delegations. What the visits by NATO and Quad allies of the U.S. all have in common is their planning at short notice, and putting discussions on India’s stand on Ukraine at the top of their talks. Even Japanese PM Fumio Kishida, who had a full bilateral agenda to discuss with Prime Minister Narendra Modi at their much-delayed annual summit meeting, arrived in Delhi on a very short visit, and made it clear that finding a common position on Ukraine and telling India that it must not “condone” Russia’s actions was a “priority”. The message from the West is clear: that India must shift its position on three counts: to do more at the UN, where New Delhi has consistently abstained from resolutions criticising Moscow; to join the sanctions regime; and to avoid contracting for more Russian oil, or sending civil or military supplies to the Putin regime until the war ends. The flurry of visits, comments by officials, and press statements by diplomats indicate that tensions between Russia and the West have reached a point of no return, and New Delhi is being asked to make a very pointed choice between them.

### **Reasons for India’s Stand**

While there are several reasons why New Delhi has declined the attempts to steer it from its course on Russia that are linked to its strong partnership with Russia, there are some global interests that the Modi government must consider more closely. The civilian toll in Ukraine is mounting, and while Russia has denied reports of targeted attacks on schools and theatres, it is necessary for New Delhi to acknowledge any Russian violation of human rights, especially as the Kremlin has not yet fully clarified its endgame.

Second, while India has expressed concerns over nuclear safety, it must be willing to make this an issue with Moscow, if necessary. Another area is the threat of chemical and biological warfare, and while the Indian representative spoke strongly at the UN Security Council about the importance of fully implementing the

Biological and Toxin Weapons Convention, the Government must be prepared to vote on the issue and call out any side that violates these. As the war progresses, more such debates will arise, and New Delhi must retain its ability to judge and shift its position from “being neutral” and “abstentionist” to one more wholly seized of the issues, and as a leading nation that is able to exercise its “strategic autonomy” on matters of principle, when required.

**Source: The Hindu**

## **51. What is ‘Finlandization’, discussed as a possible option for Ukraine?**

**Relevant for GS Prelims & Mains Paper II; International Issues**

It will soon be a month since Russia invaded Ukraine, and despite several rounds of talks between the representatives of the two sides, it remains unclear when and how the war might end. Russia invoked the threat of Ukraine joining NATO as a pretext for the invasion; President Volodymyr Zelenskyy however, appeared to acknowledge last week that his country will not be part of the US-led military alliance in the foreseeable future.

Among the scenarios that have been seen as potentially workable is the “Finlandization” of Ukraine — something that France’s President Emmanuel Macron was said to have suggested as “one of the models on the table” (he denied it later) amid rising tensions in early February, and which had been floated earlier in 2014, the year Russia annexed Crimea and fighting broke out in Ukraine’s eastern Donbas region.

The exercise of the “Finland” option at this stage is however complicated — with Russia having already reduced significant parts of Ukraine to rubble, and President Joe Biden having described President Vladimir Putin as “a murderous dictator, a pure thug who is waging an immoral war against the people of Ukraine”.

### **Meaning of the term**

‘Finlandization’ refers to the policy of strict neutrality between Moscow and the West that Finland followed during the decades of the Cold War. The principle of neutrality was rooted in the Agreement of Friendship, Cooperation, and Mutual Assistance (or YYA Treaty, from the Finnish “Ystävyys-, yhteistyö- ja avunantosopimus”) that Finland signed with the USSR in April 1948.

Article 1 of the treaty (translated) reads: “In the eventuality of Finland, or the Soviet Union through Finnish territory, becoming the object of an armed attack by Germany or any state allied with the latter (meaning, essentially, the United States), Finland will, true to its obligations as an independent state, fight to repel the attack.

“Finland will in such cases use all its available forces for defending its territorial integrity by land, sea, and air, and will do so within the frontiers of Finland in accordance with obligations defined in the present agreement and, if necessary, with the assistance of or jointly with, the Soviet Union.

“In (these) cases, the Soviet Union will give Finland the help that it requires, subject to mutual agreement between the contracting parties.”

### **Context and reasoning**

The 1948 treaty formed the basis of Helsinki-Moscow relations until 1992, when Finland signed a new agreement with post-Soviet Russia. It lay at the heart of Finland’s foreign policy doctrine especially when Juho Kusti Paasikivi (1946-56) and Urho Kekkonen (1956-82) were President, and is known in international relations studies as the “Paasikivi-Kekkonen line”.

From the perspective of Finland — whose capital Helsinki is situated just across the Gulf of Finland from St Petersburg (Leningrad) — the treaty protected it from being attacked or incorporated into the USSR like the



Baltic and eastern European states. It allowed the country to pursue the path of democracy and capitalism while staying out of the conflict between the great powers.

Finland did not participate in the Marshall Plan, the post-War European recovery programme named after President Harry S Truman's Secretary of State George C Marshall, which promoted the idea of shared interests and cooperation between the US and Europe. It took neutral positions on matters on which the Soviet Union and the West disagreed. It stayed aloof from NATO and European military powers, and used this positioning to ward off pressure from Moscow to become part of the Soviet bloc or the Warsaw Pact.

### **Ukraine and Finlandization**

In an op-ed article titled 'To settle the Ukraine crisis, start at the end' published in The Washington Post in March 2014, Henry Kissinger, US Secretary of State from 1973 to 1977, argued that "if Ukraine is to survive and thrive, it must not be either side's outpost against the other — it should function as a bridge between them".

Kissinger put forward four points summarising his "notion of an outcome compatible with the values and security interests of all sides". The first three of them remain relevant to the current crisis in Ukraine as well, and the third explicitly advocates the option of Finlandization.

"1. Ukraine should have the right to choose freely its economic and political associations, including with Europe.

"2. Ukraine should not join NATO, a position I took seven years ago, when it last came up.

"3. Ukraine should be free to create any government compatible with the expressed will of its people. Wise Ukrainian leaders would then opt for a policy of reconciliation between the various parts of their country. Internationally, they should pursue a posture comparable to that of Finland. That nation leaves no doubt about its fierce independence and cooperates with the West in most fields but carefully avoids institutional hostility toward Russia."

Also in 2014, Zbigniew Brzezinski, who served as the US National Security Advisor from 1977 to 1981 and is recognised as one of the most prominent voices that shaped Cold War American foreign policy, told DW in an interview: "If we want a solution that's constructive it has to be based on compromise. And I can envisage Ukraine evolving in the context of a constructive compromise into a country whose domestic and foreign policies will be somewhat similar to that of Finland."

In an Op-Ed written at the time in the Financial Times titled 'Russia needs to be offered a 'Finland option' for Ukraine', Brzezinski recommended: "The US could and should convey clearly to Mr Putin that it is prepared to use its influence to make certain that a truly independent and territorially undivided Ukraine pursues policies towards Russia similar to those so effectively practised by Finland: mutually respectful neighbours, wide-ranging economic relations both with Russia and the EU, but no participation in any military alliance viewed by Moscow as directed at itself – while also expanding its European connectivity. In brief, the Finnish model as the ideal example for Ukraine, and the EU, and Russia."

**Source: The Indian Express**

## **52. Why have the Pakistan PM's allies and his fellow MNAs come out against him? What happens if he does get removed from office?**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

The all-powerful Pakistani Army appears to have withdrawn from its "coalition" with Prime Minister Imran Khan, leaving him to face the March 25 no-confidence vote on his own steam. Several members of the National Assembly, known as MNAs, have already deserted the ranks of the ruling Pakistan Tehreek-e-Insaaf (PTI) even as Mr. Khan plans a massive show of strength in Islamabad.

**Why is the “hybrid arrangement” between Mr. Khan and Army Chief Qamar Javed Bajwa collapsing and threatening the survival of the PTI government?**

The warmth between Mr. Khan and Gen. Bajwa evaporated after the Prime Minister showed a streak of independence when the Army wanted the removal of the Inter-Services Intelligence (ISI) Directorate chief Lt. General Faiz Hameed in October 2021. In theory, the choice of appointing the director-general of the ISI lies with the Prime Minister, but the Army chief is usually able to influence the appointment. Finally, Mr. Khan did the unprecedented in “interviewing” three candidates for the ISI chief’s job and signed off on Lt. Gen. Nadeem Anjum — the man originally appointed by Gen. Bajwa himself.

Previously, the regular meetings between the Prime Minister and the Army Chief were a signal that “all was well” between the country’s permanent and political establishment as they navigated the fortunes of a new governance arrangement different from those run by the Sharifs and the Zardari clan. Mr. Khan himself was effusive in his praise for the Army chief. It is no secret in Pakistan that Gen. Bajwa had helped Mr. Khan win the 2018 general elections.

The various moves by the PTI government— both on the financial and foreign policy front — would have been carefully watched by Gen. Bajwa and the rest of the army brass to assess whether these were in line with the institutional interests of the khakis.

**For all his belligerence, what are the chances of Mr. Imran Khan continuing as Prime Minister?**

Mr. Khan has been attacking the Opposition relentlessly. His remarks against Opposition leaders like Asif Ali Zardari, Shehbaz Sharif and Fazal-ur-Rehman have been scathing — mixed with threats to send all of them to jail. He hasn’t spared the Army either. A day after the Army spokesman said the institution had “nothing to do with politics”, the Prime Minister said at a public meeting on March 12, “Humans either side with good or evil. Only animals remain neutral.” The Prime Minister also said that the Army chief Gen. Bajwa had asked him not to call the Jamiat-Ulema-e-Islam (F) leader Fazal-ur-Rehman “diesel”, but said it was not him (Mr. Khan), but the people that had dubbed him “diesel”. (Mr. Rehman was accused of smuggling diesel for profit to Afghanistan during the 1990s).

All the fighting talk may not help Mr. Khan in the game, as 12 of his MNAs have openly declared that they will vote against him in the no-confidence vote.

A magic number of 172 is required in the 342-member National Assembly.

With several MNAs coming out openly against the Prime Minister, the Opposition now has the numbers to dethrone Mr. Khan.

The stance of some of PTI’s allies should also be a matter of concern — most of them are known to swing to the Army’s tune.

**What kind of political arrangement may come into existence if the PTI is ousted from government?**

An Islamabad-based political analyst believes that Shehbaz Sharif, the current leader of the Opposition in the National Assembly, and president of the Pakistan Muslim League (PML-N), could be the new Prime Minister, with other groups like the Pakistan People’s Party (PPP) becoming part of the government. The analyst was of the view that such a government could be of a temporary nature and would inevitably lead to fresh elections that are, in any case, due in 2023. The term of the current National Assembly ends in August 2023.

**Who is the Army going to back this time around?**

The inability of the PML-N and the PPP to keep step with the Army’s perceived needs and requirements led to the khakis propping up and placing Mr. Khan in the saddle after the 2018 general elections. It’s a bit of a secret as to how the Army manages the elections in Pakistan, but the fact remains that they have often managed this feat. In the past, the Army has funnelled money to political groups of their choice. In the current scenario, they think that Mr. Shehbaz Sharif, brother of former Prime Minister Nawaz Sharif, could be their best bet. A three-

time Prime Minister, Mr. Nawaz Sharif is now living in political exile in London. He is a better critic of the Army and remembers his ouster twice at the hands of the military establishment — in 1993 and in 1999. In 2017, Mr. Sharif was removed as Prime Minister following a Supreme Court order. His brother, the junior Sharif, is more amenable to working with the Army.

### **Will the no-confidence vote be smooth?**

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No elected government has ever been removed from office through a no-confidence vote — the Army and the Supreme Court have played this role. If Mr. Khan's government falls, this will be a first for Pakistan. The role of the Speaker and the mass mobilisation promised by the Prime Minister could play the role of spoiler in the conduct of the no-confidence motion.

**Source: The Hindu**

## **53. Sri Lanka's aggravating economic crisis**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

Why did the island nation reach this point? How has India extended support and assistance to its neighbour? The story so far: Sri Lanka's economic crisis is aggravating rapidly, putting citizens through enormous hardship. Over the weekend, at least two senior citizens died while waiting in long queues to buy fuel; the price of cooking gas spiked to LKR 4,199 (roughly ₹1,150), the price of the widely used milk powder shot up by LKR 600 a kg, and authorities were forced to cancel school examinations for millions of students, due to a shortage of paper.

### **Why are prices soaring and why is there a shortage?**

Sri Lanka is in the grips of one of its worst economic meltdowns in history. The first wave of the pandemic in 2020 offered early and sure signs of the distress — when thousands of Sri Lankan labourers in West Asian countries were left stranded and returned jobless; garment factories and tea estates in Sri Lanka could not function, as infections raged in clusters, and thousands of youth lost their jobs in cities as establishments abruptly sacked them or shut down. It meant that all key foreign exchange earning sectors, such as exports and remittances, along with tourism, were brutally hit.

The lack of a comprehensive strategy to respond to the crisis then, coupled with certain policy decisions last year — including the government's abrupt switch to organic farming —widely deemed "ill-advised", further aggravated the problem. In August last year, the government declared emergency regulations for the distribution of essential food items, amid wide import restrictions to save dollars which in turn led to consequent market irregularities, and reported hoarding.

Fears of a sovereign default rose by the end of 2021, with the country's foreign reserves plummeting to \$1.6 billion, and deadlines for repaying external loans looming. But Sri Lanka managed to keep its unblemished foreign debt servicing record. All the same, without enough dollars to import essentials such as food, fuel, and medicines, the year 2022 began on a rather challenging note, marked by further shortages and an economic upheaval.

### **What is happening on the ground?**

At the macro-economic level, all indicators are worrisome. The Sri Lankan rupee, that authorities floated this month, has fallen to nearly 265 against the U.S. dollar. Consumer Price inflation is at 16.8% and foreign reserves stood at \$2.31 billion at the end of February. Sri Lanka must repay foreign debt totalling nearly \$7 billion this year and continue importing essentials from its dwindling dollar account. In a recent address to the country, President Rajapaksa said Sri Lanka will incur an import bill of \$22 billion this year, resulting in a trade deficit of \$10 billion.

For citizens, this means long waits in queues for fuel, a shortage of cooking gas, contending with prolonged power cuts in many localities and struggles to find medicines for patients. In families of working people, the crisis is translating to cutting down on milk for children, eating fewer meals, or going to bed hungry.

### **Is there resistance?**

Yes, both citizens and different segments of the political opposition are taking to the streets, demanding that President Rajapaksa go home. Many media houses are criticising the government, while social media pages are rife with memes and sharp commentary on the Rajapaksas.

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### **What is the government's response?**

"This crisis was not created by me," President Rajapaksa has said, pointing to challenges that arose due to the pandemic. Despite many economists putting forward support from the International Monetary Fund (IMF) as the "only option" for the government, the establishment was reluctant until recently when mounting protests and criticism forced the government into a policy U-turn. The government is now in talks with the IMF to "to find a way to pay off our annual loan instalments, sovereign bonds", Mr. Rajapaksa said. It remains to be seen how the IMF will support Sri Lanka at this juncture, and to what extent its support might help the country cope with the crisis. Colombo has also sought support from various bilateral partners, including India, by way of loans, currency swaps, and credit lines for import of essentials.

### **How is India helping?**

Beginning January 2022, India has extended assistance totalling \$ 2.4 billion — including an \$400 million RBI currency swap, a \$500 million loan deferment, and credit lines for importing food, fuel, and medicines. Of this, a billion-dollar credit line was finalised last week, during Finance Minister Basil Rajapaksa's visit to New Delhi. "Neighbourhood first. India stands with Sri Lanka. \$1 billion credit line signed for supply of essential commodities. Key element of the package of support extended by India," External Affairs Minister S. Jaishankar said in a tweet.

Meanwhile, China is considering Sri Lanka's recent request for further \$2.5 billion assistance, in addition to the \$2.8 billion Beijing has extended since the outbreak of the pandemic, the Chinese Ambassador in Colombo told a media conference.

### **How is India's assistance being viewed in Sri Lanka?**

The leadership has thanked India for the timely assistance, but there is growing scepticism in Sri Lankan media and some sections, over Indian assistance "being tied" to New Delhi inking key infrastructure projects in the island nation in the recent past — mainly the strategic Trincomalee Oil Tank Farm project; the National Thermal Power Corporation's recent agreement with Ceylon Electricity Board to set up a solar power plant in Sampur, in Sri Lanka's eastern Trincomalee district; and two renewable energy projects in northern Sri Lanka, with investment from India's Adani Group.

The weekend newspaper Sunday Times took an editorial position that New Delhi was resorting to "diplomatic blackmail", while cartoonists have depicted Sri Lankan leaders trading crucial energy projects for emergency financial assistance from India. The political opposition has accused the Adani Group of entering Sri Lanka through the "back door", avoiding competitive bids and due process.

**Source: The Hindu**

## **54. Why Russia and Japan never officially declared peace after WWII**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

On September 2, 1945, the allied forces accepted Japan's formal surrender, marking the end of the most destructive global conflict of all time — World War II. But nearly eight decades later, Japan and Russia technically remain at war.



The two countries are yet to formally sign a peace treaty to end World War II hostilities. At the heart of the conflict is a group of tiny islands located just off Japan's northernmost island of Hokkaido.

Now peace talks between the two countries have hit yet another stumbling block — Russia's invasion of Ukraine. After Japan joined the West in imposing hefty sanctions on Moscow, the Russian foreign ministry announced that it was withdrawing from treaty discussions, accusing Japan of "consciously choosing an anti-Russian course".

Moscow further announced that it was halting all joint-economic programs between the two countries.

### **Why has Moscow halted peace talks?**

After Russia invaded Ukraine, Japan announced that it was revoking 'most-favoured nation' (MFN) trade status as part of its economic sanctions against the country. MFN status is a key principle of the World Trade Organisation (WTO). It ensures non-discriminatory trade between all partner countries of the WTO.

Japan Prime Minister Fumio Kishida's decision came soon after similar announcements were made by the US, the EU, and the United Kingdom. But since Tokyo and Moscow aren't major trading partners, the move is unlikely to have too much of an adverse impact on Russia, according to a report by Japan Times.

Kishida further announced that Japan was expanding the scope of asset freezes against Russia and banning the imports of certain products, Reuters reported. Apart from a wide range of luxury products, Japan has banned the export of about 300 semiconductors, computers and communications devices to Russia and Belarus, according to Japan Times.

Soon after Japan's announcement, Russia asserted that it would not be continuing talks with Japan. "The Russian side, in the current conditions, does not intend to continue talks with Japan on the peace treaty," the Russian Foreign Ministry said in a statement. It said this was "due to the impossibility of discussing the core document on bilateral relations with a country that has taken an openly hostile position and is striving to cause harm to the interests of our country".

Russia called off several joint-economic programs and ended a visa-free regime that allowed Japanese people to visit the disputed Kuril islands that were claimed by the Soviet Union towards the fag end of World War II, AFP reported.

### **Why haven't Japan and Russia declared peace yet?**

Japan and Russia have had a complicated relationship for over a century. But one of the lowest points in Russia-Japan relations played out during the final days of the Second World War, right before Japan's Emperor Hirohito announced his country's surrender.

The Soviet Union declared war on Japan and seized a group of islands located near the coast of Hokkaido. All 17,000 Japanese residents were expelled at the time. The islands — known as the southern Kurils in Russia and the Northern Territories in Japan — are at the centre of an ongoing standoff between the two countries.

Since then, while Russia insists that the islands fall under its jurisdiction, Japan maintains that they are an inherent part of its territory and are presently under illegal occupation. The territorial dispute has caused deep rifts between the countries and has kept them from finalising a peace agreement.

After WWII, the Soviet Union refused to sign the formal Treaty of Peace with Japan. Instead, in 1956, the two countries signed a joint declaration "that would technically "end the state of war". The declaration included an agreement to sign a peace treaty in the future. But this is yet to be achieved.

### **Why do these islands matter?**

Apart from being home to rich fishing grounds, the islands are significant from a strategic perspective. It is here that a large chunk of Russia's pacific fleet is docked. In fact, over the last few years, Russia has been increasing its military presence on the islands.

In 2016, Russian anti-ship and missile defence systems were stationed here, according to a report by ABC. It has also deployed fighter jets to the islands, much to the ire of Japan's Foreign Affairs ministry.

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**Have Japan and Russia tried to negotiate?**

Yes, several times. Between 2012 and 2020, leaders of the two countries have held 25 meetings, according to a report by Bloomberg.

Things were starting to look up for Japan in 2018 when Russian President Vladimir Putin and Japan's former Prime Minister Shinzo Abe agreed that their negotiations should be based on the joint declaration of 1956, which called for the transfer of two of the four islands to Japan. But Russia said Tokyo would first have to acknowledge its sovereignty over the islands.

Then in 2020, Russia amended its constitution, making it illegal to hand over any of its territories.

**Source: The Indian Express**

**55. Why Mariupol matters to Russia in the Ukraine war****Relevant for GS Prelims & Mains Paper II; International Issues**

The Russian offensive against Mariupol has turned the city into "ashes of a dead land", the city council asserted on Tuesday, describing the increased bombarding and shelling ever since Ukraine rejected the Kremlin's proposal to lay down their arms and surrender.

Mariupol has been a key fighting ground as Moscow looks to overturn its 2014 loss when the Russia-backed separatists had failed to capture the city in the Donetsk oblast (region). We explain why Mariupol holds the key to the Russian offensive.

**Why is Mariupol significant to Moscow?**

Geographically, Mariupol forms a land bridge between Crimea—which Russia annexed in 2014—and Dobass, the separatist-held regions of Ukraine. As of now, the Sea of Azov falls between the Donetsk-Luhansk region and Crimea.

Just a 100-km away from the separatist-held regions, the rebel forces had tried to capture the city in 2014. However, Ukrainian forces reclaimed the region. Then president Petro Poroshenko had declared Mariupol the regional capital of the oblast after Donetsk fell to rebel forces.

In 2016, it also became a 'city of solidarity'—as termed by the United Nations High Commissioner for Refugees—welcoming internally displaced people from the contested territories.

**Maritime advantage, economic hit**

Not just land, capturing Mariupol also gives Russia a maritime advantage. With the fall of Kherson, Russia has already expanded its control over the Black Sea coastline, most of which is dominated by Moscow after it seized Crimea.

Russian troops have also launched attacks on Mykolayiv and Odessa, cities along the Black Sea. However, Ukrainian troops have been able to resist its advances so far.

In the East, much of the coastline along the Sea of Azov is also under Russian territory, barring Mariupol, which is home to one of the largest ports of Ukraine. Melitopol and Berdyansk along Azov were taken over by Russian forces just days after the invasion began, The Guardian has reported.

If Mariupol falls, Russia will control the entire coastline along the Sea of Azov and much of the Black Sea, cutting off Ukraine's maritime trade.

In 2014, it had lost a third of its Black Sea coastline, access to the Kerch Strait and five of its seaports.

After the annexation, the handling of cargo at Mariupol and Berdyansk fell almost 70 per cent and 50 per cent, respectively, The Financial Times has reported. This resulted in a loss of \$400 million for the ports, which was made worse with the opening of the Kerch Strait bridge by Russia in 2018. The bridge can only provide way to smaller ships with a maximum height of 35-meters. And with increasing inspections by Russian authorities, Ukrainian ships are forced to wait nearly five hours to go through.

However, Mariupol continues to account for a fifth of Ukraine's ferrous metal exports. Along with Berdyansk, it also makes up for 5 per cent of grain exports, according to Bloomberg. It is also home to two of the largest iron and steel plants in Europe — Azovstal and Ilyich. Azovstal has reportedly been damaged by Russian shelling.

Hence, Moscow's control over Mariupol will be a significant hit to Ukraine's maritime trade and metal production.

### **Novorossiia**

In 2014, Russian President Vladimir Putin invoked 'Novorossiia' (New Russia) while talking to reporters. Novorossiia is a historical term for territories considered to be part of Russia under tsarist rule, which included large parts of southern and eastern Ukraine, such as Odessa, Kharkiv, Kherson, Donetsk and Luhansk.

"The region's history as part of Russia created an obligation on Moscow to protect its present-day inhabitant," Putin was quoted as saying by Reuters.

Effectively, controlling Mariupol will put Putin closer to the imagined Novorossiia.

### **A much-needed victory**

Lastly, with the battlefield across northern Ukraine "largely static", according to the latest update by British military intelligence, a win in Mariupol will be a major morale booster for Russian forces.

On Wednesday, the UK Ministry of Defence said, "Russian forces are attempting to envelop Ukrainian forces in the east of the country as they advance from the direction of Kharkiv in the north and Mariupol in the south." This came just a day after US National Security Advisor Jake Sullivan called Russia's invasion a 'failure'. "Russia intended to accomplish three basic objectives in launching its unprovoked attack against Ukraine: first, to subjugate Ukraine; second, to enhance Russian power and prestige; and third, to divide and weaken the West. Russia has thus far manifestly failed to accomplish all three objectives. In fact, it has thus far achieved the opposite," Sullivan said.

Moreover, Mariupol is also the headquarter of the Azov regiment, which in 2014 had warded off Russian troops. The Azov fighters, however, are known for harbouring neo-Nazi and far-right views. Incorporated into the National Guard in 2014, Azovs also have a political party—National Corps—and a paramilitary group, National Militia, that has been accused of extremist violence.

Putin called for the "military operation" in Ukraine on the pretext of fighting such neo-Nazi groups. A win over the regiment would arguably buttress his claim. However, the Azov fighters form just a small fraction of the Ukrainian defence.

Stanford's Center for International Security and Cooperation estimates that as of 2019, the Azov regiment consisted of 1,500 members, and an additional 1,000 members in the National Militia.

**Source: The Indian Express**

## **56. The new refugees from Sri Lanka, driven by hunger, not war**

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### **Relevant for GS Prelims & Mains Paper II; International Issues**

For decades, groups of Sri Lankan Tamils have come to Tamil Nadu, fleeing war and hostilities on the island. The 16 Sri Lankan Tamils who arrived on the Rameswaram coast in two batches on March 22 were, however, different.

They were economic refugees, trying to escape a dire situation in Sri Lanka, which is reeling under a severe economic crisis.

Indian intelligence agencies believe that as unemployment and skyrocketing inflation drive more and more people to desperation in the coming days and weeks, the numbers of these refugees are likely to only increase.

### **Tamil Nadu, a natural destination**

Barely 30 km away across the shallow Palk Strait, India has long appeared within reach, especially to Tamils in Northern and Eastern Sri Lanka. Ethnic affinity has made Tamil Nadu inviting, either as asylum or as a point of transit to the West, mostly Europe — where a large and influential Tamil diaspora has gathered over the decades of war and political turbulence in Sri Lanka.

People and political parties in Tamil Nadu have been traditionally welcoming of Sri Lankan refugees with similar ethnic and cultural roots. In the 1970s and 80s, India trained and armed the Tamil rebels, and the sea crossing presented no major threat to the illegal immigrants from Sri Lanka. This situation changed radically after Rajiv Gandhi was assassinated by the LTTE in 1991.

### **History of Sri Lankan refugees**

While Tamil-origin refugees from Northern and Eastern Sri Lanka had been arriving in India from long before the 1980s, their flow increased significantly after 1983, when ethnic clashes began on the island between the majority Sinhala Buddhist ruling class and the Indian-armed Tamil Tigers.

Those who arrived before 1983 were mainly Indian-origin Tamils whose forefathers had migrated to Sri Lanka to work in the tea plantations. Their arrival was facilitated by an agreement between Prime Ministers Lal Bahadur Shastri and Sirimavo Bandaranaike to allow 9,75,000 people of Indian origin in Sri Lanka to become citizens of the country of their choice.

Many of the 4.6 lakh repatriations from Sri Lanka before 1982 travelled to Europe; others married Indians in an effort to resolve their crises of identity.

From 1983, the Sri Lankan Tamils arrived in multiple waves. The first of these was between July 1983 and 1987, when 1.34 lakh Sri Lankan Tamils reached India, pushed by anti-Tamil riots in Sri Lanka after an LTTE ambush killed 13 Sri Lankan soldiers, and pulled by the India-Sri Lanka Accord. In the two years from 1987, however, some 25,600 refugees returned to Sri Lanka, according to official records.

The second wave of arrivals began after the war flared up in June 1990, and about 1,22,000 Tamils fled the island. Between 1991 and 1995, some 54,000 refugees were repatriated to Sri Lanka; this was also the period in which Sri Lankan Tamils faced pressures in Tamil Nadu after the assassination of Rajiv Gandhi.



The third wave of arrivals began in 1995 and continued until 2002, a period that witnessed intense fighting in Northern Sri Lanka. The exodus turned into a flood in 2008-09, the final years of the war. Refugees continued to arrive until 2013.

### **Tamil refugee numbers**

As per latest records, about 19,000 Sri Lankan families — or 58,822 individuals, including about 10,000 children below the age of 8 — live in 108 refugee camps set up for Sri Lankan Tamils in Tamil Nadu. Another 34,087 individuals with refugee certificates live outside the camps.

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There are also individuals who have overstayed in India, those who are in transit to Europe, former Tamil militants who have been sheltered in special camps, and refugees who have been caught by Indian agencies while attempting an illegal sea passage from Indian waters to Europe or Australia.

### **Their life in Tamil Nadu**

Many Tamil nationalists in Sri Lanka consider the DMK as a betrayer of Tamils because it was part of the UPA regime that aided the brutal last phase of the war in which the Sri Lankan army killed thousands of civilians. Ordinary people fleeing the island however, are more favourably disposed towards the M K Stalin government, which has taken several “pro-refugee” steps over the past year.

Despite continuous discussions on the Sri Lankan Tamil issue in Tamil Nadu politics for decades, not much was done to improve the quality of life in the refugee camps. Most camps are ramshackle open prisons with families crammed into one or two rooms that they received in the 1980s or 1990s. Many refugees who work in hotels or other sectors, or as daily wage labourers, are watched by the Q-branch, the state intelligence and investigative unit tracking terrorists and other radicalised individuals.

The refugees have benefitted from the general social welfare schemes in the state, be it the free rice or periodic festival incentives and “kits”. The head of each refugee family gets a monthly allowance of at least Rs 1,000, and monthly assistance for spouses and children below age 12. The DMK government announced a scheme to build 3,510 houses for Sri Lankan refugees, renovate 7,469, and provide financial assistance to refugee students for higher education.

### **New economic refugees**

The collapse of tourism following the Easter attacks of 2019 and the Covid-19 pandemic has wrecked the Sri Lankan economy. The country is heavily import-dependent, and with foreign exchange reserves crashing, there have been acute shortages of food items, fuel, and other essentials. Staples like rice and milk have become unaffordable for large numbers of people.

Local people in Mannar and Jaffna, the Tamil populated areas in the north, say many are ready to travel to India. “They are waiting for conducive factors such as the availability of boats and the position of the Sri Lankan navy and the Indian Coast Guard...,” a source in Mannar said. Several sources said people are keenly following the news from Tamil Nadu about the way those who have reached India are being treated.

**Source: The Indian Express**

## **57. What is Idaho’s anti-abortion law?**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

On Wednesday, Idaho became the first state in the US to enact an anti-abortion law fashioned after the Texas ‘Heartbeat’ Act, which bans abortion after over six weeks of pregnancy.

But while the Texas anti-abortion bill does not allow abortions even in case of pregnancies that are a result of rape, the Idaho law does provide exceptions to abortion in the case of incest and rape.

Earlier this month, the Texas Supreme Court further restricted the possibility that the state's anti-abortion law could be blocked.

Idaho has become the newest state to enact some form of legislation related to the restricting of abortion rights. Some other states that have passed similar legislation include Alabama, Arizona, Florida, Idaho, Maryland, Minnesota, Missouri, Ohio, and Wisconsin.

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Idaho's announcement has come a few months before the US Supreme Court is expected to take a call on the landmark Roe versus Wade judgment of 1973, which said that undue state restrictions on abortion were unconstitutional. In December last year, the Supreme Court, which has a conservative majority, signaled that they might overturn the landmark judgment.

### **The Idaho bill**

The Idaho bill called SB 1309 says the following: "A person may not perform an abortion on a pregnant woman when a 43 fetal heartbeat has been detected, except in the case of a medical emergency...". The exceptions include pregnancies resulting from rape and incest.

In the case of the Texas bill, ordinary citizens instead of state officials are incentivised to enforce the law. Essentially, the law authorises private individuals to sue those who provide abortions after six weeks by bringing civil action against them. Such an individual is also offered \$10,000 in damages apart from attorney's fee and costs.

On the other hand, SB 1309 allows family members of the person who gets an abortion to sue abortion providers after six weeks, or after cardiac activity has been detected. Further, the medical professionals who knowingly or "recklessly" attempted, performed, or induced an abortion in violation of the law are liable to pay up to \$20,000 in damages.

Unless it is challenged, the law will take effect within a period of 30 days.

### **What is unique about the structure of SB8 and SB1309?**

While Idaho's governor signed the bill on Wednesday, in a letter to the state Senate president, he expressed his concern about the "novel civil enforcement" element of the bill that he said will be proven "unconstitutional" and "unwise" in the short term, until the country's highest court invalidates Roe versus Wade.

The unique legal strategy of incentivising ordinary people to enforce the law, first articulated by SB8 (the Texas anti-abortion bill), has made it difficult for pro-choicers to challenge the legislation in court.

The structure of the SB8 has been criticised by some conservatives too, who have warned that Democrats could implement similar laws in other states and that the laws could go against other constitutionally protected rights that are important for Republicans, such as gun control and religious practice or mask mandates.

Last year, the organisation called the Firearms Policy Coalition filed a brief in the court against the state of Texas because it felt that the anti-abortion law could be used as a template to restrict other individual rights protected by the constitution.

**Source: The Indian Express**

## **58. India abstains in two UNGA votes on Ukraine humanitarian crisis**

**Relevant for GS Prelims & Mains Paper II; International Issues**

**Abstains from Vote**

India abstained on two resolutions at the United Nations General Assembly (UNGA) on Thursday related to the humanitarian crisis in Ukraine following the Russian invasion. The first abstention was on a draft resolution proposed by Ukraine that held Russia responsible for the crisis.

The second was a procedural vote — on whether the UNGA ought to take up a second resolution, proposed by South Africa, for action at all. This resolution did not mention Russia. The first resolution was adopted with support from 140 countries and the second was not put to vote because it did not have sufficient support.

The draft version of Ukraine's resolution named Russia, saying the UNGA "demands an immediate cessation of the hostilities by the Russian Federation against Ukraine, in particular of any attacks against civilians and civilian objects."

### **Response of countries**

The 140 countries that voted in its favour included the U.S. and European Union countries. India was among 38 abstentions, as were China, South Africa and Sri Lanka. Five countries voted against it: Russia, Belarus, North Korea, Syria and Eritrea.

### **Rationale by India**

"India abstained on the resolution since what we require now is to focus on cessation of hostilities and on urgent humanitarian assistance. The draft resolution did not fully reflect our expected focus on these challenges," India's permanent representative to the United Nations (UNPR), T.S. Tirumurti said in his 'explanation of vote' remarks.

Mr. Tirumurti was presumably referring to Ukraine's resolution, since the South African one was not put to vote and the abstention there was at the procedural stage.

While he stopped short of naming Russia, Mr. Tirumurti said India emphasised a "need to respect the UN Charter, international law and the sovereignty and territorial integrity of states". He said India was deeply concerned about the humanitarian situation and called an "immediate ceasefire".

### **Resolution by Russia**

Also, in another development, India, along with 12 other UN Security Council members, abstained on a resolution by Russia on the humanitarian crisis in Ukraine.

The draft resolution was co-sponsored by Syria, North Korea and Belarus. It failed to get adopted in the Council on Wednesday as it did not get the required nine 'yes' votes to pass.

Russia and China voted in favour of the resolution while there were no countries voting against. India and the remaining Security Council members abstained.

Russia had called for a vote in the 15-nation Security Council on its draft resolution.

**Source: The Hindu**

## **59. Why did the China Eastern Airlines plane nosedive before crash?**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

On March 21, a China Eastern Airlines Corporation flight (MU5735) on a domestic flight in China, from Kunming to Guangzhou, abruptly impacted the ground west of Guangzhou in a mountainous area. The aircraft had 123 passengers and nine crew on board. At a press briefing on March 23, the Civil Aviation Administration of China (CAAC) said that one of the black boxes had been recovered but was "substantially damaged". Suspected debris

(a large metal strip) has also been found 10 km away from the crash spot, pointing to possible mid-air disintegration.

### **What happens to the black boxes?**

A CAAC briefing has said that based on a preliminary assessment, the black box device recovered is the cockpit voice recorder and that the “recording material appeared to have survived the impact in relatively good shape”. It is being decoded in Beijing, according to a report.

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A black box must be able to withstand many accident scenarios. A document by the German Federal Bureau of Aircraft Accident Investigation says that ‘these devices are tested for extreme conditions such as an impact with a concrete wall at 750 kilometres per hour; a static load of 2.25 tons for at least five minutes, a maximum temperature of 1,100 degree Celsius (2,012 degree Fahrenheit) for one hour and water pressure of depths of up to 6,000 metres or over 19,500 feet’.

An aviation expert says the data files must be decoded first, as graphs, to get a sense of what happened. There is even the use of “spectral analysis” in some cases allowing experts and investigators to pinpoint even faint alarms or the hint of an explosion.

The U.S. National Transportation Safety Board (NTSB) — invited by China — is to take part in the investigation, as a U.S.-made aircraft is involved.

An aviation expert says that public and media pressure can be intense given that this is an age where people want instant answers. He cautions that getting an idea of what might have happened could take days, preliminary reports could appear after some months, while a detailed investigation could take even a year or more.

### **What are the additional details about the flight?**

Flight MU5735 had left Kunming at around 1.10 p.m. local time and was scheduled to land at Guangzhou a little after 3 p.m. Introduced into service in June 2015, the Boeing 737-800 aircraft with CFM56 engines had completed a little over 18,000 hours of flight. A report has quoted a CAAC official as saying that the air controllers had been in contact with the crew throughout the flight — the implication is that there was no emergency/distress call. Later, the crew did not respond to controller attempts to contact them, which could point to a catastrophic event having occurred.

The captain, who was employed in January 2018, had 6,709 hours flying experience, while the first and second officers had 31,769 hours and 556 hours, respectively. The third pilot was an observer to accumulate flight experience. CAAC has added that the aircraft was in an airworthy condition and had been maintained in requirement with regulations. It also added that the family life of the crew was “relatively harmonious”.

Images have also emerged — apparently caught on video security footage from a mining company, close to the crash area — which seem to suggest that the aircraft was plunging toward the earth.

However, it is the data from tracking sites that have sparked interest.

### **What does some of the data show?**

New 3D data visualisation by a leading tracking website shows the aircraft had been cruising at about 29,100 ft (nearly 9,000 metres; in China, the flight levels are assigned in metres). It then went into a dive from 27,025 ft to 7,425 ft. There was a climb to 8,600 ft and then a second dive to 3,225 ft, at which point the tracking stops — in total, an event over two-and-half minutes. The dive rate has been calculated to be 157 metres a second.

Experts have called this extremely excessive and unusual. An expert says this could be to do with the plane’s tail. Or even sabotage.



In an email in response to queries by The Hindu, David Learmount, Consulting Editor, Flightglobal/DVV Media International Ltd. (also former Operations and Safety Editor, Flightglobal, and former Flying Instructor, Royal Air Force) said, “The plateauing may well have been an attempt at recovery by one pilot. But why did the attempt then reverse itself? Was it two or three pilots fighting for different outcomes,” is a point he makes.

He added, “Of course, until we have hard data, sabotage or major failure is possibly the cause.” Mr. Learmount also said that if one looked at the issue of upset recovery — dealt with later in this FAQ — one had to look at what caused the upset.

In response to another query by The Hindu, Dr. Hassan Shahidi, President and CEO, Flight Safety Foundation, U.S., said, “This accident is very perplexing. The 737-800 series has had an excellent safety record. There are more than 4,200 in operations around the world and more than 1,100 in China. The investigators will be looking into all aspects of this accident, including mechanical and structural. They will be looking into the maintenance history of this aircraft as well as pilot training.

“This is certainly an unusual accident. At the moment, it is difficult to imagine what might have caused this airplane to nosedive at great altitude. We won’t know the cause, until the investigators have done their work. The data from the recorders will be crucial to understanding what happened in the moments the aircraft began its rapid descent.”

#### **What about the issue of upset recovery?**

A senior commander who flies the Boeing 777 aircraft told The Hindu that the issue of upset recovery could also enter the equation.

A senior commander who flies the Airbus family of aircraft told The Hindu, “Yes, it does matter depending on whether it was some kind of upset or disorientation that caused this crash. Upset recovery training would help a pilot handle any unusual attitude by an aircraft either due to environmental factors, physical factors such as disorientation or instrumental factors such as unreliable airspeed (as seen in the Air France AF447 crash, of June 2009), etc. It would not be very relevant for cases involving severe structural or mechanical failure. There will need to be more data to figure out what caused the China crash,” he said.

Data on commercial aircraft accidents and fatalities show that loss of control in flight counts among the single biggest causes. It is in recognition of this that the aviation industry and its regulators — India included — have begun to focus on Upset Prevention and Recovery Training, or UPRT.

UPRT is a mixture of theory and flying training, teaching flight crew to avoid and recover from situations in which an aircraft unintentionally exceeds normal flight parameters.

In aviation, flight crew confront a variety of weather systems and issues, with thunderstorms, being rated as one of the most hazardous. Therefore, if crew are caught up in a thunderstorm, UPRT would teach them to be familiar with where the most significant threat could occur from. And also the best recovery techniques.

UPRT, says the Boeing senior commander, is most certainly needed for professional pilots.

A document on UPRT says that in an upset, there is an ecosystem of causes, which include ‘environmental, systems and system malfunctions, aerodynamic issues, pilot induced/human factor and/or their combinations of the above’. UPRT training covers all of these. And, in crew training, the stress is on prevention. Equipping flight crew to ‘resolve an upset condition, both technically and emotionally’ is the key training goal.

Preparing pilots not only for flying skills training but also ‘ingraining the circumstances and precursors’ that could cause an upset are what form the technical aspects of training. Unexpected mental shock, G forces, noises and even changes in environmental conditions can affect flight crew, in turn impacting their ability to make decisions and take action.

Across the world, pilots are equipped with varied levels of capabilities and technical knowledge. The quality and type of their flight training also differs. It only needs reiteration that UPRT needs to provide a critical level of training when it comes to dealing with the threats that upset conditions pose.

**Source: The Hindu**

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## **60. U.S. cuts a deal with the EU vis-a-vis LNG**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

U.S. President Joe Biden struck a deal with the European Union to supply liquefied natural gas (LNG) to meet the continent's energy needs. The deal comes amidst efforts by European countries to wean themselves off Russian energy exports in the wake of the Russia-Ukraine war.

#### **What is it?**

Under the U.S.-EU LNG deal, the United States will supply 15 billion cubic meters (bcm) of LNG to the EU this year. Further, the EU will import additional LNG of at least 50 bcm until 2030 from the U.S.. This is expected to reduce Europe's dependence on Russian energy exports and thus neutralise the Kremlin's influence on Europe to a significant extent. It should be noted that Europe has been at the mercy of Russian energy exports which has limited its response to Russia's invasion of Ukraine due to the fear that Russia could cut off its energy exports to Europe. Gas prices in Europe rose sharply even before the Russian invasion and a drop in supplies from Russia could make the situation even worse. This has left the EU vulnerable, so much that the West hasn't imposed sanctions on EU's energy imports from Russia.

Europe relies on Russian exports to meet about 40% of its natural gas requirements and about a quarter of its crude oil needs. Germany and many countries in Eastern Europe depend on Russia to meet more than 80% of their natural gas needs. In 2006 and 2009, Russia significantly increased the price of gas to Ukraine to punish the country's pro-Western government. Since Russian gas supplies to Europe pass through Ukraine, this caused disruptions in energy supplies to Europe. The EU came up with the Nord Stream 2 pipeline project to ensure direct supply of gas from Russia, thus bypassing Ukraine. While this project was stopped indefinitely since the Russian invasion of Ukraine, many analysts believed that it would still put Europe at the mercy of the Kremlin's geopolitical goals. So, earlier this month, the EU came up with a plan to cut down its reliance on Russian gas completely before 2030.

#### **Can Europe end its reliance on Russia for energy?**

The LNG deal with the U.S. is not likely to reduce Europe's heavy dependence on Russian energy immediately. Russia supplied over 150 bcm of gas to the EU last year, and the fresh supply of gas from the U.S. to Europe this year will amount to only 15 bcm. Further, while fresh supplies can lower gas prices in Europe from their current high levels, to grab hold of these supplies Europe will have to bid up the price of existing supplies sold to other buyers in the international market. This will increase the price of LNG to other buyers in the market. Over the long-run, if production from countries other than Russia rises to meet increased demand coming from Europe we could see LNG prices stabilise.

There are also logistical and production costs involved when it comes to LNG which make it a more expensive fuel when compared to natural gas delivered through pipelines. This is why Europe has traditionally opted to rely on gas imports from Russia that are relatively cheap. With greater reliance on LNG over natural gas due to changing geopolitical dynamics, Europeans may have to pay a higher price for energy going forward unless alternative suppliers boost production. Further, Europe will have to invest in building additional LNG terminals to process fresh supplies of LNG and this can take some time. However, the U.S.-EU LNG deal could mark the beginning of efforts by the EU to diversify its energy source to end its reliance on Russia. Even this year, Europe is expected to meet more than a third of its gas needs through LNG imported from non-Russian sources.

#### **What lies ahead?**

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Youtube channel: [PrepMateEduTech](https://www.youtube.com/channel/UCPrepMate)

The EU has woken up from its long slumber and taken significant steps to rearm itself militarily since the invasion of Ukraine by Russian forces last month. Germany, for instance, upped its defense spending to deal with a belligerent Russia. The EU could make a similar shift in strategy when it comes to energy security even in the midst of Russian energy threats. Over the last two decades, the EU's production of natural gas has dropped by about two-thirds while it simultaneously increased its imports of gas from Russia. In fact, Europe's reliance on Russian gas rose even more after Russia cut off supplies running through Ukraine. Many consider former German Chancellor Gerhard Schröder, a prominent member in Russian energy company Rosneft's board, to have played a key role in deepening Germany's reliance on Russian energy.

Significantly, the EU last month declared nuclear energy and gas to be "green" sources of energy. This is seen by analysts as a compromise on the EU's commitment to its climate change goals. It should be noted that the EU's push to end the use of fossil fuels, as part of its agenda to tackle climate change, was seen by some analysts as a major reason for high energy prices last year.

The chief complaint made by critics was that renewable energy sources such as wind and solar energy are not as reliable as traditional fossil-based energy sources, particularly during winters. Now under pressure from external suppliers like Russia, the EU may be more willing to explore traditional fossil fuels as well as other banned energy sources such as shale.

- The United States will supply LNG of at least 50 bcm to the EU until 2030. This is to reduce Europe's dependence on Russian energy exports and thus neutralise Kremlin's influence on Europe.
- Europe relies on Russian exports to meet about 40% of its natural gas requirements. Germany and many countries in Eastern Europe depend on Russia to meet more than 80% of their natural gas needs.
- Under pressure from an impending energy crisis, the EU has compromised on its commitment to climate change goals. For example, just last month the EU declared nuclear energy and gas to be "green" sources of energy.

**Source: The Hindu**

## **61. Who are the Bucharest Nine, countries on NATO's eastern flank?**

**Relevant for GS Prelims & Mains Paper II; International Issues**

The envoys to India of nine Eastern European countries jointly wrote an article in The Indian Express on March 25 to "acquaint the Indian public with the basic facts on the ground" about the "premeditated, unprovoked and unjustified Russian aggression in Ukraine".

The "Bucharest Nine" is a group of nine NATO countries in Eastern Europe that became part of the US-led military alliance after the end of the Cold War. In the article, the envoys rejected the Russian claim (which has been amplified by the Chinese) about the eastward "expansion" of NATO, and "underlined that NATO is not an organisation that "expanded" to the east", rather, "It was we, the independent European states, that decided on our own to go west."

### **Organisation**

The Bucharest Nine or Bucharest Format, often abbreviated as the B9, was founded on November 4, 2015, and takes its name from Bucharest, the capital of Romania.

The group was created on the initiative of Klaus Iohannis, who has been President of Romania since 2014, and Andrzej Duda, who became President of Poland in August 2015, at the High-Level Meeting of the States from Central and Eastern Europe in Bucharest.

According to a 2018 release from the office of the Romanian President, "the Bucharest Format (B9) offers a platform for deepening the dialogue and consultation among the participant allied states, in order to articulate

their specific contribution to the ongoing processes across the North-Atlantic Alliance, in total compliance with the principles of solidarity and indivisibility of the security of the NATO Member States.”

### Composition

The B9 are, apart from Romania and Poland, Hungary, Bulgaria, the Czech Republic, Slovakia, and the three Baltic republics of Estonia, Latvia, and Lithuania. All nine countries were once closely associated with the now dissolved Soviet Union, but later chose the path of democracy. Romania, Poland, Hungary, and Bulgaria are former signatories of the now dissolved Warsaw Pact military alliance led by the Soviet Union. (The other Warsaw Pact countries were the erstwhile Czechoslovakia and East Germany, and Albania.) Estonia, Latvia, and Lithuania were part of the former Union of Soviet Socialist Republics (USSR).

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All members of the B9 are part of the European Union (EU) and North Atlantic Treaty Organisation (NATO).

### Opposition to Putin

The B9 countries have been critical of President Vladimir Putin’s aggression against Ukraine since 2014, when the war in the Donbas started and Russia annexed the Crimean peninsula.

At a virtual summit of the B9 in May 2021, which US President Joe Biden also joined, President Iohannis said: “As allies on the Eastern flank, we need to continue consolidating deterrence and defence. We all recently witnessed the worrying military build-up by Russia in our close neighbourhood, in the Black Sea, in and around Ukraine... This is why I have argued, including in discussions with President Biden, for an increase of allied military presence in Romania and...the south of the Eastern flank.”

In a statement, the White House press office said at the time: “President Biden expressed his support for enhancing NATO’s deterrence and defence posture, as well as the importance of Allies increasing their resilience against harmful economic and political actions by our strategic competitors.”

After the Russian invasion of Ukraine on February 24, the B9 met in Warsaw, and their meeting was joined by Ursula von der Leyen, President of the European Commission.

On February 25, Ukraine’s President Volodymyr Zelenskyy posted on Twitter: “...Appealed to the Bucharest Nine for defense aid, sanctions, pressure on the aggressor. Together we have to put at the negotiating table. We need anti-war coalition.”

**Source: The Indian Express**

## 62. Targeting big tech, what EU’s landmark Digital Act aims to achieve

### Relevant for GS Prelims & Mains Paper II; International Issues

The European Union (EU) on Thursday finalised details of its Digital Markets Acts (DMA), a sweeping new legislation that could dramatically change the way big tech firms such as Apple, Google, Meta, and Amazon operate in Europe, and have ramifications for the rest of the world as well. The European Council said the law aimed to make the “digital sector fairer and more competitive”.

### Who are the targets of the Digital Markets Acts?

The DMA’s focus is on companies termed as ‘gatekeepers’, which include Apple, Facebook, Google, etc. These companies will have to comply with the new rules.

Violators can be fined up to 10 per cent of the company’s global annual sales for an initial breach of the law, rising to 20 per cent for repeated infringements. In worst case scenarios, they could even be banned from any further acquisitions, according to the Council’s press statement.



The reason the law refers to these companies as gatekeepers is that they often control distribution, whether it is for apps or ads on the platform, or even communication. Also, gatekeepers may have a dual role as developers of operating systems and device manufacturers. Examples here would be Apple, Google, even Amazon.

According to the proposal, the provisions of the act will be “limited to a number of ‘core platform services’ where the identified problems are most evident and prominent”.

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A company will be termed as a gatekeeper if it has an annual turnover of at least €7.5 billion within the EU in the past three years, or a market valuation of at least €75 billion. Any player with over 45 million monthly end-users, and at least 10,000 business users established in the EU, also qualifies as a gatekeeper. Small and medium enterprises are exempt from being identified as gatekeepers.

The platform must also control one or more core platform services in at least three EU states. These services include marketplaces and app stores, search engines, social networking, cloud services, advertising services, voice assistants, and web browsers.

A category of ‘emerging gatekeeper’ has been identified, aimed at “companies whose competitive position is proven but not yet sustainable”.

### **What are the DMA’s proposals?**

The rules state that users will have the right to choose and install their apps. They also crack down on pre-installed apps, common in Apple, Google and others. The press statement indicates that users will not be forced to use this software by default when installing the OS, and mentions web browsers. But it could extend to every other pre-installed app. So, future iPhones might not come with Safari, or even iMessage or Siri, pre-loaded. The same could happen with Android phones as well.

The EU wants “interoperability” between the basic functionalities of messaging services. This could mean that a user on WhatsApp and one on iMessage should be able to talk to each other. How interoperability is to be achieved is not clear, and will require major technical work from the companies.

The rules also call for fair access conditions to app stores owned by the gatekeepers. They note that gatekeepers must “allow the installation and effective use of third party software applications or software application stores”, even while they can take “proportionate measures” for security.

Companies like Apple have for long opposed allowing users to download from third-party app stores. Apple claims they pose a serious security threat to iOS. On Google, the Play Store dominates — and while third-party stores exist, they do not have the reach and influence of the official store.

Also, gatekeepers cannot establish unfair conditions for business users or require app developers to use certain services (e.g. payment systems or identity providers) in order to be listed in app stores. App developers such as Epic Games, Spotify, etc. have long accused Google and Apple of holding them hostage to their payment systems.

Interestingly, Google is testing a new agreement with Spotify, where the latter is allowed to give access to its own in-app payment system on Android, instead of using Google’s Play Store billing system.

The EU wants app developers to get fair access to supplementary functionalities of smartphones, for example the Near Field Communications chip. Also, gatekeepers will have to give sellers access to their marketing or ad performance data on the platform.

The gatekeepers will have to inform the European Commission of their acquisitions and mergers. This is significant because big players tend to buy out some of their upcoming competition. Meta (formerly Facebook) has done this with Instagram and WhatsApp.

The new rules also forbid the gatekeepers from ranking their own products or services higher than others, and from reusing private data collected during a service for the purposes of another service.

### **Why do these new rules matter?**

The new rules come at a time when big tech is under immense scrutiny and, as before, the EU is taking the first set of steps to “rectify” what it thinks are core problems plaguing the industry. The EU already has one of the most comprehensive user data protection laws under the General Data Protection Regulation (GDPR).

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The issue of in-app payments, third-party app stores, fairness in ranking, and pre-loaded apps have been raised across the world. In the US, Epic has sued Apple over in-app payments and won, although Apple has managed to get an injunction on implementing the changes.

In South Korea, a law was passed, which specifically banned Apple and Google from forcing developers to use their own in-app payments system.

The US is deliberating on these questions. In India too, app developers have raised the issue of control, in-app payments, and third-party app stores.

Once the EU’s new rules come into effect, they could set an important legal precedent for other countries to follow.

**Source: The Indian Express**

## **63. When did the Myanmar coup take place and what followed? Why did the ruling junta invite Russia as a guest of honour for Armed Forces Day?**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

On March 27, Myanmar commemorated its Armed Forces Day with a grand parade featuring Russia as the guest of honour. The Armed Forces Day is in honour of the army’s rebellion against the Japanese occupation in 1945. The leader of the country’s ruling military junta, Senior General Min Aung Hlaing, gave exceptionally inflammatory comments aimed to quell dissidents and protesters. He said that the armed forces would “annihilate” the dissidents who he deemed “supporters of terrorist groups” looking to threaten the peace and security of the country. The country has led intense crackdowns on those resisting junta rule. The General invalidated the identity and agency of those protesting, and by deeming them terrorists, provided the authorities a basis to engage violently.

### **What is happening on the ground?**

The military continues to conduct operations in different regions of the country to quash dissident voices. The regions under artillery attack, airstrikes, and other physical forms of violent attacks include Sagaing, the Kayah State, the Chin State, and the Kayin State, reminiscent of last year’s bloody operations on Armed Forces Day. Myanmar continues its resistance with political opponents of the junta also joining militias. These militias have collaborated with some long-standing ethnic armed groups which have operated in the borderlands of the country.

These States have rarely been centrally controlled. For most part of their history, these have been ruled by local leaders. These States can also serve as a buffer between Myanmar and its bordering nations and thus be a site of constant assaults. The Wa state of the larger Shan State in particular has a remarkably complex history with it being over-run by Mao Zedong’s forces during the Chinese Civil War. After about two decades, the region was taken over by the Communist Party of Burma. Deng Xiaoping’s tenure saw China making a halt on the assaults and instead focusing on potential trade opportunities. As a result of such historical events, China enjoys a complex relationship with the local factions and the military junta.

**What is the Myanmar-Russia relationship?**

Myanmar's military junta seized power last year on February 1 and then invited Russia, their "true friend", as a guest of honour for its Armed Forces Day celebrations. Apart from Russia, India and seven other countries sent their representatives to attend the military parade. Keeping the bonhomie alive, Myanmar was one of the very few countries which came to Moscow's defence after the invasion of Ukraine. Russia also continues to be a major defence exporter to Myanmar. Myanmar doesn't like to exclusively depend on one country for its defence needs and its history shows that it likes to cozy up to different seemingly sympathetic countries. Apart from Russia, China is another major player which offers arms to Myanmar. Pakistan, India, Serbia, Belarus, Ukraine, and the Republic of Korea also routinely export defence equipment, and small to medium size arms and ammunitions. Myanmar has a tumultuous relationship with China as Beijing is also involved in arming rebel factions and thus, Myanmar wishes to diversify its dependence.

The relationship between Russia and the junta seems to be of cooperation, one which now favours Moscow more than before as it faces sanctions from a host of countries. Myanmar is looking to use their raw materials as currency which works out for them as well as Moscow. The flip side to this story is that as the Russian offence continues in Ukraine, it would not have the capacity or the willingness to export its defence equipment to Myanmar.

Myanmar continues to run the Moscow agenda in international fora whenever it can by being sympathetic to Russia's actions and referring to Vladimir Putin as "a visionary leader who had the foresight to quietly build up his military and economic strength". In doing so, they are propagating a strong-man argument and thus trying to solidify their domestic support to sell a similarly constructed imagination of what a nation could be with just the right kind of actions.

**How has the junta acted?**

The junta's actions in Myanmar have been downright horrific. Hundreds of children were detained since the junta seized power back in 2021 in a bid to use them as leverage in order to find and arrest their family members and relatives who may be part of dissident groups. The junta was and continues to be allegedly involved in mass killings, acts of sexual violence, and arbitrary arrests of protesters and other civic society members who refuse to toe the line. On February 1, 2021, the junta arrested the country's elected leaders including Aung San Suu Kyi and then president Win Myint. It is reported that close to 4,00,000 people have been internally displaced since the beginning of the coup in 2021.



## The aftermath of the coup

More than 12,000 people have been arrested and over 1,700 have been killed in Myanmar since the military seized power in February, according to a local monitoring group



### What led to the coup?

To make sense of the 2021 coup in Myanmar, it is important to look at the chequered history of independent Myanmar. The country has been in a constant tussle between democracy and military rule. Before the 2021 coup, it had previously witnessed two coups; in 1962 and in 1988. Even during the brief periods of democracy, the junta continued to remain the strongest institution. Myanmar has seen three Constitutions being drawn up and enacted, the latest of it being a result of the military junta. They gave themselves 25% of the seats in the legislature and thus made it possible that amendments couldn't pass without their support.

The junta gave concessions to the democratic elements and released Aung San Suu Kyi from house arrest in 2010 under strict conditions, one of which was that she could never be the President. She was, however, able to circumvent this clause by taking control as 'State Counsellor' with de-facto power residing with her as a customary President's post was taken up by a proxy. What the junta did not realise was how her popularity would surge. The year 2015 saw the National League of Democracy (NLD), led by Suu Kyi, winning 77% of the seats in Parliament.

The reasons for the 2021 coup stem from this growing popularity of Suu Kyi and her party. The junta would have wanted to squash this before democracy made any more inroads into the junta's stronghold on the country.

### Who's the coup leader?

Gen. Min Aung Hlaing became Myanmar's military chief in 2011, at a time when the country was transitioning into quasi democracy. When Aung Saan Suu Kyi's NLD swept the 2015 election, the military accepted the



results. But the political peace did not last long. When the NLD swept the 2020 election with a bigger mandate, the Union Solidarity and Development Party (USDP), a proxy of the military, alleged election fraud. On February 1, Gen. Min Aung Hlaing carried out the third coup in the country's history.

As a commanding officer, he led several military campaigns against the country's myriad rebels. But his rise to the top echelons of the powerful military was sealed after he led the 2009 offensive against the Myanmar Nationalities Democratic Alliance Army, an insurgents group in the Kokang region, along the border of China's Yunnan province. Within one week, the Myanmar military dislodged thousands of insurgents from the border. The campaign also resulted in thousands of refugees fleeing the border villages to the Chinese side of the border. Within the military, the campaign was hailed as a victory and Gen. Min Aung Hlaing got the attention of Senior General Than Shwe. In August 2010, he was appointed joint chief of staff. And in March 2011, when Gen. Than Shwe, in his mid-70s, retired, he picked Gen. Min Aung Hlaing as his successor.

When the NLD swept the 2020 election, the Army considered the rising popularity of the party and its leader a threat. The Generals made three demands to Ms. Suu Kyi, according to a Reuters report: disband the Election Commission, announce a probe into alleged election fraud and postpone the meeting of Parliament. Ms. Suu Kyi said 'no' to all three. Then came the coup.

### **What is India's stand?**

India's relationship with Myanmar has been predicated on maintaining a balance in its neighbourhood in a bid to keep a check on China's growing influence. In doing so, it has forgone certain democratic ideals and allowed itself to not publicly speak against the events transpiring in Myanmar. It abstained from voting on the United Nations General Assembly's resolution on Myanmar and has constantly refused to actively speak out against the junta. Recently, India urged Myanmar to end violence and implement ASEAN's five-point consensus. It continues to offer military exports to Myanmar.

Different multilateral forums and organisations are trying to get the junta to mend their ways but to little avail. In his recent visit to Myanmar, ASEAN's special envoy, Prak Sokhonn, hinted that the junta leadership gave a positive response towards the possibility of him being able to meet the democratic leadership.

Sri Lanka's Foreign Secretary, Admiral Jayanath Colombage, communicated the idea that they would be looking to engage with Myanmar. As of now, the Sri Lankan President Gotabaya Rajapaksa is hosting the Indian Prime Minister Narendra Modi and other regional leaders from BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) in a hybrid mode.

Recently, the Biden administration, in a bid to put Myanmar under the limelight internationally, ruled that the military junta carried out genocide against the Rohingya minority. It also, along with the U.K. and Canada, implemented sanctions against high-ranking members of the junta. The U.N. Security Council condemned the actions of the junta falling short of terming the events of 2021 as a "coup". New Zealand suspended political and diplomatic ties with Myanmar back in 2021 but continued to make sure that developmental programmes function seamlessly.

It becomes especially important for the international community to act in ways which while punishing the military junta for its actions and trying to force them into taking corrective measures also doesn't hurt the local population of the country. Blind economic sanctions won't get the job done and would only hurt the already hurting populace, say observers.

- On March 27, Myanmar commemorated its Armed Forces Day with Russia as the guest of honour. Myanmar was one of the few countries which came to Moscow's defence after the invasion of Ukraine as Russia continues to be a major defence exporter to Myanmar.
- The Myanmar junta continues to conduct operations in different regions of the country to quash dissident voices. The junta was and continues to be allegedly involved in mass killings, acts of sexual violence, and arbitrary arrests of protesters and other civic society members who refuse to toe the line.

- India's relationship with Myanmar has been predicated on maintaining a balance in its neighbourhood in order to check China's growing influence. Recently, India urged Myanmar to end violence and implement ASEAN's five-point consensus while continuing to offer military exports to Myanmar.

**Source: The Hindu**

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## **64. Why India's pact with Sri Lanka on a maritime rescue centre is significant**

### **Relevant for GS Prelims & Mains Paper II; International Issues**

India and Sri Lanka have signed a Memorandum of Understanding for the Indian public sector Bharat Electronics Ltd (BEL) to set up a state of the art Maritime Rescue Co-ordination Centre (MRCC) in Colombo. The MoU was signed on March 28 during the visit of External Affairs Minister S Jaishankar to Colombo.

The agreement is significant as it enhances co-operation on maritime security between the two countries in a part of the Indian Ocean region where the India-China rivalry has taken centre stage over the last decade. Earlier this month, India also provided a naval floating dock to the Sri Lankan Navy, and two Dornier aircraft to the Sri Lankan Air Force.

Since March 23, an Indian Navy team has been training the Sri Lankan Air Force and Navy in helicopter operations. During the course of the training, the Sri Lankan pilots are being familiarised with India's Advanced Light Helicopter.

Further, the two navies conducted a joint exercise in the seas off Colombo. Indian Navy Ship Sharda was part of the exercise, along with Sri Lankan OPV Sayurala.

According to senior officials, the engagement between the forces of the two countries will augment interoperability and seamless maritime actions like carrying out anti-smuggling operations in the Indian Ocean Region.

### **Enhancing Sri Lanka capacity**

MRCCs are part of an international network under the UN's International Maritime Organisation to monitor the sea lanes with the objective of swift response to emergencies, such as vessels in distress, rescue and evacuation of people, and prevention of and containing environmental disasters such as oil spills.

Each country is responsible for its own Search and Rescue Region. The work of MRCCs is co-ordinated by the Navy or Coast Guard in each country. In India, the Coast Guard is the co-ordinating agency. In Sri Lanka, it is the Navy.

The Bengaluru-based BEL has proposed enhancing Sri Lanka's small MRCC by setting up advanced software systems that will increase Sri Lanka's capacities for communication and co-ordination in its SRR in the Indian Ocean, where it is the first responder. The MRCC will be established with a grant of \$6 million from India.

The enhanced MRCC will work out of the Sri Lankan Navy headquarters at Colombo, with a sub-centre at Hambantota, where a Chinese state-owned company runs a deep water port that it helped to build, and which was controversially leased to it by Sri Lanka in 2016.

Seven other sub-units along Sri Lanka's coastline will make up the proposed new network. In situations in which regional assistance has to be mobilised, as happened with the two recent ship fires in Sri Lankan waters, this MRCC will be able to share information with its Indian counterparts.

### **SAGAR push**

Sri Lanka's SRR is a wide swathe of 1,778,062. 24 sq kms of the Indian Ocean, and nearly 200 ships pass through these waters everyday.

The agreement appears to be part of India's SAGAR (Security and Growth for all in the Region) initiative in the Indian Ocean, which has also seen India, Sri Lanka and Maldives give a new push to their 2011 Colombo Security Conclave that now includes Mauritius.

The recent meeting of the CSC National Security Advisers identified "five pillars" of co-operation: maritime safety and security; countering terrorism and radicalisation; combating trafficking and transnational organised crime; cyber security, protection of critical infrastructure and technology; and humanitarian assistance and disaster relief.

### **Sri Lanka clarification**

The MRCC has been controversial in Sri Lanka. Parts of the agreement were leaked to the Sri Lankan press last week after it received cabinet approval.

On Tuesday, the day after it was signed, Sri Lanka's Defence Ministry issued a clarification on the MRCC, as well as on recent agreements with India for a naval floating dock and Dornier aircraft. The clarification has provided more details about the agreements than have been in the public domain so far.

### **Excerpts from the clarification:**

The recently signed maritime security pacts with the Government of India will neither result in hindrance nor threat to the national security of Sri Lanka, as misinterpreted by several print and electronic media.

The receipt of Floating Dock Facility from the Government of India at no cost has been projected to reduce the annual outlay of Rs 600 million for outsourced docking repairs and this proposal has been in the pipeline since year 2015.

The Dornier Reconnaissance Aircraft is basically deployed for maritime surveillance, search and rescue operations and to deliver information to various required platforms. The unavailability of this capability was the motive for bilateral dialogues between the Governments of India and Sri Lanka during the last couple of years and it was agreed upon to provide one Dornier Reconnaissance Aircraft to Sri Lanka free of charge.

Accordingly, during the period earmarked for manufacturing process of the said aircraft, the Government of India will lend a similar aircraft which will be piloted by Sri Lanka Air Force (SLAF) pilots. An Indian training team will also arrive and stay in the island until the SLAF gains required expertise. Thus, SLAF aircrew will receive an added qualification enabling the country to further strengthen its maritime security while cutting a large cost as a result of the pacts.

Further, with regard to the Maritime Rescue Coordination Centre in Colombo (MRCC), the Cabinet of Ministers has granted approval for the proposal to establish MRCC with a US \$6 million grant from the Government of India. The establishment of MRCC is highly essential to instantly respond to the search and rescue services of vessels in distress operating in the region and ensure safety of vessels in compliance to various international conventions. Sri Lanka Navy (SLN) is the authority responsible for conducting Maritime Search and Rescue (SAR) operations for commercial ships around the island's SAR region.

Prior to the signing of aforementioned three pacts, the Ministry of Defence has followed the standard criteria and procedures while channelling it through the other mandatory state establishments including the Attorney General's Department.

Therefore, except economic and security gains embedded with infrastructure and personnel development, the Defence Ministry assures there won't be any kind of risk to the national security of Sri Lanka it is being a sovereign nation."

On Tuesday morning, amid the furore over the MRCC, the Sri Lankan Navy arrested four Indian fishermen from Rameshwaram fishing near Sri Lanka northern island of Nedunthivu and impounded their mechanised boat.

**Source: The Indian Express**

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## Geography

### 1. What is Daylight Saving Time, which the US Senate has voted to scrap?

#### Relevant for GS Prelims & Mains Paper I; Geography

The United States Senate on Tuesday (March 15) unanimously passed a law making daylight saving time (DST) permanent, scrapping the biannual practice of putting clocks forward and back coinciding with the arrival and departure of winter.

If the legislation, Sunshine Protection Act, passes in the House of Representatives as well, and is signed into law by President Joe Biden, it will come into effect in November 2023. The practice of turning clocks back by an hour to standard time every November will stop — and DST, which now starts in March, will be in effect all year round.

Countries have long debated the usefulness of DST. In 2019, the European Parliament voted to scrap the custom, but later paused its coming into effect, which was scheduled for 2021. DST is currently followed by some 70 countries twice a year.

#### Why have DST?

The key argument is that DST is meant to save energy. It involves resetting clocks ahead by an hour in spring, and behind by an hour in autumn, and those in favour of DST argue that it means a longer evening daytime. Individuals will complete their daily work routines an hour earlier, and that extra hour of daylight means — or is supposed to mean — a lower consumption of energy.

Written accounts suggest that a group of Canadians in Port Arthur (Ontario) were the first to adopt the practice on July 1, 1908, setting their clocks an hour ahead. Other parts of Canada followed suit.

In April 1916, during World War I, Germany and Austria introduced DST to minimise the use of artificial lighting. It gradually caught on in many countries. In the EU, clocks in the 28 member states move forward on the last Sunday in March and fall back on the last Sunday in October. India does not follow daylight saving time.

#### What is the problem with this?

In a recent article, Popular Science magazine cited studies to list out the disadvantages of DST. One hour of lost sleep in the US, one study calculated, increases the fatal crash rate by 5.4% to 7.6% for six days following the transition.

The New York Times report on the law passed by Senate started with a reference to the shortened sleep time: “After losing an hour of sleep over the weekend, members of the United States Senate returned to the Capitol this week a bit groggy and in a mood to put an end to all this frustrating clock-changing.”

Other studies found a higher rate of workplace injuries after the switch, leading to lost days of work; a slight drop in stock market performance; health problems as a result of disruption of the circadian rhythm (body clock) — and even longer sentences ordered by judges deprived of sleep.



The vote in European Parliament in 2019 followed a survey by the European Commission. Out of 4.6 million responses, 84% voted in favour of scrapping DST, The Guardian reported.

**Source: The Indian Express**

## **2. What is Par Tapi Narmada river-linking project & why are tribals in Gujarat protesting against it?**

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**Relevant for GS Prelims & Mains Paper I; Geography**

On March 21, the tribals in Gujarat will hold a public meeting in Kaprada in Valsad district to protest against the Centre's Par Tapi Narmada river-linking project. This will be the fourth such protest meet after the first on February 28 in Dharampur of Valsad district, the second one on March 5 in Vyara of Tapi district, and the third meet on March 11, in Dang district.

**What is the Par Tapi Narmada river link project, why are tribals protesting and how will it affect the BJP government in Gujarat ahead of assembly elections?**

**What is the Par Tapi Narmada river-linking project?**

The Par Tapi Narmada link project was envisioned under the 1980 National Perspective Plan under the former Union Ministry of Irrigation and the Central Water Commission (CWC).

The project proposes to transfer river water from the surplus regions of the Western Ghats to the deficit regions of Saurashtra and Kutch. It proposes to link three rivers — Par, originating from Nashik in Maharashtra and flowing through Valsad, Tapi from Saputara that flows through Maharashtra and Surat in Gujarat, and Narmada originating in Madhya Pradesh and flowing through Maharashtra and Bharuch and Narmada districts in Gujarat.

The link mainly includes the construction of seven dams (Jheri, Mohankavchali, Paikhed, Chasmandva, Chikkar, Dabdar and Kelwan), three diversion weirs (Paikhed, Chasmandva, and Chikkar dams), two tunnels (5.0 kilometers and 0.5 kilometers length), the 395-kilometre long canal (205 kilometre in Par-Tapi portion including the length of feeder canals and 190 km in Tapi-Narmada portion), and six powerhouses.

Of these, the Jheri dam falls in Nashik, while the remaining dams are in Valsad and Dang districts of South Gujarat.

An official of the Ukai dam explains how the excess water in the interlinked Par, Tapi and Narmada rivers which flow into the sea in the monsoon would be diverted to Saurashtra and Kutch for irrigation. "During the monsoon season, the water which is supplied to Saurashtra through the state government from Sardar Sarovar dam will be saved and used for other purposes. Presently the water of Sardar Sarovar is used in urban areas and for irrigation in Saurashtra", says the dam official.

**Centre's role**

A Memorandum of Understanding (MoU) was signed between Gujarat, Maharashtra and the central government on May 3, 2010, that envisaged that Gujarat would get the benefit of the Par Tapi Narmada link project through en-route irrigation from the link canal and in the drought-prone Saurashtra Kutch region by way of substitution.

The Detailed Project Report (DPR) for the project was prepared by the National Water Development Agency (NWDA) in 2015 and modified on the intervention of the Gujarat government, through letters the then chief minister wrote in 2016. The chief minister had suggested to include the command area of five projects proposed, namely: Ugtta, Sidhumber, Khata Amba, Zankhari and Khuntali; irrigate tribal areas en route right side of link canal by lift; lift irrigate tribal areas of Dang and Valsad districts directly from the reservoirs; explore

possibilities of irrigation in the tribal areas of Chhota Udepur and Panchmahal districts from Narmada Main Canal on substitution basis; provide drinking water for all villages of Dang and Navsari districts and villages of Kaprada and Dharampur talukas of Valsad district and provide for filling up all possible tanks in the area under the project's cover.

The Gujarat government had, in December 2016, proposed providing a pipeline system instead of open canals to "avoid/minimise the land acquisition in tribal areas" as well as to reduce evaporation and seepage losses. A letter dated January 18, 2017, by the secretary, Gujarat government, to NWDA suggested revision of the DPR on these lines.

### **How will the project affect villages?**

According to a report by the NWDA, about 6065 ha of land area will be submerged due to the proposed reservoirs. A total of 61 villages will be affected, of which one will be fully submerged and the remaining 60 partly. The total number of affected families would be 2,509 of which 98 families would be affected due to the creation of the Jheri reservoir, the only one in Maharashtra, spread over six villages. In Gujarat, 793 families from 17 villages will be affected by the Kelwan reservoir, 563 families by the Dabdar reservoir across 11 villages, 379 families by Chasmandva reservoir spread over seven villages, 345 families would be affected by Chikkar reservoir across nine villages and 331 families would be affected due to Paikhed reservoir spread over 11 villages.

The affected villages are located in Surgana and Peint talukas in Nashik and Dharampur taluka of Valsad, Vandsa taluka of Navsari and Ahwa taluka of Dang districts in Gujarat.

"The affected families may lose their lands or houses or both in the submergence when the reservoirs are created", says the NWDA report. As per the report, the affected families would be compensated for the loss of their lands and houses and those whose houses are submerged, would be resettled.

### **Irrigation benefits**

The surplus water proposed to be diverted through the estimated Rs 10,211 crore Par-Tapi-Narmada link project is expected to irrigate an area of 2,32,175 hectares, of which 61,190 ha is en route to the link canal. The command area of five projects on the left side of the canal as proposed by the Gujarat government is about 45,561 ha which will be irrigated by gravity through a link canal. The 36,200 ha on the right side will be by lift irrigation. The link project will take over 76710 ha under the command of the existing Miyagam branch canal of the Narmada canal system. The Narmada water thus saved will be used to irrigate nearly 23,750 ha of tribal land in Chhota Udepur district and 10,592 ha in Panchmahal district, on the right side of the Narmada Main Canal (NMC). About 42,368 ha area in the Saurashtra region will also be covered.

An official of the Ukai dam, on condition of anonymity, said the project aims to harness the excess water that flows into the sea by interlinking the rivers. This will also help in containing regular flood-like situations in the rivers in Valsad, Navsari, Surat and Bharuch.

### **What are the tribals' fears?**

The districts where the project will be implemented are largely dominated, by tribals who fear displacement. Three public meetings have already been organised by the tribals to protest the project. The fourth meet will be held in Kaprada in the Valsad district. After Kaprada, one more public meeting is due to be held at Mandvi in Surat district, the date for which is yet to be announced.

The movement is backed by Samast Adivasi Samaj, Adivasi Samanvay Manch, Adivasi Ekta Parishad and Congress MLA Navsari Anant Patel.

### **Political implications**

In her Union Budget speech this year, Finance Minister Nirmala Sitharaman indicated the Centre's renewed push for the river-linking project. The announcement has the ruling BJP worried as the state goes to polls this year.

The BJP leaders say that if the river link project is not put on hold it will affect the party's prospects in the upcoming assembly elections.

Several BJP leaders from South Gujarat including MLAs from Valsad, Navsari and Dangs have even made representations to chief minister Bhupendra Patel and state BJP president C R Paatil about the anger among tribals.

On March 3, several party leaders met Chief Minister Patel, state cabinet ministers, and Paatil, where they were assured that the state government will make representations to the Centre on this issue.

In the 2017 assembly election, the BJP won the tribal-dominated assembly seats of Kaprada, Dharampur, and Dang. There are 28 seats in Gujarat reserved for Scheduled Tribes (ST) which the BJP aims to win this year, The party has also announced several schemes for tribals in the state budget.

**Source: The Indian Express**

### 3. Why is it so hot in March?

#### Relevant for GS Prelims & Mains Paper I; Geography

New Delhi (Sardarjung) recorded a temperature of over 38 degrees Celsius on Sunday, the hottest for March so far for the national capital. Jammu and Uttarakhand reported heatwaves for a brief period last week. Rajasthan is reeling under a heatwave for nearly a week now. Why is it so hot over north and northwest India in March?

#### Heatwave Climatology

As winter transitions to spring with the northward march of the Sun post the winter solstice, maximum temperatures in India show a rising trend, starting from southern parts followed by central and northern India.

March is the beginning of the summer season over India. During this month, the maximum heating zone runs along central India regions between Odisha and Gujarat. Here, hotter conditions start building up in March.

The maximum temperatures peak in April and May and the India Meteorological Department (IMD) identifies the core heatwave zone spanning Rajasthan, Punjab, Haryana, Chandigarh, Delhi, West Madhya Pradesh, Uttar Pradesh, Chhattisgarh, Odisha, Vidarbha in Maharashtra, parts of Gangetic West Bengal, Coastal Andhra Pradesh and Telangana.

Hot winds from the deserts of northwest India also contribute to the soaring temperatures in central India regions.

Many places in the northwest and cities along the southeastern coast report up to eight heatwave days per season. However, the regions in the extreme north, northeast and southwestern India are lesser prone to heatwaves.

#### March heatwave

This year, the geographical expanse of the latest heatwave spell was unusually large.

North and northwest India including Jammu, Kutch-Saurashtra, Rajasthan along with parts Madhya Pradesh and Uttarakhand experienced heatwave last week.

In addition to such a large area being under the influence of heatwaves, the latest spell was a prolonged one too. It later spread to Gujarat, north Maharashtra and extended all the way to interior Odisha.

“During the past few days, the southerly winds from Gujarat, south Pakistan took the heat to southern and southwest Rajasthan. There were no active western disturbances, which otherwise brings colder winds. As a result, temperatures in Jammu, Rajasthan and neighbourhood areas remained higher than normal,” said Mrutyunjay Mohapatra, director general, IMD.

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### **Missing rain and thunderstorms**

Along with seasonal transition, the lack of pre-monsoon showers has contributed to the overall heating.

“There has not been significant thunderstorm activity and associated rainfall over most parts of the country in March,” said Dr Mohapatra.

The cumulative effect is an all India March (till March 21) rain deficit at 83 per cent. So far, surplus rain was recorded only over Kerala (14 per cent) and Andaman and Nicobar Islands (599 per cent), all other states and Union Territories have remained dry.

The Andamans are presently bracing for Cyclone Asani and high rainfall is mainly associated with the storm. Region-wise rainfall over India in March (March 1 to 21, IMD data)

- 1) Northwest India: minus 86 per cent
- 2) East and northeast India: minus 92 per cent
- 3) Central India: minus 84 per cent
- 4) South Peninsula: minus 40 per cent

### **Heatwave in Antarctica**

On March 18, surface air temperature recorded along eastern Antarctica were historic — up to 40 degrees Celsius above normal.

Normally, the temperatures around this time of the year should have been around minus 45 to minus 50 degrees Celsius. However, the southern pole recorded somewhere between minus 18 and minus 12 degrees, which climate scientists are terming unprecedented.

Last week, Concordia, a station located on the Antarctica plateau and at a distance of 1,670 km from the Geographic South, reported temperatures 50 degrees above normal. The situation has arisen due to warm westerly winds surpassing the Southern Ocean and reaching the interior parts of Antarctica.

**Source: The Indian Express**

## **Economics**

### **1. Did NSE give preferential access to some brokers?**

#### **Relevant for GS Prelims & Mains Paper III; Economics**

The issue of co-location has come into the limelight once again in the wake of the latest order by the markets regulator sanctioning former National Stock Exchange (NSE) MD and CEO Chitra Ramkrishna over decisions taken by her under the alleged influence of a mysterious ‘yogi’. In its February 11 order, the Securities and Exchange Board of India (SEBI) had observed that the fact of Ms. Ramkrishna having shared confidential internal NSE information with an unknown person had come to light during the regulator’s probe of the co-location matter. SEBI had passed its first order after adjudicating the co-location case in April 2019, when it



had fined the NSE a sum of ₹625 crore. The regulator had also at the time banned OPG Securities and its three directors from the securities market for five years and imposed a fine of about ₹15 crore.

**What is co-location all about?**

In 2009, the NSE started to offer co-location services to members of the exchange. Co-location allows a member to set up his server in a specifically earmarked data centre within the NSE's exchange premises for a certain price. And even though this data centre is located in a different wing from the exchange's trading systems, the relative proximity allows members wishing to gain access to the entirety of buy and sell orders sent to the exchange by market participants, or tick-by-tick data, a headstart of a few microseconds or nanoseconds. However, these brokers technically will only be able to carry out automated trading using algorithms since the speed and volume of data arriving is too high to process manually. These so-called 'high-frequency' traders also often analyse the data in its entirety in order to refine their trading strategies, which is then incorporated into the algorithms that execute the automated trades.

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Other investors including retail participants, on the other hand, view a snapshot of market information that is periodically broadcast to them by the NSE on their broker platforms.

**Is there anything illegal about co-location?**

Co-location per se is not illegal. Stock exchanges across the world allow the practice to flourish as a paid service. The SEBI, in fact, had allowed exchanges to offer co-location in 2008. So, the NSE co-location case has to do with something else.

A whistleblower in 2015 alleged that some exchange members were able to manipulate NSE's co-location services to their own benefit with the support of certain officials in NSE's IT department. It should be noted that initially NSE disseminated order data to users of its co-location service through the TCP-IP or Internet Protocol technology that as a technology prioritises first comers. It is said that under this older technology members who logged into NSE's servers first and into servers with the least load were able to access data coming from the exchange before others. Some members also attempted to tap into NSE's backup server to bypass competition and are said to have employed various other tactics aimed at crowding out other members.

SEBI, however, has not yet been able to establish that the NSE colluded in such manipulation. It has only penalised the exchange for failing to prevent the misuse of its co-location service. NSE also made changes to the way it disseminated data to users of its co-location services. In 2014, it introduced Multicast Protocol transmission under which data from the exchange was multicast and the members subscribed to a specified address to receive the tick-by-tick data. This ensures that all members availing the co-location facility receive the data streamed by the exchange on a service at the specified address.

**Do co-location services give an unfair advantage to some?**

The issue of co-location has caused many to question the fairness of today's market infrastructure. Supporters of co-location services argue that it allows quicker dissemination of market data and improves market liquidity. They also state that the service is available to anyone who is willing to pay the appropriate fee. It must also be noted that the other connectivity options to access NSE trading data, including the V-SAT and leased line, too are based on a fee.

Critics of co-location, however, believe that it offers preferential access to certain market participants at the cost of others. This, they argue, goes against the fundamental purpose of exchanges, which is to ensure that securities are sold to the highest bidders among all market participants.

In short, they contend that market efficiency is more important than speed. Some critics have even argued that exchanges should regulate the pace of transmission of order data in such a way that all market participants receive the data at the same time.

- The issue of co-location has come into the limelight once again in the wake of the latest order by the markets regulator sanctioning former National Stock Exchange (NSE) MD and CEO Chitra Ramkrishna over decisions taken by her under the alleged influence of a mysterious 'yogi'.
- Co-location per se is not illegal. Stock exchanges across the world allow the practice to flourish as a paid service.
- Critics of co-location, however, believe that it offers preferential access to certain market participants at the cost of others.

Source: The Hindu

## 2. War impact, beyond oil

Relevant for GS Prelims & Mains Paper III; Economy



High gasoline prices are posted at a Mobil gas station following Russia's invasion of Ukraine, in California on Friday. (Photo: AP)

The current Russian invasion of Ukraine — unlike previous wars in Iraq and Libya or sanctions against Iran — is having an impact not just on energy prices. The effects of shipping disruptions through the Black and Azov Seas, plus Russian banks being cut off from the international payments system, are extending even to the global agri-commodities markets.

The reasons aren't difficult to see: Russia is not only the world's third biggest oil (after the US and Saudi Arabia) and the second biggest natural gas (after the US) producer, besides the No. 3 coal exporter (behind Australia and Indonesia). It is also the second largest exporter of wheat. The US Department of Agriculture (USDA), in its most recent report on February 9, estimated the country's shipments for 2021-22 (July-June) at 35 million tonnes (mt), next only to the 37.5 mt of the whole of European Union.

But the story doesn't end there. At No. 4 position in wheat exports, after EU, Russia and Australia (26 mt), is Ukraine, at 24 mt. Ukraine, moreover, is the world's third largest exporter of corn/maize, with a projected 33.5 mt in 2021-22, after the US (61.5 mt) and Argentina (42 mt). Ukraine and Russia are also the top two exporters of sunflower oil, at 6.65 mt and 3.8 mt, respectively in 2021-22, as per USDA. If that weren't all, Russia and its next-door ally Belarus are the world's No. 2 and No. 3 producers of muriate of potash (MOP) fertiliser, at 13.8 mt and 12.2 mt in 2020, respectively, behind Canada (22 mt).

## HOW GLOBAL COMMODITY PRICES HAVE MOVED

	March 2	Year ago	Month ago	Prices in
Brent crude	112.93	62.70	89.47	\$/barrel
Coal	440.00	87.50	220.10	\$/tonne for Newcastle (Australia) coal futures
Wheat	1,058.50	663.25	755.00	Cents/bushel for most actively-traded futures contract at Chicago Board of Trade
Corn	739.00	560.75	622.50	
Soyabean	1,677.50	1,414.00	1,545.25	
Skim milk powder	4,481.00	3,302.00	4,051.00	\$/tonne for average price at fortnightly Global Dairy Trade auctions
Cotton	138.70	94.25	141.50	Cents/pound for average Cotlook 'A' index price
Crude palm oil	6,660.00	3,735.00	5,523.00	Ringgit/tonne for most active futures contract at Bursa Malaysia derivatives exchange
Sugar	18.64	16.43	17.93	Cents/pound for most active raw sugar futures contract at New York's Inter Continental Exchange
Urea	900.00	390.00	596.00	\$/tonne for landed import price (cost plus freight) in India
MOP	587.00	247.00	447.00	
DAP	950.00	504.00	900.00	
Phosphoric acid	1,530.00	795.00	1,330.00	

### How global commodity prices have moved

It should not surprise, therefore, that Russia's war on Ukraine hasn't stopped at driving up Brent crude to \$110-15/barrel and international coal prices to unprecedented \$440/tonne levels. The shutting down of ports in the Black Sea have also sent prices of wheat and corn traded at Chicago Board of Trade futures exchange soaring to their highest since March 2008 and December 2012, respectively.

### What does that mean for India?

Skyrocketing global prices have made Indian wheat exports very competitive and in a position to at least partially fill the void left by Russia and Ukraine. Wheat from Gujarat, Rajasthan and Uttar Pradesh is now being delivered by rail wagons or trucks at warehouses near Kandla port at Rs 2,400-2,450 per quintal, as against Rs 2,100 or so hardly 15 days ago. This is above the government's minimum support price (MSP) of Rs 2,015/quintal for the new crop that will arrive in the markets from mid-March.



High export demand for wheat – India has already shipped out 5.04 mt of the cereal in April-December 2021 – could result in lower government procurement this time, compared to the record 43.34 mt and 38.99 mt from the 2020-21 and 2019-20 crops, respectively. A lot of wheat from western and central India may end up getting exported rather than in the Food Corporation of India's godowns and, in turn, putting pressure on public stocks: These, at 23.66 mt as on February 28, were the lowest for this date in three years.

"The government might, sooner than later, have to impose some kind of a tariff or other restrictions on exports," says S. Pramod Kumar, senior vice president, Roller Flour Millers Federation of India. Whether or not required, the situation post Ukraine is a far cry from FCI's overflowing granaries that enabled, if not forced, free distribution of this excess wheat and rice to some 81 crore people. The free grain scheme, introduced in April 2020 following the Covid-19-induced lockdown, will end this month with the conclusion of state elections in UP.

According to Kumar, the government would hereon need to carefully manage both its own stocks and also the overall domestic availability position in wheat.

### **The other oil**

The Ukraine crisis has also led to prices of vegetable oils and oilseeds skyrocketing. That includes not just sunflower and its immediate competitor, soyabean. Palm oil in Malaysia has hit all-time-highs, even scaling 7,000 ringgits-per-tonne levels briefly in the past few days. The benefits of it should flow to mustard growers in Rajasthan and UP, who are set to market their crop in the coming weeks. Mustard prices are ruling at Rs 6,500-plus per quintal, which is again above the MSP of Rs 5,050.

Brent at \$110-115/barrel is also helping lift the prices of cotton (because of synthetic fibres becoming costlier) and agri-commodities that can be diverted for production of ethanol (sugar and corn) or bio-diesel (palm and soyabean oil). High prices (above MSP) and a good monsoon (hopefully) can act as an inducement for farmers to expand acreages under cotton, soyabean, groundnut, sesamum and sunflower in the upcoming kharif planting season. That will serve the cause of crop diversification – especially weaning farmers away from paddy, if not sugarcane.

But there is a flip side. The ongoing Black Sea tensions are impacting fertiliser prices as well. Take MOP, a nutrient that India wholly imports. Out of the total 5.09 mt that was imported in 2020-21, nearly a third came from Belarus (0.92 mt) and Russia (0.71 mt). With supplies from there virtually choked, more quantities would have to be procured from other origins such as Canada, Jordan and Israel.

International prices of other fertilisers (urea, di-ammonium phosphate and complexes) and their raw materials/intermediates (ammonia, phosphoric acid, sulphur and rock phosphate), too, have gone up in the past one month and more. These commodities essentially track crude and gas prices. It doesn't help when China is also India's largest supplier of urea (Ukraine was No. 3 in 2020-21, after Oman) and second largest of DAP (after Saudi Arabia).

In short, the challenges that Ukraine will present in the coming days are going to be vastly different from those in the aftermath of Corona. And this war and the associated sanctions are also different from those experienced vis-à-vis Iraq, Libya and Iran. The effects are not confined to oil.

**Source: The Indian Express**

### **3. What is co-location, at the heart of the scam at the NSE?**

**Relevant for GS Prelims & Mains Paper III; Economy**



Multiple agencies are investigating the NSE co-location scam related to the manipulation of the market at the stock exchange, in which several former top officials including former CEOs Chitra Ramakrishna and Ravi Narain are under a cloud.

#### **What is co-location?**

Co-location is typically associated with a facility where a third party can lease a rack/server space along with other computer hardware. Co-location facility provides infrastructure such as power supply, bandwidth, and cooling for setting up servers and storage of data.

What happened at the co-location facility of the NSE that is now being probed by law enforcement agencies? There are allegations that some brokers who had leased space at the NSE co-location facility were able to log on to the NSE's systems faster with better hardware specifications while engaged in algorithmic trading, which allowed them unfair access and advantage during the period from 2012 to 2014.

Even a split-second faster access is believed to result in huge gains for a trader. At that time NSE used to disseminate information through unicast, which is a single, direct request sent from one host to another, with only those hosts interacting over the route.

#### **What did the probe by the capital markets regulator find?**

The Securities and Exchange Board of India (Sebi) found that preferential access was given to stock brokers at NSE's co-location facility. It found that a single stock broker could log on to multiple dissemination servers through multiple IPs assigned to him.

It also found that brokers could have multiple logins to a single dissemination server through multiple IPs assigned to it. This gave at least 15 brokers preferential access.

#### **What did Sebi do?**

Following its investigation into the issue, Sebi in 2019 directed NSE to disgorge Rs 624.89 crore, and barred the exchange from accessing the market for funds for six months.

Sebi also asked the former NSE CEOs, Ramakrishna and Narain, to disgorge 25 per cent of their respective salaries drawn during a certain period. They were also prohibited from associating with a listed company or a market infrastructure institution or any other market intermediary for a period of five years.

In February 2022, the regulator once again fined Ramakrishna and Narain for corporate governance lapses in the appointment of NSE's group operating officer, Anand Subramanian. Subramanian was arrested by CBI last month.

**Source: The Indian Express**

### **4. What does RBI's \$5 billion dollar-rupee swap mean?**

#### **Relevant for GS Prelims & Mains Paper III; Economics**

The Reserve Bank of India (RBI) conducted a \$ 5 billion dollar-rupee swap auction as part of its liquidity management initiative, leading to infusion of dollars and sucking out of the rupee from the financial system. The central bank's move will reduce the pressure on inflation and strengthen the rupee.

#### **What has been the response?**

The RBI's planned forex swap auction went through smoothly. The central bank said it received bids worth \$13.56 billion for the sell/buy auction. It accepted 86 of these bids for \$5.135 billion. The cut-off premium was set at 656 paise. The first leg of the settlement will be March 10, 2022 and the second leg will be March 11, 2024.

**What happened during the swap auction?**

The RBI sold \$5.135 billion to banks on March 8 and simultaneously agreed to buy back the dollars at the end of the swap settlement period. When the central bank sells dollars, it sucks out an equivalent amount in rupees, thus reducing the rupee liquidity in the system. Dollar inflow into the market will strengthen the rupee which has already hit the 77 level against the US dollar.

The swap auction can be done in the reverse way also when there is shortage of liquidity in the system. The RBI then buys dollars from the market and releases an equivalent amount in the rupees.

**What's the impact of the swap?**

The RBI would have removed close to Rs 39,000 crore (\$5.135 billion) at Monday's rupee closing rate of 76.91 per dollar. The major impact will be that liquidity which currently averages around Rs 7.6 lakh crore will shrink. The RBI normally brings down liquidity in the system when inflation threatens to rise sharply. With crude oil prices rising sharply in the wake of the Russia-Ukraine war, inflation is set to rise in the coming days.

Further, foreign portfolio investors have been pulling out funds from India. They have withdrawn Rs 34,000 crore from Indian stocks in March so far, putting severe pressure on the rupee. After the swap auction on Tuesday, the rupee recovered to 76.92 from 76.97 on Monday.

**More such measures on the cards?**

With the rupee under pressure and inflation posing a big risk to the economy, the central bank is expected to come out with more such measures to rein in inflation and prevent a big slide in the rupee.

**Source: The Indian Express**

**5. Biden's ban on Russian oil imports, impact on US, Europe and India****Relevant for GS Prelims & Mains Paper III; Economics**

The United States on Tuesday banned all imports of Russian oil and gas and energy in an effort that US President Joe Biden said would hit "the main artery of Russia's economy". The UK has also announced plans to phase out imports of Russian crude oil by the end of 2022.

**What does the ban entail?**

The ban blocks any new purchases of Russian crude oil, certain petroleum products, liquefied natural gas, and coal, and winds down the deliveries of existing purchases that have already been contracted.

New investments from the US in Russia's energy sector are also prohibited under the ban.

The ban does not, however, impact the ability of other countries to import Russian crude oil or natural gas. During his announcement of the import ban, US President Joe Biden clarified that while the import ban was decided in consultation with European allies, the US did not expect them or ask them to join in the import ban.

**How dependent on Russian oil are the US and Europe?**

The US is the world's largest producer and a net exporter of crude oil. In 2021, Russian crude oil accounted for about 10 per cent of US oil imports but about 30 per cent of the oil imports of Europe.

European countries are particularly reliant on Russia for natural gas imports. In 2021, the European Union imported 155 billion cubic metres of natural gas from Russia, accounting for about 45% of EU gas imports and nearly 40% of the EU's total gas consumption.

**How will the ban affect crude oil prices?**

Experts noted that as long as Russian crude oil supplies continue, there would not be a major impact on crude oil prices which are already near 14 year highs. Brent crude was trading at \$130.8 per barrel on Wednesday (10.30 am IST), up 34 per cent since Putin announced military operations in Ukraine.

Economic sanctions imposed by the US and Europe have already had some impact on exports of Russian crude oil. Analysts have noted that cargoes of Russian crude oil are struggling to find buyers with many concerned about the reputational damage from buying Russian crude which is now being offered at steep discounts due to sanctions.

### **How are rising crude oil prices going to affect Indian consumers?**

The sharp uptick in crude oil prices comes as Indian consumers have been enjoying a four month reprieve from rising fuel prices with oil marketing companies (OMCs) having kept the price of petrol and diesel constant since early November.

With elections in Uttar Pradesh, Punjab, Uttarakhand, Manipur, and Goa having come to a close, consumers are expected to see a consistent increase in fuel prices starting this week as OMCs look to bring prices in line with international benchmarks and recoup losses.

The price of petrol and diesel have to be hiked by about 52 paise for every dollar increase in the price of crude oil for OMC marketing margins to remain constant. The price of crude oil has risen by about \$50 per barrel since the price of petrol and diesel was last revised in November.

Petrol is currently retailing at Rs 95.41 per litre in the national capital while diesel is retailing at Rs 86.67 per litre.

**Source: The Indian Express**

## **6. Reviving the inland water transport system for the Northeast**

### **Relevant for GS Prelims & Mains Paper III; Economics**

A month after setting sail on the Ganga from Patna, the MV Lal Bahadur Shastri carrying 200 metric tonnes of food grains for the Food Corporation of India (FCI), docked at Guwahati's Pandu port on the southern bank of the Brahmaputra on March 6. The occasion is believed to have taken inland water transport, on two of India's largest river systems, to the future.

### **Why is a Ganga-Brahmaputra cargo vessel in focus?**

The vessel had on February 5 started sailing from Patna on National Waterway-1 (NW1, river Ganga). It passed through Bhagalpur, Manihari, Sahibganj, Farakka, Tribeni, Kolkata, Haldia, Hemnagar in India, Khulna, Narayanganj, Sirajganj and Chilmari in Bangladesh and again to India on National Waterway-2 (NW2, river Brahmaputra) through Dhubri and Jogighopa covering 2,350 km. The docking of the vessel carrying 200 MT of food grains for the FCI has rekindled hope for the inland water transport system which the landlocked northeast depended on heavily before India's independence in 1947.

### **Is this the first such shipping of cargo?**

The shipping of cargo from Patna to Pandu via Bangladesh was FCI's pilot project. A similar experiment was carried out in 2018 when two 1,000-tonne barges carrying 1,233 tonnes of bagged fly ash travelled 2,085 km from Bihar's Kahalgaon to Pandu for more than a month. A private firm had procured the fly ash from the National Thermal Power Corporation's plant in Bihar for use in its cement factories in Assam and Meghalaya. But the FCI cargo is expected to lead to regular services between NW1 and NW2 "heralding a new age of inland water transport" for the northeast.

### **How would regular inland water service impact the northeast?**

Website: [www.prepmate.in](http://www.prepmate.in)

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Telegram Channel: [@upscprepmate](https://t.me/upscprepmate)

Youtube channel: [PrepMateEduTech](https://www.youtube.com/channel/UCPrepMate)

Around Independence, Assam's per capita income was the highest in the country primarily because of access for its tea, timber, coal and oil industries to seaports on the Bay of Bengal via the Brahmaputra and the Barak River (southern Assam) systems. Ferry services continued sporadically after 1947 but stopped after the 1965 war with Pakistan, as Bangladesh used to be East Pakistan then.

The scenario changed after the river routes were cut off and rail and road through the "Chicken's Neck", a narrow strip in West Bengal, became costlier alternatives. "The start of cargo movement through the Indo-Bangladesh Protocol (IBP) route is going to provide the business community a viable, economic and ecological alternative.

### **How did the water cargo service through Bangladesh come about?**

The resumption of cargo transport service through the waterways in Bangladesh has come at a cost since the Protocol on Inland Water Transit and Trade was signed between the two countries.

India has invested 80% of ₹305.84 crore to improve the navigability of the two stretches of the IBP (Indo-Bangladesh Protocol) routes — Sirajganj-Daikhowa and Ashuganj-Zakiganj in Bangladesh.

The seven-year dredging project on these two stretches till 2026 is expected to yield seamless navigation to the north-eastern region.

IWAI officials said the distance between NW1 and NW2 will reduce by almost 1,000 km once the IBP routes are cleared for navigation.

The Government has also undertaken the Jal Marg Vikas project with an investment of ₹4,600-crore to augment the capacity of NW1 for sustainable movement of vessels weighing up to 2,000 tonnes.

A few issues remain, though. Sailors who made the cargo trips possible have had difficulties steering clear of fishing nets and angry fishermen in Bangladesh.

These hiccups will get sorted out with time, officials say.

**Source: The Hindu**

## **7. EPF rate slashed from 8.5% to 8.1% for 2021-22, to hit savings**

### **Relevant for GS Prelims & Mains Paper III; Economics**

The return on workers' retirement savings parked with the Employees' Provident Fund Organisation (EPFO) has been slashed to 8.1% for 2021-22 from the 8.5% rate credited to EPF members' accounts in the last two years.

The last time the EPF savings were paid an annual return this low was in 1977-78, when the rate was 8%, but that marked the highest EPF rate at the time since the EPFO's inception in 1952. Since then, the EPF rate has only been lower than 8.5% in three years — 1979-80, 1980-81 and 2011-12 — when an 8.25% return was paid on balances.

### **Recommendation of 8.1%**

The EPFO's Central Board of Trustees (CBT), chaired by Labour and Employment Minister Bhupender Yadav, recommended 8.1% interest rate. The rate will have to be ratified by the Finance Ministry before it is notified and credited to members' accounts.

### **Cut in times of inflation**

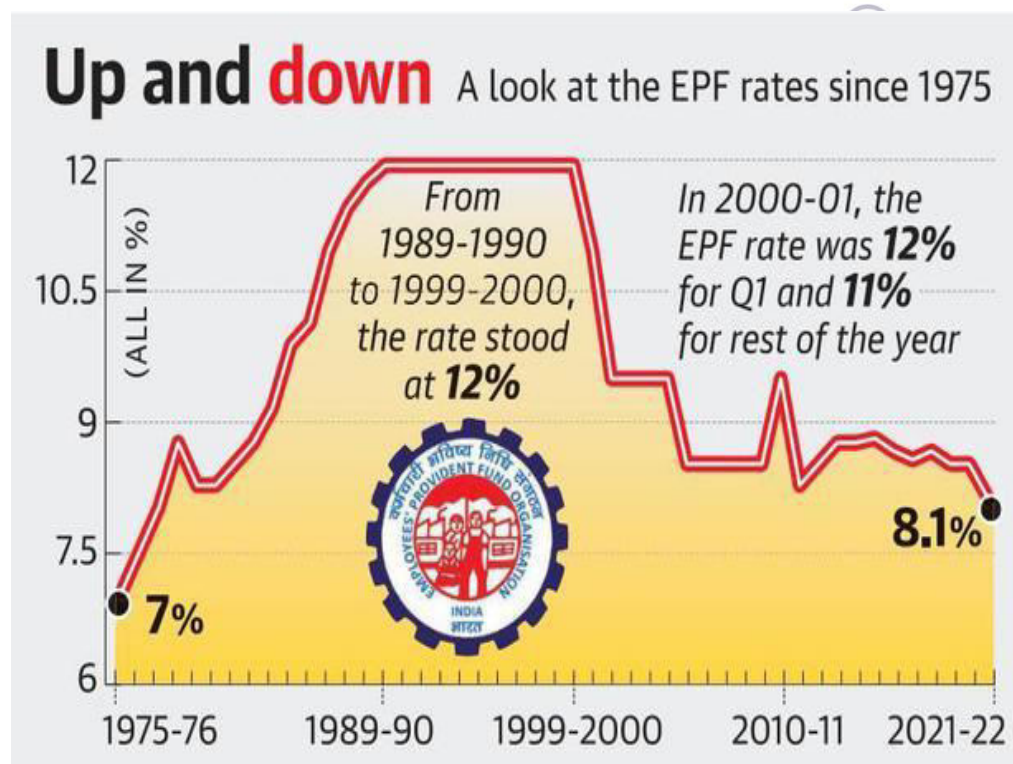


The cut in the EPF rate, at a time when inflation is resurging, attracted criticism from the central trade union representatives on the board who called for the 8.5% return to be retained. Employee representatives had also opposed the last rate cut on EPF savings from 8.65% in 2018-19 to 8.5% in 2019-20.

### Justification by EPFO

Mr. Yadav sought to downplay concerns and said he feels good to announce 8.1% at a time when a 10-year fixed deposit with the State Bank of India yields just around 5.4%, while returns on savings instruments like the Public Provident Fund are in the range of 6.8% to 7.1%.

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### Income of EPFO

The EPFO's income from investments this year stood at ₹76,768 crore from about ₹70,000 crore in 2020-21, when it had paid out 8.5% to EPF accounts. The EPF corpus went up during the year from ₹8.29 lakh crore to ₹9.42 lakh crore.

The EPFO has been investing at least 5% of incremental EPF inflows into members' accounts into the equity markets since 2015-16. A minimum 45% of fresh accruals are invested in government securities, with a ceiling of 65%.

### About EPFO

The EPFO is the country's largest retirement fund and the second largest non-banking financial institution with a corpus of about ₹16 lakh crore. It has 24.77 crore members with EPF accounts, of which 14.36 crore members were allotted Unique Account Numbers (UANs) as of March 31, 2020. About five crore members are active contributors with fresh accretions made into their EPF accounts during 2019-20.

The EPF accounts are mandatory for employees earning up to ₹15,000 a month in firms with over 20 workers, with 12% of the basic pay and dearness allowance deducted as employees' contribution and another 12%

remitted by the employer. Part of this cumulative 24% contribution is remitted to the Employees' Pension Scheme of 1995.

**Source: The Hindu**

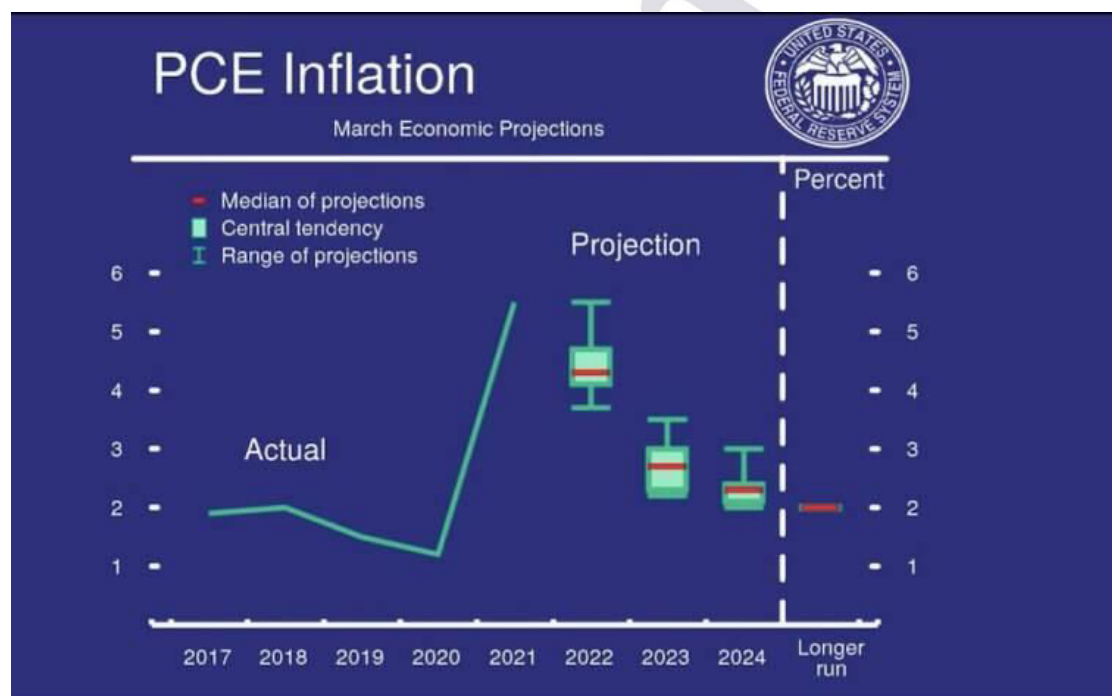
## 8. The US Fed Reserve's rate hike, and its impact on markets, RBI policy

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### Relevant for GS Prelims & Mains Paper III; Economics

In its first hike since 2018, the US Federal Reserve on Wednesday raised interest rates by 25 basis points and outlined an aggressive stance that also includes balance sheet reduction aimed at fighting record high inflation. The Fed projected that its policy rate would hit a range between 1.75 per cent and 2 per cent by year's end, arguing that the ongoing increases will be appropriate to curb inflation, the highest in 40 years at 7.9 per cent in February. It also cited the war in Ukraine as creating additional upward pressure on inflation, with global commodity prices remaining elevated.

Federal Reserve Chairperson Jerome Powell said at a press briefing that inflation is expected to start cooling off by the second half of the year and fall to its target level of 2 per cent by 2024. The strong US economy should be able to expand even with a less accommodative monetary policy. "All signs are that this is a strong economy, indeed, one that will be able to flourish, not to say withstand, but certainly flourish in the face of less accommodative monetary policy," he said.



Personal Consumption Expenditure Inflation (Chart source: US Fed)

What impact has the Fed Reserve hike had on financial markets?

Markets responded positively to the clear path outlined by the world's largest central bank, with US markets closing higher by 2 per cent and Indian stock markets opening with a gap of more than 1 per cent on Thursday. Commodities retreated with the Brent crude oil falling and remaining below \$99 per barrel, sharply lower than the \$139 per barrel recorded just a few days ago.

Going forward, Indian and global markets are expected to stay positive as three major uncertainties seem to be over — the Assembly elections in five Indian states, the US Fed's decision, and signs of the Russia-Ukraine conflict entering a resolution phase. Any spike in commodity prices could cause corrections in equity markets, even as the broader trend of rising stock prices remains intact.

### **How will it impact the RBI policy decision?**

The Fed's decision to hike rates and rising domestic retail inflation rate will have a direct bearing on the Reserve Bank of India's monetary policy review at the next meeting of the Monetary Policy Committee scheduled between April 6 and April 8. Unlike the US Fed, which has clearly reversed course from its accommodative monetary policy, the RBI continues to hold an accommodative stance. This is partly because the retail inflation in India has not breached the set target range of the RBI.

As per recent data, domestic retail inflation rose to an eight month high of 6.07 per cent in February, breaching the upper tolerance level of medium-term inflation target of 4+/- 2 per cent for the second month in a row.

Some economists argued that the RBI may have to revise upward its inflation forecast as inflationary pressures are becoming generalised. A reassessment of the current accommodative stance of the central bank is also possible. This is the fifth consecutive month of rising inflation. Retail inflation was at 6.01 per cent in January 2022 and 5 per cent a year ago. The RBI has projected retail inflation at 5.3 per cent for FY22, with Q4 inflation at 5.7 per cent before easing to 4.9 per cent in Q1 FY23.

### **What will be the breach of the RBI inflation target?**

According to the Finance Ministry, two months of over 6 per cent retail inflation cannot be seen as a breach of the upper band of RBI's target, and crossing of the inflation rate above the 6 per cent band "for a particular month cannot be construed as breach of target".

"Breach of this inflation target is construed only when: (a) the average inflation is more than the upper tolerance level of the inflation target for any three consecutive quarters; or (b) the average inflation is less than the lower tolerance level for any three consecutive quarters," as per the ministry. Therefore, the RBI has room to stay the course on its present stance, despite some risks from elevated commodity prices. The fact that Brent crude oil has retreated sharply below \$99 a barrel should provide additional comfort to the central bank.

Some policy makers also believe that since the fiscal policy is in "contraction" mode, the monetary policy must maintain an accommodative stance. The government has pegged the fiscal deficit at 6.4 per cent of GDP in 2022-23, down from 6.9 per cent in 2021-22 and 9.2 per cent in 2020-21.

"From the levels of 9.2 per cent, the fiscal contraction next year will almost be 3 per cent, now this is a huge contraction. At a time when fiscal policy is in contraction, and private consumption is still below previous levels with no likelihood of economy overheating, the monetary policy must remain accommodative under such circumstances," an official said, indicating why the government expects RBI to continue to hold an accommodative monetary policy stance.

**Source: The Indian Express**

## **9. Will the war in Ukraine rattle India's banks?**

**Relevant for GS Prelims & Mains Paper III; Economics**

S&P Global earlier this week forecast that banks in India would face 'headwinds' as a fallout of the Russia-Ukraine conflict. The rating agency flagged rising inflation and borrower 'stress' that could affect companies' ability to fully pay back loans.

### **How does a war in eastern Europe affect India?**

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Youtube channel: [PrepMateEduTech](https://www.youtube.com/channel/UCPrepMate)

The war has impacted the production and movement of a wide range of raw materials and commodities. Ukraine, for instance, is the main source of sunflower oil imported into India. Supplies have naturally been hit and are bound to further push up the retail prices of edible oils.

The conflict has also forced Ukraine to shut two neon factories that account for about 50% of the global supply needed in the manufacture of semiconductors. As semiconductors become scarcer, user industries bear the brunt. Already, the global chip shortage has led to the waiting period for the delivery of new premium cars in India being extended to several months. And with major carmakers having reported declines in sales for January and February, the profit outlook for these companies and their component suppliers looks significantly clouded. The domino effect on the automobile and other industries' supply chains could impair the ability of businesses, especially medium and small enterprises, to fully service their loans.

### **What are the other factors that may undermine a company's ability to repay loans?**

Oil has been on the boil ever since Russia invaded Ukraine on February 24. After zooming to \$139 a barrel — near historical highs — Brent crude prices were at the \$106 a barrel level as of Friday. With India's state-run oil marketing companies certain to raise the retail prices of petrol and diesel sooner than later, the higher cost of transportation is bound to feed into the prices of goods from agricultural produce to raw materials for factories and to finished products headed to store shelves, thus quickening inflation across the board.

Higher input costs for manufacturers and service providers would leave them in a tough spot as they would have to choose between passing on the price increases to consumers — thus risking the already tenuous demand — and hurting their profitability if they opt to absorb the impact. Here again smaller businesses, that are most dependent on bank credit, are bound to be hit the hardest. If the war in Europe is prolonged, Indian banks could end up facing delays in the repayment of loans or possibly even having to write them off as 'bad'.

Separately, with the dollar benefitting from a global flight to less risky assets, as well as the start of the U.S. Federal Reserve's calibrated monetary tightening to rein in inflation from a 40-year high in the world's largest economy, the rupee is expected to weaken against the U.S. currency. With the exchange rate impacted, importers would have to shell out more rupees for the same dollar value of imports than before. Unless demand expands, allowing them to sell more volume, a weaker local currency eats into their profits, leaving them with lesser cash available to service loans.

Official data for February show that overall goods imports are growing faster than exports compared with a year earlier, widening the current account deficit (CAD). Widening CAD is likely to cause the rupee to weaken further to 77.5 to a dollar by March 2023, from 75, Crisil Ratings said on March 17.

Rising inflation, which is already just beyond the RBI's 6% upper tolerance limit, may nudge the central bank into raising benchmark interest rates. This means more interest will have to be paid by companies that would likely face the prospect of lesser profit.

Earlier this month, India Ratings said that the increase in commodity prices could result in a stretched working capital cycle for small and medium enterprises (SMEs), weakening their debt servicing ability.

### **Why is the situation particularly worrying for Indian banks?**

India's lenders had already been struggling to cope with an overhang of non-performing assets or bad loans even before the pandemic severely hurt overall economic momentum.

In its Financial Stability report for December 2021, the RBI warned that from a Gross Non-Performing Asset Ratio of 6.9% in September 2021, commercial banks were likely to see the metric rise to 8.1% in a baseline scenario, and possibly soar to 9.5% under a 'severe stress' situation by September 2022.

- S&P Global earlier this week forecast that banks in India would face 'headwinds' as a fallout of the Russia-Ukraine conflict.



- The war has impacted the production and movement of a wide range of raw materials and commodities. Ukraine, for instance, is the main source of sunflower oil imported into India.
- The conflict has also forced Ukraine to shut two neon factories that account for about 50% of the global supply needed in the manufacture of semiconductors.
- With the dollar benefitting from a global flight to less risky assets, as well as the start of the U.S. Federal Reserve's calibrated monetary tightening to rein in inflation from a 40-year high in the world's largest economy, the rupee is expected to weaken against the U.S. currency.
- Rising inflation, which is already just beyond the RBI's 6% upper tolerance limit, may nudge the central bank into raising benchmark interest rates. This means more interest will have to be paid by companies that would likely face the prospect of lesser profit.

**Source: The Hindu**

## 10. On India's recovery two years into the pandemic

### Relevant for GS Prelims & Mains Paper III; Economics

This week, India will complete two years since the Government embarked on what is now considered the harshest and quickest lockdowns in the world in a bid to block entry points for the infectious COVID-19 virus. The efficacy of that lockdown, both in terms of curbing infection rates (and mortality rates) and the accompanying hardships imposed on the population at large, can be debated at length. There is, however, little argument over the massive economic costs for the country.

#### Economic Costs of Lockdown

The Reserve Bank of India has underlined that some of that damage to India's GDP is permanent. This can be linked to businesses shutting shop for good, labourers migrating home (with many choosing not to return) and consumers turning increasingly reluctant. The rebuilding effort remains a work in progress, although record tax collections would suggest that all is well. Personal consumption and employment-driving contact-intensive sectors remain below pre-pandemic levels, even as other macro metrics have surpassed pre-COVID performance. Just as the virus appeared to be ebbing, triggering hopes of a revival in consumer confidence, the Russia-Ukraine conflict has thrown up fresh challenges, including high commodity and crude oil prices.

#### New Challenges

Health-care costs are considered a key factor for pushing several middle- and lower-income households below the poverty line, while high inflation affects all economic actors. The Russia-Ukraine situation has not only catapulted gas, oil and coal prices higher but also fertilizers, wheat, corn, and seed oil. A section of farmers growing crops such as wheat may gain, but inflation in essential items such as food and transport, will impact the poor the most. For now, India's oil marketing companies, who the Government has argued determine the retail prices of fuel, have shown extreme benevolence in holding rates at November 2021 levels and this may persist till Parliament's current session ends. This is, however, not fiscally sustainable, just as the Finance Ministry has argued that high global commodity prices are not. A prolonged conflict in Europe could tip the global economy into recession, even as monetary policy missteps and social risks associated with high inflation, could dampen growth, Moody's Investors Service warned last week. On the other hand, the Government's robust direct tax collections that have surpassed even revised estimates by ₹1.13 lakh crore, give it room to not just push forward the LIC share sale till market volatility subsides but also slash fuel taxes further, curb other inflationary pressures and expand the COVID-19 booster shots coverage. Unless people get more certainty about the pandemic's end-game, and have some money in their hands, it would be difficult to spur consumption enough to reach the necessary next stage of the recovery — a revival in private investments.

**Source: The Hindu**

## 11. The National Land Monetisation Corporation

**Relevant for GS Prelims & Mains Paper III; Economics**

The Union Cabinet on March 9 approved the creation of the National Land Monetisation Corporation (NLMC), the Special Purpose Vehicle (SPV) that Finance Minister Nirmala Sitharaman had announced in the Union Budget 2021-22, to carry out monetisation of government and surplus land holdings of public sector undertakings (PSU).

**What is the NLMC and what will it do?**

The National Land Monetisation Corporation will be a firm, fully owned by the government, to carry out the monetisation of government and public sector assets in the form of surplus, unused or underused land assets. It will fall under the administrative jurisdiction of the Ministry of Finance and will be set up with an initial authorised share capital of ₹5,000 crore and a paid-up capital of ₹150 crore.

Apart from monetising underutilised or unused land parcels of Central Public Sector Enterprises (CPSEs), the Corporation will also facilitate the monetisation of assets belonging to PSUs that have ceased operations or are in line for a strategic disinvestment, with the aim of unlocking the value of these land holdings.

The surplus land and building assets of such enterprises are expected to be transferred to the NLMC, which will then hold, manage and monetise them.

According to an official statement released after a recent Cabinet meeting chaired by Prime Minister Narendra Modi, the setting of the NLMC “will speed up the closure process of the CPSEs and smoothen the strategic disinvestment process.”

The statement said it “will also enable productive utilisation of these under-utilised assets” by setting in motion private sector investments, new economic activities such as industrialisation, boosting the local economy by generating employment and generating financial resources for potential economic and social infrastructure.

Besides managing and monetising, the NLMC will act as an advisory body and support other government entities and CPSEs in identifying their surplus non-core assets and monetising them in an efficient and professional manner, maximising the scope of value realisation.

**What does monetisation mean?**

When the government monetises its assets, it essentially means that it is transferring the revenue rights of the asset (could be idle land, infrastructure, PSU) to a private player for a specified period of time. In such a transaction, the government gets in return an upfront payment from the private entity, regular share of the revenue generated from the asset, a promise of steady investment into the asset, and the title rights to the monetised asset.

There are multiple ways to monetise government assets; in the case of land monetisation of certain spaces like offices, it can be done through a Real Estate Investment Trust (REIT) — a company that owns and operates a land asset and sometimes, funds income-producing real estate. Assets of the government can also be monetised through the Public Private Partnerships (PPP) model.

There are different reasons why the government monetises its assets. One of them is to create new sources of revenue. The economy has already been hit due to the coronavirus pandemic and revenues are essential to fulfil the Narendra Modi government’s target of achieving a \$5 trillion economy.

Monetisation is also done to unlock the potential of unused or underused assets by involving institutional investors or private players.

Thirdly, it is also done to generate resources or capital for future asset creation, such as using the money generated from monetisation to create new infrastructure projects.

### **How will the NLMC function?**

The firm will hire professionals from the private sector with a merit based approach, similar to other specialised government companies like the National investment and infrastructure Fund (NIIF) and Invest India. This is because asset monetisation of real estate requires expertise in valuation of property, market research, investment banking, land management, legal diligence and other related skill sets.

The NLMC will undertake monetisation as an agency function and is expected to act as a directory of best practices in land monetisation.

### **How much land is currently available for monetization?**

According to the Economic Survey 2021-2022, as of now, CPSEs have put nearly 3,400 acres of land on the table for potential monetisation. They have referred this land to the Department of Investment and Public Asset Management (DIPAM).

As per the survey, monetisation of non-core assets of PSUs such as MTNL, BSNL, BPCL, B&R, BEML, HMT Ltd, Instrumentation Ltd etc are at different stages. In March 2020, for instance, BSNL had identified a total of ₹24,980 crore worth of properties for monetisation. The Railways and Defence Ministries, meanwhile, have the largest amount of government land in the country. The Railways have over 11 lakh acres of land available out of which 1.25 lakh acres is vacant. The Defence Ministry has in its possession 17.95 lakh acres of land. Out of this, around 1.6 lakh acres fall inside the 62 military cantonments while over 16 lakh acres are outside the cantonment boundaries.

### **What are the possible challenges for NLMC?**

The performance and productivity of the NLMC will also depend on the government's performance on its disinvestment targets. In FY 2021-22, the government has just been able to raise ₹12,423.67 crore so far through various forms of disinvestment. In the budget 2021-22, the government had initially set a disinvestment target of ₹1.75 lakh crore which was later brought down to ₹78,000 crore. The Life Insurance Corporation IPO, which was supposed to raise ₹60,000 crore is now shrouded in uncertainty owing to the Russia-Ukraine crisis making stock markets volatile. If the IPO does not hit the markets by the end of March, the government would be missing its disinvestment targets by a wide margin.

The procedure to find a bidder for state-owned carrier Air India also took a considerable amount of time and negotiations before the Tata Group came in.

Besides, the process of asset monetisation does not end when the government transfers revenue rights to private players, identifying profitable revenue streams for the monetised land assets, ensuring adequate investment by the private player and setting up a dispute-resolution mechanism are also important tasks. Posing as another potential challenge would be the use of Public Private Partnerships (PPPs) as a monetisation model. For instance, the results of the Centre's PPP initiative launched in 2020 for the Railways were not encouraging.

It had invited private parties to run 150 trains of the Indian Railways but when bids were thrown open, nine clusters of trains saw no bidders while there were only two interested bidders for three clusters. Even for these three clusters, IRCTC — the Railways' own firm, was the single serious bidder. The presence of just a few serious bidders would also give rise to the possibility of a less competitive space, meaning a few private entities might create a monopoly or duopoly in operating surplus government land. For instance, questions were raised when the government removed the cap on the number of airports a single entity could bid for, resulting in the Adani Group taking possession of six city airports for ₹2,440 crore from the Airports Authority of India.

**Source: The Hindu**

## **12. India sets \$400 billion export record: Its significance and key drivers of growth**

### Relevant for GS Prelims & Mains Paper III; Economics

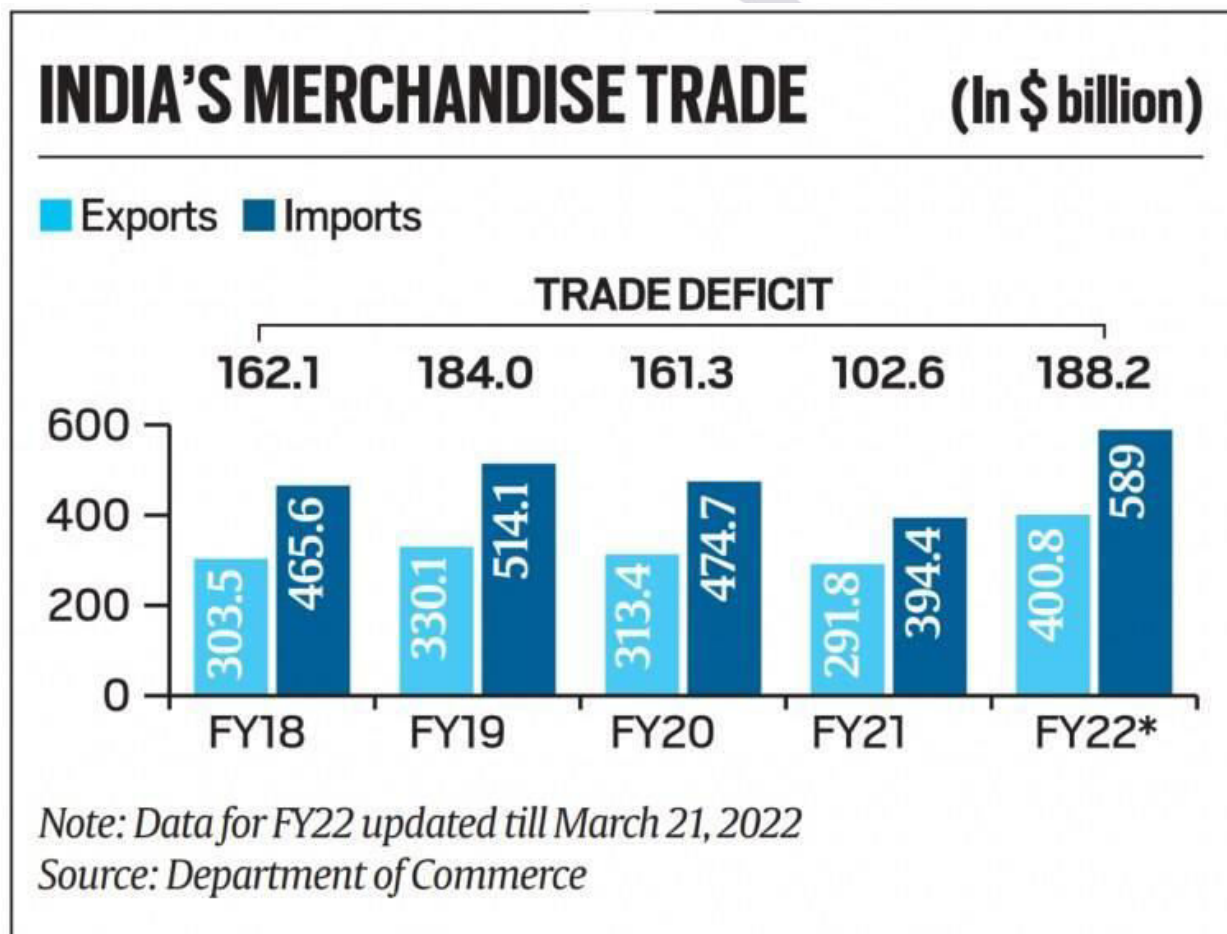
Prime Minister Narendra Modi Wednesday said that India had achieved the target of \$400 billion in exports in FY2022 and complemented farmers, weavers, MSMEs, manufacturers, exporters for the achievement.

"India set an ambitious target of \$400 billion of goods exports & achieved this target for the first time ever. I congratulate our farmers, weavers, MSMEs, manufacturers, exporters for this success. This is a key milestone in our Atmanirbhar Bharat journey," Modi tweeted on Wednesday.

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### What is the significance of India achieving \$400 billion in merchandise exports in the fiscal?

The achievement of \$400 billion in merchandise exports represents a growth of over 21 per cent in exports compared to the previous record high of \$330 billion achieved in FY2019 prior to the Covid-19 pandemic. Experts have noted that one of the key factors driving the surge in exports is pent up demand that was not met during major waves of the Covid-19 pandemic. Expansionary monetary policy by developed economies in response to the economic impact of the pandemic has also boosted demand for Indian exports.



Source: Department of Commerce

### What areas have been the key drivers of India's export growth?

Areas that have been key drivers of India's export growth include engineering goods which have seen a growth of 49.7 per cent in the first 11 months of the fiscal, electronics goods exports which have grown by 42.8 per cent and gems and jewellery exports which have grown by 57.3 per cent. Export of petroleum products have grown by 147.6 per cent driven by a steady increase in crude oil prices.



### **What has been the increase in imports?**

While exports have grown sharply India's merchandise imports have grown even faster reaching \$550 billion in the first 11 months of the fiscal through sharp growth in imports of crude oil, coal, gold, electronics and chemicals. Rising prices of commodities including crude oil and coal have played a significant role in adding to India's import bill and taking the trade deficit for the first 11 months to a record high of \$176 billion.

**Source: The Indian Express**

## **13. Significance of PVR-INOX merger, its impact on entertainment industry**

### **Relevant for GS Prelims & Mains Paper III; Economics**

Multiplex chains PVR Ltd and INOX Leisure Ltd have decided to merge to form the largest entertainment company in the country.

The boards of both the companies on Sunday approved the amalgamation and the share exchange ratios. Accordingly, INOX shareholders will receive three shares in PVR for 10 shares of INOX. After the merger, PVR promoters will have 10.62 per cent stake while INOX promoters will have 16.66 per cent stake in the combined entity.

### **What does the deal entail?**

After the merger, the promoters of INOX will become co-promoters in the merged entity along with the existing promoters of PVR. Further, the board of directors of the merged company would be re-constituted with a total board strength of 10 members. Moreover, both the promoter families will have equal representation with two board seats each.

With PVR currently operating 871 screens across 181 properties in 73 cities and INOX operating 675 screens across 160 properties in 72 cities, the combined entity will become the largest film exhibition company in India, operating 1,546 screens across 341 properties in 109 cities.

PVR shares closed with a gain of 2.84 per cent at Rs 1,827.60 on the BSE on Friday. INOX Leisure shot up by 6.10 per cent to Rs 469.70.

### **How does it change the market dynamics?**

The merger is expected to augur well for the growth of the Indian cinema exhibition industry, besides ensuring tremendous value creation for all stakeholders, including customers, real estate developers, content producers, technology service providers, the state exchequer and the employees.

Ajay Bijli would be appointed as the managing director and Sanjeev Kumar would be appointed as the executive director. Pavan Kumar Jain would be the non-executive chairman of the board while Siddharth Jain would be appointed as the non-executive, non-independent director in the combined entity.

"The combined entity will be named as PVR INOX Limited with branding of existing screens to continue as PVR and INOX respectively," PVR said in a statement.

New cinemas opened after the merger will be branded as PVR INOX. While strongly countering the adversities posed by the advent of various OTT platforms and the after-effects of the pandemic, the combined entity would also work towards taking world-class cinema experience closer to the consumers in tier-2 and tier-3 markets, PVR and INOX said.

INOX had posted a revenue of Rs 296.47 crore and a loss of Rs 1.31 crore for the quarter ended December 2021. PVR made a loss of Rs 24.53 crore on a turnover of Rs 546.94 crore for the third quarter.

Ajay Bijli, Chairman and Managing Director of PVR, said, "The film exhibition sector has been one of the worst impacted sectors on account of the pandemic and creating scale to achieve efficiencies is critical for the long-term survival of the business and fight the onslaught of digital OTT platforms."

Siddharth Jain, Director, INOX Leisure, said, "As we head into the industry's revival amidst headwinds, this decisive partnership would bring in enhanced productivity through scale, a deeper reach in newer markets and numerous cost optimization opportunities, and continue to delight cinema fans with world-class experiences and landmark innovations."

Drushti Desai, Registered Valuer, Partner at Bansil S. Mehta & Co and SSPA & Co chartered accountants, the independent valuers appointed by INOX and PVR respectively, have recommended a share exchange ratio. Ernst & Young Merchant Banking Services LLP provided the fairness opinion to INOX, while Axis Capital provided a fairness opinion to PVR on the share exchange ratio.

**Source: The Indian Express**

## Environment

### 1. Land protests over Deocha Pachami coal block

#### Relevant for GS Prelims & Mains Paper III; Environment

The West Bengal government's ambitious Deocha Pachami coal block mining project at Mohammad Bazar in Birbhum district has run into hurdles over land acquisition and other issues. On February 20, nine people, including economist-activist Prasenjit Bose, were arrested at a rally to protest against the proposed project, being undertaken by the West Bengal Power Development Corporation. Bail has been rejected, and Bose and others have been sent to judicial custody till March 1 when they will be produced in court again. On Monday, February 21, Chief Minister Mamata Banerjee announced a sweetened relief and rehabilitation package, and said there will be no forcible acquisition of land for the project, which was awarded to the State by the Centre in 2018.

#### What is the project?

The State government is planning to start mining at the Deocha Pachami coal block, considered to be the largest coal block in the country with reserves of around 1,198 million tonnes of coal and 1,400 million cubic metres of basalt, spread over an area of 12.31 sq. km, which is around 3,400 acres. There are around 12 villages in the project area with a population of over 21,000, comprising Scheduled Castes and Scheduled Tribes.

However, the ₹35,000 crore Bengal government project is facing protests over land acquisition. The government owns 1,000 acres, of which 300 acres is forest land, but needs to acquire the rest to begin coal mining.

#### Why are locals upset?

Villagers represented by the Birbhum Jomi Jeeban Jeevika O Prakriti Bachao Mahasabha (Birbhum Save Land and Environment Protection Organisation) have been organising protests and rallies against the project, with activists claiming that there is a "misleading propaganda" that locals are willing to "give land voluntarily". Locals, mostly Santhal tribals, have close affinity with the land, with forests and waterways, and rely on it for their needs. Activists said that instead of engaging with the people on their grievances about the coal mining project, they, together with the tribals, were being harassed and had been arrested under false and serious charges. Various other organisations have leant their voice to the protests and spoken out against alleged police atrocities, including the Samyukt Kisan Morcha (which had led the year-long farmers' stir on the borders of

Delhi), the Jawaharlal Nehru University Students' Union, Bangla Sanskriti Mancha and the Teachers Against the Climate Crisis. Experts, environmentalists and activists have raised a host of issues concerning the project and the pitfalls of going ahead with plans for open cast mining of coal at a time when there are calls to cut back on fossil fuel to tackle global warming. Also, the project details have not yet been made public; and the environment clearance is awaited.

### **What is the compensation package?**

Chief Minister Mamata Banerjee insists that the State needs the mining project, saying it will create about one lakh jobs. The State government revised the relief and rehabilitation project, which will cost the exchequer ₹10,000 crore, to give land losers a better deal. The Chief Minister claimed that of 4,300 families who will be affected by the project, about 1,600 families have decided to hand over their land willingly.

Under the revised relief & rehabilitation (R&R) package for Deocha Pachami coal block, a person having land in the area will get double the market value along with 100% solatium as land cost (i.e. around ₹13 lakh per bigha). "Built-up area of the individual houses to be provided to all families (along with separate houses for all adult members of the family) has been increased from 600 sq ft to 700 sq ft. Compensation in lieu of built-up houses (for those who will opt for money) has been increased from ₹5 lakh per family to ₹7 lakh," according to the government. While the original R&R package provided for one job for one member of every family at the junior police constable level, in the revised package, those with higher qualifications will be provided with a higher grade posting in the police or an equivalent posting in other departments. A total of 5,100 people will get jobs, the government said.

Along with this, long-term residents of the area who are not landowners will be provided with land patta and a compensation package, the Chief Minister announced. "The government will develop this project and no land will be given to private players. There are some mine owners who are trying to spread misinformation among people. Despite this, if anyone does not want to give land we will not force and will develop the project excluding that portion," Ms. Banerjee said.

### **Are the protests similar to Singur and Nandigram?**

When Ms. Banerjee was in the Opposition, she spearheaded a massive protest at Singur against forced land acquisition that led the Tatas to exit the State with the Nano small car project. In 2007, land acquisition for a proposed chemical hub during Left rule also turned violent. The protests at Deocha Pachami comes at a time when the Trinamool Congress government, in its third term, has been trying to shed its anti-industry image and bring back jobs to the State and stop large-scale migration of youngsters to other States.

**Source: The Hindu**

## **2. Reading new climate report**

### **Relevant for GS Prelims & Mains Paper III; Environment**

The latest report of the Intergovernmental Panel on Climate Change (IPCC), released on Monday, has warned of multiple climate change-induced disasters in the next two decades even if strong action is taken to reduce the emissions of greenhouse gas emissions. It has said the ability of human beings, and natural systems, to cope with the changing climate was already being tested, and further rise in global warming would make it even more difficult to adapt.

Noting that over 3.5 billion people, over 45% of the global population, were living in areas highly vulnerable to climate change, the report identifies India as one of the vulnerable hotspots, with several regions and important cities facing very high risk of climate disasters such as flooding, sea-level rise and heat-waves.

### **The IPCC reports**

The latest warnings have come in the second part of IPCC's Sixth Assessment Report which talks about climate change impacts, risks and vulnerabilities, and adaptation options. The first part report was released in August last year. That one was centred around the scientific basis of climate change. The third and final part of the report, which will look into the possibilities of reducing emissions, is expected to come out in April.

The Assessment Reports, the first of which had come out in 1990, are the most comprehensive evaluations of the state of the earth's climate. Hundreds of experts go through every available piece of relevant, published scientific information to prepare a common understanding of the changing climate. The four subsequent assessment reports, each thousands of pages long, came out in 1995, 2001, 2007 and 2015. These have formed the basis of the global response to climate change.

### What is new

The Sixth Assessment Report does not say anything remarkably new. Over the years, each assessment report has built on the work of the previous ones, adding more evidence, information and data, so that most of the conclusions about climate change and its impacts have far greater clarity, certainty and wealth of new evidence now, than earlier.

But that does not mean this is only a reiteration of previous statements. Each of these reports have also progressively expanded the scope of their assessment, and introduced fresh information about different aspects of climate change.

The latest report has, for the first time, made an assessment of regional and sectoral impacts of climate change. It has included risks to, and vulnerabilities of, mega-cities around the world. For example, it has said Mumbai is at high risk of sea-level rise and flooding, while Ahmedabad faces serious danger of heat-waves. Such granular information was not available in previous assessment reports. Flooding in Mumbai and heat-waves in Ahmedabad are common occurrences. What this report has done is to look at granular data affecting these events, and quantified these risks, so that there is a much clearer understanding of the threats posed to these cities.

Also for the first time, the IPCC report has looked at the health impacts of climate change. It has found that climate change is increasing vector-borne and water-borne diseases such as malaria or dengue, particularly in sub-tropical regions of Asia. It has also said deaths related to circulatory, respiratory, diabetic and infectious diseases, as well as infant mortality, are likely to increase with a rise in temperature. Increasing frequency of extreme weather events like heatwaves, flooding and drought, and even air pollution was contributing to under-nutrition, allergic diseases and even mental disorders.

### Other findings

The report has said the impacts of climate change were far greater, more frequent and vastly more disruptive than previously understood.

"Based on increased observations and a better understanding of processes, we now know that the extent and magnitude of climate change impacts on nature are greater than previously assessed. The impacts we see today are appearing much faster, they are more disruptive and more widespread than we expected 20 years ago," it has said.

The report has said that while strong actions to reduce greenhouse gas emissions in the near term, in the next 20 years, would substantially reduce the threats, and the projected damages, they would not eliminate them all. If the temperature rise crossed the threshold of 1.5°C from pre-industrial times, then many changes could be irreversible.

The need to take adaptation measures is therefore very important, the report has stressed. It has recognised progress being made to adapt to the new situation, but pointed out that, in most places, it was nowhere close



to what is required to be done. It has said the gaps in adaptation was a result of lack of funds and political commitment, and also the absence of reliable information and a sense of urgency.

It has pointed out that there were “feasible and effective” adaptation options which could reduce the risks to people and nature. But the effectiveness of these options decreases sharply with further increases in temperature.

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“Adaptation is essential to reduce harm, but if it is to be effective, it must go hand in hand with ambitious reductions in greenhouse gas emissions because with increased warming, the effectiveness of many adaptation options declines,” the report has said.

#### **What now**

IPCC reports form the scientific basis on which countries across the world build their policy responses to climate change. These reports, on their own, are not policy prescriptive: They do not tell countries or governments what to do. They are only meant to present factual situations with as much scientific evidence as is possible.

And yet, these can be of immense help in formulating the action plans to deal with climate change. The detailed nature of this latest report, with respect to regional and sectoral impacts, presents actionable intelligence, particularly for countries that lack the resources or the capacity to make their own impact assessments. The fact that these findings are the product of the combined understanding of the largest group of experts on climate science lends it a credibility greater than any individual study.

These reports also form the basis for international climate change negotiations that decide on the responses at the global level. It is these negotiations that have produced the Paris Agreement, and previously the Kyoto Protocol. The Paris Agreement, negotiated on the basis of the Fifth Assessment Report, seeks to keep the rise in global temperatures “well below” 2°C from pre-industrial times, while “pursuing efforts” to limit it to 1.5°C. The Sixth Assessment Report, however, has presented lots of evidence to suggest that pursuing a 2°C target could be disastrous, and more ambitious actions need to be taken to keep the temperature rise within 1.5°C.

**Source: The Indian Express**

### **3. IPCC sounds another climate warning**

#### **Relevant for GS Prelims & Mains Paper III; Environment**

On February 27, the Intergovernmental Panel on Climate Change (IPCC) issued a major report that reviewed the scientific evidence on natural, ecological, social and economic spheres, concluding that climate change has already produced irreversible losses and damage to land, coastal and marine ecosystems.

This new report, which assesses the prospects for the planet if global average surface temperature exceeds 1.5°C from the pre-industrial era, warns of severe consequences to food supply, human health, biodiversity loss and integrity of the natural environment, if carbon emissions from human activity are not sharply reduced, and governments lack the political will to review their policies.

#### **What are the key features of the report?**

Using the time-frames of near-term, mid-term and long-term effects of climate change caused by average temperature exceeding 1.5°C, Working Group II proposes urgent actions that the world’s leaders must take. The WG II report titled “Impacts, Adaptation and Vulnerability” is among three specialist publications that contribute to the overall Assessment Report 6 of the IPCC due in September 2022. One report was published last year.

The scientific assessment is that between 3.3 and 3.6 billion people “live in contexts that are highly vulnerable to climate change.”

This includes people living along coastlines that are threatened by rising sea levels and extreme weather events such as cyclones and floods. Clearly, India has several populous coastal cities, including Mumbai and Chennai, which play an important role in manufacturing, exports and services, and the IPCC’s assessment points to the need for a policy review to help them adapt.

The IPCC’s conclusions are classified as having ‘very high confidence’ to ‘low confidence’ based on the strength of the evidence. One area where the data inspires ‘high confidence’ is human pressures on habitat. “Globally, and even within protected areas, unsustainable use of natural resources, habitat fragmentation, and ecosystem damage by pollutants increase ecosystem vulnerability to climate change,” it says. Taken as a whole, less than 15% of the world’s land, 21% of the freshwater and 8% of the ocean are protected.

### **What are the threats?**

Food production as a fundamental determinant of human well-being and progress faces a climate threat. On this, the scientists contrast agricultural development contributing to food security with “unsustainable agricultural expansion, driven in part by unbalanced diets” as a stressor that increases ecosystem and human vulnerability, leading to competition for land and water.

The prognosis for a 2°C (or worse) warmer world is severe and the report says that with higher global warming level in the mid-term (from 2041-60), food security risks due to climate change “will be more severe, leading to malnutrition and micronutrient deficiencies, concentrated in Sub-Saharan Africa, South Asia, Central and South America and Small Islands.”

There are adaptation options, however, which should form part of inclusive policy. These include raising food output through cultivar improvements, agroforestry, community-based adaptation, farm and landscape diversification, and urban agriculture.

Applying the principles of agroecology (a holistic approach using ecological and social concepts for sustainable agriculture), ecosystem-based management in fisheries and aquaculture, and use of natural processes can improve food security, nutrition, health, livelihoods, biodiversity, sustainability and ecosystem services, the IPCC report argues.

In the current situation, between 3% and 14% of all species on earth face a very high risk of extinction at even 1.5°C, with devastating losses at higher temperatures. This too will have an impact through ecological catastrophes.

### **Are there any policy prescriptions?**

Sounding a warning, the report says that between 2010-2020, human mortality from floods, droughts and storms was 15 times higher in highly vulnerable regions, compared to regions with very low vulnerability. South Asia is a hotspot, as it has among the largest absolute numbers of people displaced by extreme weather, along with South East Asia and East Asia, followed by sub-Saharan Africa.

There are pointers for India. Heavy rainfall has increased in most of the Indian subcontinent, and Chennai, along with Chittagong, Dhaka and Mumbai, as well as the Gangetic Plain and the Delhi - Lahore corridor are seen as future migration hotspots.

Some possible remedial measures are Heat Health Action Plans that include early warning and response systems for extreme heat. Water-borne and food-borne disease threats in populous settings can be met by improving access to potable water, reducing exposure of water and sanitation systems to flooding and extreme weather events, as well as improved early warning systems.

The IPCC calls for mainstreaming of adaptation actions into institutional budget and policy planning, creating statutory processes, monitoring and evaluation frameworks and recovery measures during disasters. Moreover, introducing “behavioural incentives and economic instruments that address market failures, such as climate risk disclosure, inclusive and deliberative processes strengthen adaptation actions by public and private actors,” it says.

#### **What options exist for climate resilient development?**

In the IPCC’s assessment, the window of opportunity to keep the rise in temperature to below 1.5°C is narrowing. There already exists a consensus that under existing pledges by governments who signed the Paris Agreement, this goal is impossible, and the average temperature could rise as high as 3°C, with catastrophic consequences.

Climate Resilient Development is the answer, and it would align all pathways towards sharp cuts in greenhouse gas emissions, institution of measures to absorb much of the stock of CO<sub>2</sub> in the atmosphere, and raise sufficient climate finance for adaptation.

Here, the IPCC says the global trend of urbanisation offers an immediate, critical opportunity to advance climate resilient development. Coastal cities and settlements play an especially important role.

What cannot work, however, is energy-intensive and market-led urbanisation. Neither would weak and misaligned finance, as well as a misplaced focus on grey infrastructure, rather than ecological and social approaches. Wrong policies in areas such as housing could, in fact, lock in maladaptation, particularly affecting poor communities. Poor land use policies, siloed approaches to health, ecological and social planning also affect resilient development. The rest of the current decade is crucial in steering the world towards a low carbon pathway, the report adds.

**Source: The Hindu**

### **4. The complexities of introducing African cheetahs to India**

#### **Relevant for GS Prelims & Mains Paper III; Environment**

The cheetah, which became extinct in India after Independence, is all set to return with the Union Government launching an action plan. According to the plan, about 50 of these big cats will be introduced in the next five years, from the Africa savannas, home to cheetahs, an endangered species.

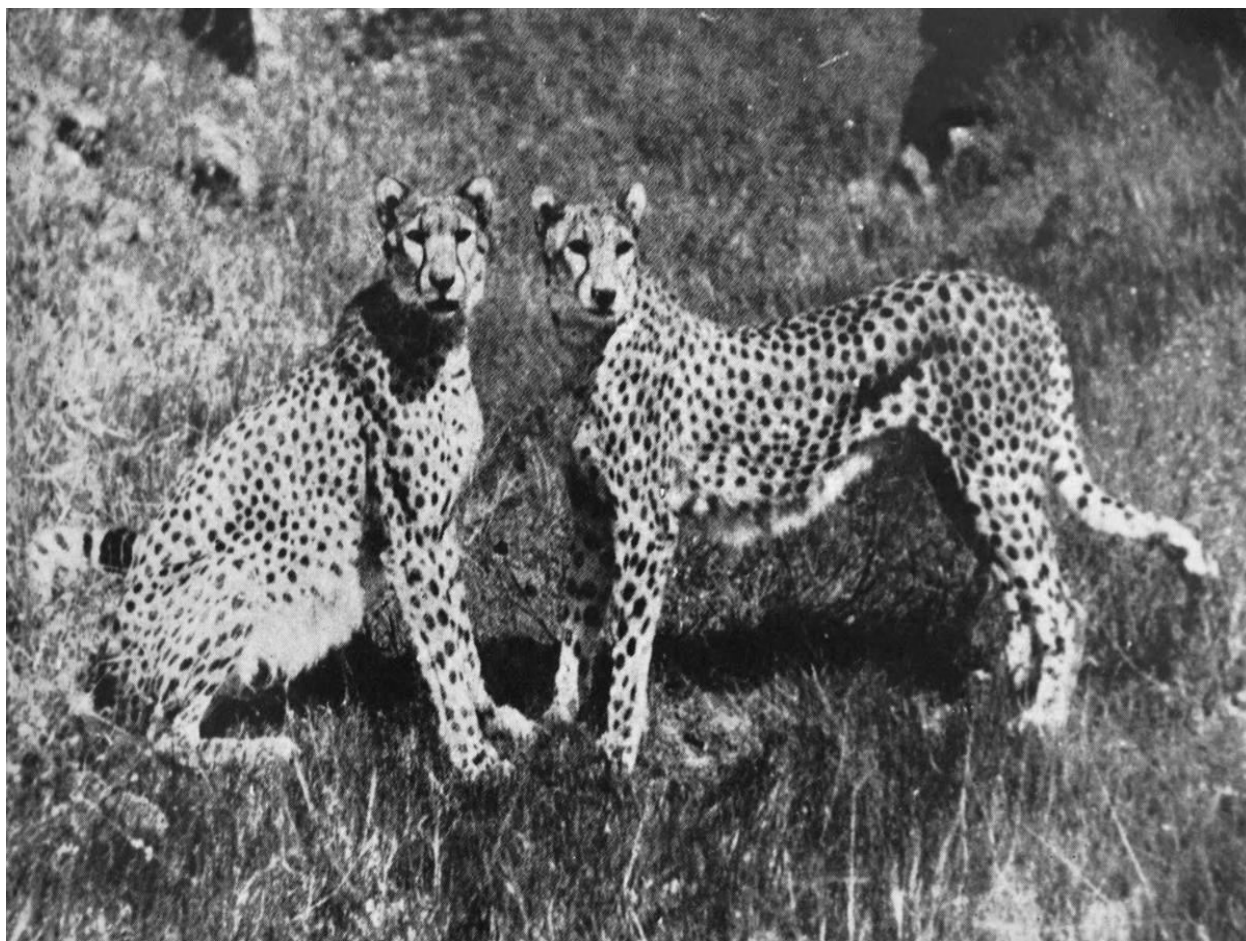
#### **What was the distribution of cheetahs in India? What were the habitats?**

Historically, Asiatic cheetahs had a very wide distribution in India. The distribution range of the cheetah was wide and spread all over the subcontinent. They occurred in substantial numbers.

The cheetah’s habitat was also diverse, favouring the more open habitats: scrub forests, dry grasslands, savannas and other arid and semi-arid open habitats.

In Iran, the last surviving population of wild Asiatic cheetahs are found in wide range of habitats. The current estimate of the population of wild Asiatic cheetahs is about 40 with 12 identified adult animals. They occur in very low density spread over vast areas extending to thousands of square kilometres.





*A pair of captive Indian Cheetahs belonging to The Maharajah of Kolhapur, who together with the Maharajas of Jaipur, Baroda and Bhavnagar, kept these animals for sport. | Photo Credit: B. Seshadri.*

### **What caused the extinction of cheetahs in India? When did they disappear?**

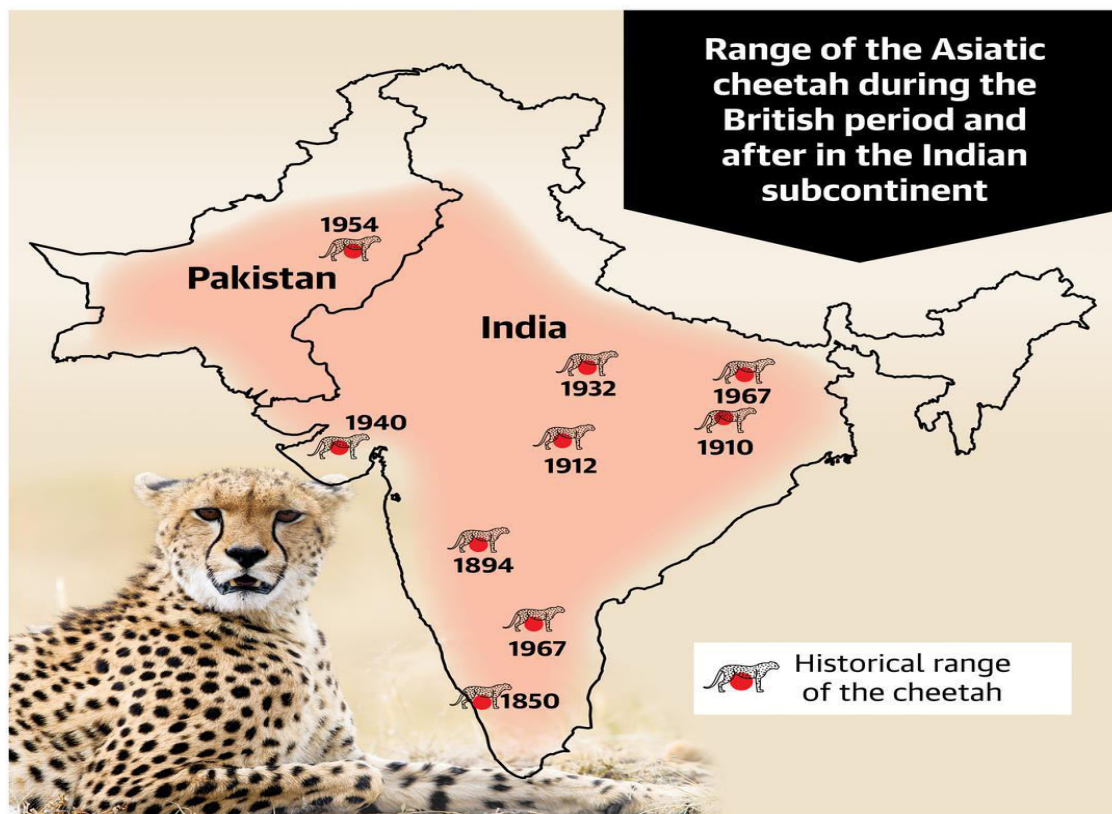
The cheetah in India has been recorded in history from before the Common Era. It was taken from the wild for coursing blackbuck for centuries, which is a major contributor to the depletion of its numbers through the ages. Records of cheetahs being captured go back to 1550s. From the 16th century onwards, detailed accounts of its interaction with human beings are available as it was recorded by the Mughals and other kingdoms in the Deccan. However, the final phase of its extinction coincided with British colonial rule. The British added to the woes of the species by declaring a bounty for killing it in 1871.

The consistent and widespread capture of cheetahs from the wild (both male and female) over centuries, its reduced levels of genetic heterogeneity due to a historical genetic bottleneck resulting in reduced fecundity and high infant mortality in the wild, its inability to breed in captivity, 'sport' hunting and finally the bounty killings are the major reasons for the extinction of the Asiatic cheetah in India.

It is reported that the Mughal Emperor Akbar had kept 1,000 cheetahs in his menagerie and collected as many as 9,000 cats during his half century reign from 1556 to 1605. As late as 1799, Tipu Sultan of Mysore is reported to have had 16 cheetahs as part of his menagerie.

The cheetah numbers were fast depleting by the end of the 18th century even though their prey base and habitat survived till much later. It is recorded that the last cheetahs were shot in India in 1947, but there are credible reports of sightings of the cat till about 1967.





Graphic and map adapted from Divyabhanusinh and Raza Kazmi (2019): Asiatic Cheetah *Acinonyx jubatus venaticus* in India: A Chronology of Extinction and related reports. *J. Bombay Nat. Hist. Soc.* Vol. 116. doi: 10.17087/jbnhs/2019/v116/141806

### What are the conservation objectives of introducing African cheetahs in India? Is it a priority for India? Is it cost effective?

Based on the available evidence it is difficult to conclude that the decision to introduce the African cheetah in India is based on science. Science is being used as a legitimising tool for what seems to be a politically influenced conservation goal. This also in turn sidelines conservation priorities, an order of the Supreme Court, socio-economic constraints and academic rigour. The issue calls for an open and informed debate.

Eminent biologist and administrator T.N. Khoshoo, first secretary of the Department of Environment, spoke out strongly against the cheetah project in 1995. "The reintroduction project was discussed threadbare during Indira Gandhi's tenure and found to be an exercise in futility," he said, pointing out that it was more important to conserve species that were still extant such as the lion and tiger, rather than trying to re-establish an extinct species that had little chance of surviving in a greatly transformed country.

Mr. Khoshoo's views are in sync with the 2013 order of the Supreme Court which quashed plans to introduce African cheetahs in India and more specifically at Kuno national park in Madhya Pradesh.

The officially stated goal is: Establish viable cheetah metapopulation in India that allows the cheetah to perform its functional role as a top predator and to provide space for the expansion of the cheetah within its historical range thereby contributing to its global conservation efforts.

African cheetahs are not required to perform the role of the top predator in these habitats when the site (Kuno) that they have identified already has a resident population of leopards, transient tigers and is also the site for the translocation of Asiatic lions as ordered by the Supreme Court of India in 2013. In other open dry habitats in India there are species performing this role, e.g., wolf and caracal, both of which are highly endangered and need urgent conservation attention. Even the Government's official estimate is expecting, at best only a few dozen cheetahs at a couple of sites (that too only after 15 years) which will require continuous and intensive management. Such a small number of cats at very few sites cannot meet the stated goal of performing its ecological function at any significant scale to have real on ground impact. Clearly, there are far more cost-effective, efficient, speedier and more inclusive ways to conserve grasslands and other open ecosystems of India.

Apart from establishing a cheetah population in India, the stated objectives include: To use the cheetah as a charismatic flagship and umbrella species to garner resources for restoring open forest and savanna systems that will benefit biodiversity and ecosystem services from these ecosystems.

Asiatic lions and a variety of species already found in these ecosystems can very well perform this role and more. If the government is serious about restoration and protection of these habitats, it first needs to remove grasslands from the category of wastelands and prevent further degradation, fragmentation and destruction of these habitats. Investing directly in science-based restoration and inclusive protection of these ecosystems will yield results much more quickly and sustainably than the introduction of African cheetahs.

Another goal is to enhance India's capacity to sequester carbon through ecosystem restoration activities in cheetah conservation areas and thereby contribute towards the global climate change mitigation goals. Experts contend that this objective does not require the introduction of African cheetahs, at a cost of ₹40 crore, with the attendant risks of diseases which haven't really been dealt with.



*Photograph of a group of three cheetahs with handlers at Baroda, Gujarat from the Curzon Collection, taken by an unknown photographer during the 1890s. | Photo Credit: British Library Online Gallery*

### What is the current status of this project? What are the chances of it succeeding?

According to the Government, Kuno is ready to receive the cheetahs. About a month ago a team of government officials visited Namibia to inspect the cheetahs that would be sent to India, review the arrangements and to reach an agreement for the transfer of the cats. It is being reported that Namibia wants India's support for lifting the CITES ban on commercial trade of wildlife products, including ivory. The draft memorandum of understanding shared by Namibia reportedly contains a condition requiring India to support Namibia for "sustainable utilisation of wildlife". Negotiations are currently underway to finalise the MoU and it is expected to be signed by the end of March.

The cheetahs are to be provided by the Cheetah Conservation Fund, an NGO, and not the Namibian government. Three to five cheetahs are expected to be part of the first group of cats and these are expected to arrive as early as May 2022 and released in the wild by August 15.

Given all the challenges, especially the lack of extensive areas extending in hundreds if not thousands of square kilometres with sufficient density of suitable prey, it is very unlikely that African cheetahs would ever establish themselves in India as a truly wild and self-perpetuating population. A likely unfortunate consequence of this initiative will be the diversion of scarce conservation resources, distraction from the real conservation priorities and a further delay in the translocation of lions to Kuno.

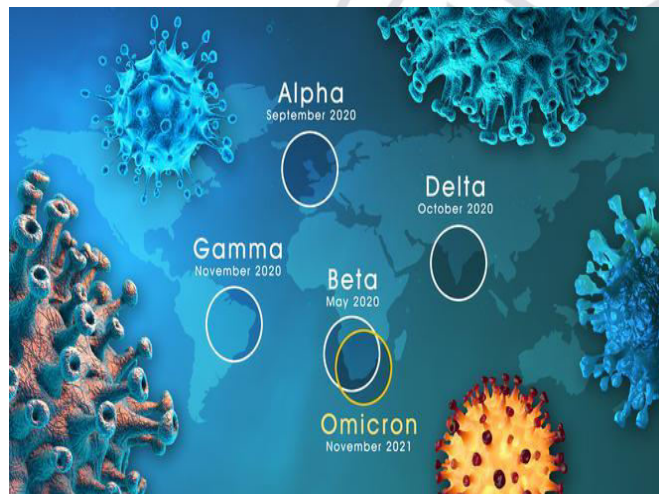
- The cheetah, which became extinct in India after Independence, is all set to return with the Union Government launching an action plan.
- The consistent and widespread capture of cheetahs from the wild over centuries, its reduced levels of genetic heterogeneity due to a historical genetic bottleneck resulting in reduced fecundity and high infant mortality in the wild, its inability to breed in captivity, 'sport' hunting and finally the bounty killings are the major reasons for the extinction of the Asiatic cheetah in India.
- A likely unfortunate consequence of this initiative will be the diversion of scarce conservation resources, distraction from the real conservation priorities and a further delay in the translocation of lions to Kuno.

Source: The Hindu

## Science and Technology

### 1. Variants do not always evolve to become less virulent

Relevant for GS prelims & Mains Paper III; Science & Technology





In early February, World Health Organization technical lead on Covid-19, Dr Maria Van Kerkhove, cautioned that the pandemic is far from over and new variants will emerge and such variants could be more transmissible than the Omicron BA.2 variant. "The next variant of concern will be more fit, and what we mean by that is it will be more transmissible because it will have to overtake what is currently circulating. The big question is whether or not future variants will be more or less severe," Dr Van Kerkhove said.

### **Evading antibodies**

The only way the next variant can become even more transmissible than the Omicron variant is by exhibiting a far higher ability to evade neutralising antibodies. This would mean that full vaccinations (two doses) will be even less effective in preventing breakthrough infections. But so far, fully vaccinated people have been found to be less likely to suffer from severe disease requiring hospitalisation and even death.

### **Virulence unpredictable**

While the next variant has to necessarily be more infectious than the Omicron variant, whether the variant will be more or less severe cannot be said with certainty. But it is important to remember that right from the very early stage of the pandemic, it became clear that transmission or virus spread begins even before symptoms can show up. That is what makes SARS-CoV-2 very different from the 2002 SARS virus and MERS virus. Since transmission begins even before symptoms set in and well before the disease becomes severe, the transmission characteristic is decoupled from disease. As a result, the natural evolution process selects variants not based on how they cause disease but how they can escape neutralising antibodies.

### **Immune escape**

The virus was novel and none in the world had any immunity in the beginning of the pandemic. But with millions being infected by the virus and millions being fully vaccinated, and some with a combination of natural infection and vaccination, the next variant has to necessarily exhibit higher immune escape to cause infection. This is the reason that the next variant will exhibit more immune escape than the Omicron variant.

Even though the Omicron variant caused a large number of infections in virus-naïve people and in those who have been previously infected and vaccinated, at the population level, disease severity has been far less severe compared with the Delta variant. But lower disease severity was seen more in people who have pre-existing immunity either from vaccination or previous infection.

Two studies that tried to document the intrinsic disease severity of the Omicron variant compared it with the Delta variant. The studies found that the Omicron variant is about 75% as likely to cause severe disease or death as the delta variant. In a study posted as a preprint in medRxiv on January 12, this year, the authors conclude: "In the Omicron-driven wave, severe COVID-19 outcomes were reduced mostly due to protection conferred by prior infection and/or vaccination, but intrinsically reduced virulence may account for an approximately 25% reduced risk of severe hospitalization or death compared to Delta."

### **Intrinsic severity**

In the second study, a report by the Imperial College COVID-19 response team found 69% reduction in hospitalisation risk in people who have been reinfected compared with primary cases.

**Source: The Hindu**

## **2. The role Fusobacterium plays in oral cancer patients in India**

### **Relevant for GS Prelims & Mains Paper III; Science & Technology**

Since the beginning of the 20th Century, it is known that infections could play a role in cancer, with 18-20% of cancers associated with infectious agents. This could be relatively higher in developing countries like India.

### **Human papillomavirus infection detection**

Website: [www.prepmate.in](http://www.prepmate.in)

Prepmate Cengage Books Preview: <https://prepmate.in/books/>

Telegram Channel: [@upscprepmate](https://t.me/upscprepmate)

Youtube channel: [PrepMateEdutech](https://www.youtube.com/channel/UCPrepMate)



Our team at ACTREC-Tata Memorial Centre developed a highly sensitive and specific automated computational tool HPVDetector to quantify the presence of human papillomavirus (HPV). This was done by subtracting human sequences from the cancer genome and comparing the rest with the HPV genome to identify the presence of HPV sequence trace and determine the range of all co-infecting HPV strains in the same individual.

The analysis revealed significant occurrence of HPV 16, 18, and 31, among others, in cervical cancer. But a surprising finding was that Indian patients with oral tumours showing a distinct tobacco usage gene signature were devoid of HPV infection. This was in sharp contrast to the oral tumours among Caucasian patients, wherein tobacco genetic signature is not common but is marked by a significant presence of HPV. Several groups have corroborated this finding, and it is well established that oral tumours among Indian patients are not driven by HPV infection.

In this study published on Mar 4, in NAR Cancer, Sanket Desai, the lead researcher from the group, developed another advanced automated computational tool — Infectious Pathogen Detector (IPD). Beyond HPV, IPD can detect the presence of 1,058 pathogens in the human cancer genome from datasets generated from any Next Generation Sequencing platform. This tool is publicly available for download from the ACTREC- TMC website. Using IPD, the DNA and RNA sequence from 1,407 cancer samples of oral, breast, cervical, gall bladder, lung and colorectal tumours derived from Indians were analysed and compared with Caucasian patients.

### Map of microbes

This has led to establishing the most detailed map of the abundance of 1,058 microbes present across Indian cancer patients. Rigorous statistical measures were adopted to distinguish the commensal microbes present as normal flora in a healthy individual compared with the diseased state. Systematic analysis of the data helped the group identify the presence of a bacteria, *Fusobacterium nucleatum*, in the oral tumours at a significantly higher burden than in the oral cavity of healthy individuals.

Interestingly, *Fusobacterium nucleatum* is known to play a vital role in colorectal cancer, wherein its presence affects the spread of the disease and the patient's response to chemotherapy. However, a similar role of *Fusobacterium* in oral cancer was not known earlier. The presence of the bacteria was found in Indian and Caucasian oral cancer patients, with a much higher incidence among the Indian patients. Moreover, oral cancer patients positive for *Fusobacterium* were found to be negative for HPV infection, suggesting they are present in a mutually exclusive way.

The finding underlines that while oral tumours in the West are more likely to be driven by HPV infection with a lower abundance of *Fusobacterium* infection, the oral cancer incidences in India are caused more by *Fusobacterium* infection. The tumours in oral cancer patients infected with the bacterium were found to spread to lymph nodes in the head and neck region or other distant organs. This sub-class of the tumour was also found to have higher levels of genes responsible for inflammation and pro-cancer immunological response.

Consistent with this finding, infection with virus or bacteria causing chronic inflammation leading to cancer has been known across multiple cancer types, such as HPV in cervical cancer, HBV and HCV in liver cancer, *H. pylori* in gastric cancer, etc. This study also identified three novel small non-coding miRNA molecules among tumours infected with the bacteria. The discovery of these miRNAs allows the investigators to understand the biological pathway targeted by the *Fusobacteria*, when it infects the oral cells, and its detailed characterisation. The study continues in collaboration with IIT Bombay, where the researchers grow the oral cancer cells in the presence and absence of the bacterium.

Preventing cancer through immunisation against infectious agents such as HPV vaccination has been known to be effective in up to 90% of HPV-related cancers. Similarly, a significant reduction was observed in the incidence of gastric cancer across multiple studies when the patients infected with the bacteria, *Helicobacterium pylori*, were treated with antibiotics specific to the bacterium. The findings from the study carried out at ACTREC- Tata Memorial Centre opens an opportunity to treat oral cancer patients positive for *Fusobacterium*, occurring predominantly among Indian patients, with a *Fusobacterium*-specific antibiotic for

selectively targeting the tumours. The study emphasises the impact of Fusobacterium infection on modulating conventional chemotherapy treatment or recurrence of the disease as frequently observed in oral cancer patients, similar to its role in colorectal cancer. The utility of community screening for the presence of Fusobacterium in the oral cavity in a population or among habitual tobacco chewers remains to be explored — though it could be a worthy exercise considering the alarming increase in tobacco-associated oral cancer in India.

**Source: The Hindu**

### **3. UPI123Pay: Payment solution for feature phone users**

#### **Relevant for GS Prelims & Mains Paper III; Science & Technology**

On March 8, the Reserve Bank of India launched a new Unified Payments Interface (UPI) payments solution for feature phone users dubbed 'UPI123Pay'. UPI, which was introduced in 2016, has become one of the most used digital payments platforms in the country. The volume of UPI transactions has already reached ₹76 lakh crore in the current year, compared to ₹41 lakh crore in FY21, RBI Governor Shaktikanta Das said. However, at present, efficient access to UPI is available largely via smartphones, the Central bank noted.

#### **How does the new solution work?**

The new UPI-based service is designed to bring the digital payments platform closer to a significant number of feature phone mobile subscribers in the country, which is estimated to be more than 40 crore. UPI123Pay will materially improve the options for such users to access UPI, who could earlier access the digital transactions platform through the USSD-based process, using the short code of \*99#, which according to RBI is not popular. The USSD-based process is considered cumbersome, with users required to send multiple messages and charged for the same, and not supported by all mobile service providers.

With the UPI123Pay, feature phone users will be required to go through an onboarding process where they have to link their bank account to their feature phone and then set a UPI PIN using their debit card for authenticating transactions. Once they have completed this initial process, users will be able to use the new UPI facility for person-to-person as well as merchant transactions, among others, through one of the four distinct payment options that don't require an internet connection.

#### **How will users make payments without internet?**

The new UPI payments system offers users four options to make payments without internet connectivity: Interactive Voice Response (IVR), app-based functionality, missed call facility and proximity sound-based payments. Using the IVR option, users would be required to initiate a secured call from their feature phones to a predetermined IVR number and complete UPI on-boarding formalities to be able to start making financial transactions like money transfer, mobile recharge, EMI repayment, balance check, among others.

The missed call facility will allow users to access their bank account and perform routine transactions such as receiving, transferring funds, regular purchases, bill payments, etc., by giving a missed call on the number displayed at the merchant outlet. The customer will receive an incoming call to authenticate the transaction by entering UPI PIN.

They could also install an app on their feature phone through which several UPI functions, available on smartphones, will be available on their feature phone, except scan and pay feature which is currently not available.

Finally, they could utilise the proximity sound-based payments option, which uses sound waves to enable contactless, offline, and proximity data communication on any device.

#### **Do other countries have something similar?**

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Mobile payment systems that do not rely on internet connectivity like the ones based on USSD or SMS technology were introduced many years ago and are still being used in some developing countries.

In fact, one of the major mobile payment systems globally was introduced by Vodafone's Kenyan associate, Safaricom in 2007. M-PESA, which is Africa's leading mobile money service, operates across the Democratic Republic of Congo, Egypt, Ghana, Kenya, Lesotho, Mozambique and Tanzania, with 51 million customers making over \$314 billion in transactions per year through the service, according to Vodafone.

**Source: The Hindu**

#### **4. What do we know about the newest crater on the moon?**

##### **Relevant for GS Prelims & Mains Paper III; Science & Technology**

A leftover piece of a spacecraft flying through space reportedly hit the surface of the moon last Friday, creating a new crater that may be around 65 feet wide. The piece of space junk was earlier believed to be a SpaceX rocket, but was later said to be the third-stage booster of Chang'e 5-T1 – a lunar mission launched by the China National Space Administration in 2014. China, however, denied responsibility, saying that the booster in question had "safely entered the earth's atmosphere and was completely incinerated", news agency AFP reported. According to orbital calculations, the collision took place on March 4 at 5.55 p.m. IST on the far side of the moon. The object reportedly weighs around four tonnes and was racing towards the moon at a speed of 9,300 km an hour. The speed, trajectory, and time of impact were calculated using earth-based telescope observations.

##### **How was the object spotted in space?**

American astronomer Bill Gray was the first to predict the collision. In January 2022, Gray had said that a booster from a SpaceX Falcon 9 rocket was likely to hit the moon after seven years of floating in space. Gray later corrected his prediction, saying that the space junk was part of a Chinese lunar mission and not from SpaceX.

Gray runs Project Pluto, a blog that tracks near-earth objects. Project Pluto also supplies astronomical software to amateur and professional astronomers. Gray is the creator of popular astronomy software called Guide.

The astronomer explained the process of ascertaining the date and time of the collision in a blog post on Project Pluto. He informed that the object was first spotted during an asteroid survey in 2015 and was believed to be a part of the Deep Space Climate Observatory (DSCOVR) satellite that was launched by SpaceX on Falcon 9 rocket on February 11, 2015.

Gray continued to track the object, and after analysing data that came in from nine different observatories in January 2022, he was able to improve the accuracy of the object's trajectory and give a confident prediction of the date and time of the object's collision with the surface of the moon.

The astronomer has also said that this is the first recorded unintentional case of space junk hitting the moon.

##### **Why did Gray change his prediction about the identity of the object?**

According to Gray, an email from Jon Giorgini of NASA's Jet Propulsion Laboratory in California made him retrace the trajectory of DSCOVR, and it was seen that the SpaceX spacecraft did not go close to the moon. "It would be a little strange if the second stage went right past the moon, while DSCOVR was in another part of the sky. There's always some separation, but this was suspiciously large," Gray wrote on his blog. The astronomer then studied the trajectory of the object backwards, and discovered a lunar flyby on October 28, 2014. The Chang'e 5-T1 mission was launched on October 23, 2014, providing evidence that the object was indeed a leftover from the same mission.

A team at the University of Arizona also studied the object and confirmed that it resembles the Chinese rocket and not that of SpaceX.

### **How will the impact be confirmed?**

NASA's Lunar Reconnaissance Orbiter and ISRO's Chandrayaan-2 orbiter are two active lunar missions that are capable of observing the crater and picturing it. The location of the impact – on the far side of the moon – has made it difficult for the crater to be pictured and studied immediately.

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### **Is the crater permanent?**

Both the earth and the moon have been hit by multiple objects like asteroids throughout their existence, but craters on the moon are of a more permanent nature than those on earth. This is because of processes like erosion, tectonics, and volcanism. According to NASA, these three processes keep the surface of the earth crater-free and remove traces of collisions that have happened in the past. Currently, the earth has less than 200 known craters while the moon has thousands.

An absence of atmosphere means there is no wind system and no weather on the moon, and hence no cause for erosion of existing craters. Absence of tectonics prevents the moon's surface from forming new rocks, or causing a shift in the existing surface patterns, unlike that on earth. Lastly, absence of volcanism makes it impossible for craters to be covered.

**Source: The Hindu**

## **5. When a missile misfires**

### **Relevant for GS Prelims & Mains Paper III; Science & Technology**

Pakistan on Thursday said an unarmed Indian missile landed 124 km inside its territory on Wednesday; India on Friday acknowledged "technical malfunction led to the accidental firing of a missile". It is extremely rare for a missile test to go so wrong that it crosses the border and changes track inadvertently.

### **Do India and Pakistan have to inform each other about such tests?**

Yes. Under the pre-notification of flight testing of ballistic missiles agreement signed in 2005, each country must provide the other an advance notification on flight test it intends to take for any land or sea launched, surface-to-surface ballistic missile.

Before the test, the country must issue Notice to Air Missions (NOTAM) or Navigational Warning (NAVAREA) to alert aviation pilots and seafarers, respectively. Also, the testing country must ensure that the launch site is not within 40 km, and the planned impact area is not within 75 km of either the International Boundary (IB) or the Line of Control (LoC). The planned trajectory should not cross the IB or the LoC and must maintain a horizontal distance of at least 40 km from the border.

The testing country must notify the other nation "no less than three days in advance of the commencement of a five day launch window within which it intends to undertake flight tests of any land or sea launched, surface-to-surface ballistic missile". The pre-notification has to be "conveyed through the respective Foreign Offices and the High Commissions, as per the format annexed to this Agreement."

The Director General, Inter-Services Public Relations of Pakistani Armed Forces, Maj General Babar Iftikhar said that there was "no contact" between the Directors General of Military Operation of Indian and Pakistani armies "on this, nothing has come from the India side". But he also mentioned that although the two countries have an agreement for sharing information on tests of ballistic missiles, "but for these kind of missiles we do not share information."

### **What kind of a missile was it?**

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Neither country has spelt this out; Pakistan has only called it a “supersonic” missile.

Some experts have speculated that it was a test of one of India’s top missiles, BrahMos, jointly developed with Russia. Their assessment is based on Ifthikar’s comments that it travelled 200 km, manoeuvred mid-air and travelled at 2.5 times to 3 times the speed of sound at an altitude of 40,000 feet. BrahMos has a top speed of Mach 3, a range of around 290 km, and a cruising altitude of 15 km (around 50,000 feet). BrahMos can be fired from anywhere, is nuclear-capable, and can carry warheads of 200-300 kg.

Other experts have wondered if the missile was a variant of the nuclear-capable Prithvi. Sources said some of the assets of the Strategic Forces command, which is responsible for India’s nuclear arsenal, are based close to the region from where the missile was fired. However, India never tests Prithvi around this region, and only does so from Balasore.

### **What explains the trajectory it took?**

A striking aspect of the episode is that the missile changed direction mid-air. Pakistan said that after picking off from Sirsa, 104 km from the nearest point on the border, the missile cruised for around 70-80 km within Indian territory, moving southwest towards Mahajan Field Firing Range of the Indian armed forces, then suddenly changed direction to northwest, and entered Pakistani territory before hitting the ground 124 km inside.

Retired Air Marshal Anil Chopra, who heads the Centre for Air Power Studies (CAPS) think tank in New Delhi, said there are very few reasons for a missile to change its direction thus. He said the known facts are that “it flew, it took a path, that path was not normal, then it took a different direction, after doing nearly 100 km”.

For a cruise missile, “you have to give target coordinates” when fired from the ground, and “after that she is on her own”, he said. There are also some missiles for which the coordinates can be updated in flight.

“First thing could be that the coordinates are not correct. But in this particular case, the missile has gone in a particular direction, and then turned. If it was wrong coordinates, it should have gone straight there. Because... normally it will only turn in the last stages. So, the type of turn she has taken, that means the coordinates could not have had been wrong,” he said.

Another possibility “is if somebody was to jam the missile while in flight, by some cyber means — I am just conjecturing. Then the whole coordinates get affected, changing the direction.”

He noted that normally, “a missile like that has a destruct fuse, which means from the ground you should be able to destroy it in flight if you think it has gone haywire. We do not know: was it loss of contact altogether, that you could not activate self-destruct?”

What can also cause a malfunction is “if the target data that has been fed into the missile gets corrupted, then takes a different direction all together.”. Had the missile crashed, “then we know some controls had failed... She had flown straight, then turned, then flown straight. She has not done any funny manoeuvres. Considering that, if she has not done any fancy manoeuvres, has sometime during flight the destination got corrupted?”

He noted that cyber intervention is in neither country’s interest. “Maybe it’s a one-time failure inside, of one digit, in the coordinates. It’s not in India’s interest to do such a thing, nor in Pakistan’s interest... All that needs to come out. You don’t want a situation between two nuclear countries,” he said.

### **Why did Pakistan not bring it down?**

The Pakistani military said on Thursday that the “high-speed flying object” was picked up inside Indian flying territory by the Air Defence Operations Centre of the Pakistan Air Force. They knew it had taken off from Sirsa, and after its initial course it suddenly manoeuvred towards Pakistani territory and violated Pakistan’s airspace ultimately falling near Mian Channu.

It stated that the Pakistani Air Force initiated requisite tactical actions in accordance with the Standard Operating Procedures, and continuously kept monitoring it and as soon as it turned towards Pakistani territory. But during this time it did not intercept the incoming missile, which was unarmed.

Chopra said that this could be due to capacity, level of alertness, and the speed at which it happened. "When something is coming at such high speeds, it's not so easy by the time you react. On that path is there a missile system? This is not a heightened state of red alert, this is peacetime... Sometimes you can do little, because it is coming so fast."

**Source: The Indian Express**

## **6. What is xenotransplantation, the process of using an animal's organ to keep a human alive?**

### **Relevant for GS Prelims & Mains Paper III; Science & Technology**

A patient whose failing heart had been replaced with the heart of a genetically altered pig in a landmark surgery at the University of Maryland Medical Centre in Baltimore, United States, died on Tuesday (March 8), two months after the operation.

The successful transplantation surgery was announced on January 10, a few days after it was carried out on 57-year-old David Bennett, who was suffering from severe arrhythmia, a life-threatening disorder affecting the rhythm of his heartbeats.

The experimental procedure was done after the US Food and Drug Administration (FDA) granted emergency authorization for it on December 31, 2021. Bennett had been ruled ineligible for a conventional heart transplant or an artificial heart by major transplant centres.

### **Cross-species transplant**

According to the FDA, xenotransplantation is "any procedure that involves the transplantation, implantation or infusion into a human recipient of either (a) live cells, tissues, or organs from a nonhuman animal source, or (b) human body fluids, cells, tissues or organs that have had ex vivo contact with live nonhuman animal cells, tissues or organs".

Xenotransplantation is seen as an alternative to the clinical transplantation of human organs whose demand around the world exceeds supply by a long distance.

Xenotransplantation involving the heart was first tried in humans in the 1980s. A well known case was that of an American baby, Stephanie Fae Beauclair, better known as Baby Fae, who was born with a congenital heart defect, and who received a baboon heart in 1984.

The surgery was successful, but Baby Fae died within a month of the transplant after the baboon heart was rejected by her body's immune system. Even so, Baby Fae managed to survive the xenotransplantation for much longer than in earlier experiments.

Xenotransplantation, if found compatible in the long run, could help provide an alternative supply of organs to those with life-threatening diseases. The pig's heart transplanted into Bennett did well initially, and he showed no signs of rejection for several weeks. Bennett spent time with his family, did physical therapy and watched the Super Bowl, The New York Times reported, quoting hospital officials.

It was not immediately clear if his death ultimately occurred due to rejection of the xenotransplanted heart by his body.

### **Why the heart of a pig?**

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Pig heart valves have been used for replacing damaged valves in humans for over 50 years now. There are several advantages to using the domesticated or farmed pig (*Sus scrofa domestica*) as the donor animal for xenotransplantation.

The pig's anatomical and physiological parameters are similar to that of humans, and the breeding of pigs in farms is widespread and cost-effective. Also, many varieties of pig breeds are farmed, which provides an opportunity for the size of the harvested organs to be matched with the specific needs of the human recipient.

### **Genetically engineered pig**

The molecular incompatibility between pigs and humans can trigger several immune complications after the transplant, which might lead to rejection of the xenograft. To preempt that situation, genetic engineering is used to tweak the genome of the pig so as to 'disguise' it, so that the immune system of the human recipient fails to recognise it, and the reactions that lead to xenograft rejection are not triggered.

In the case of Bennett, the donor pig had been put through 10 genetic modifications intended to 'deactivate' or knock out four pig genes, and add six human genes. A "GalSafe" pig was used, from which a gene that codes for Alpha-gal (a sugar molecule) was removed. Alpha-gal can elicit a devastating immune response in humans, and GalSafe pigs have been well studied, and are approved by the USFDA for use in pharmacology.

The pig was provided by Revivicor, a regenerative medicine company. On the morning of the surgery, the team removed the pig's heart and placed it in a special machine to keep the heart preserved until surgery.

**Source: The Indian Express**

## **7. What causes the interrupted sleep of the elderly?**

### **Relevant for GS Prelims & Mains Paper III; Science & Technology**

A common human wish is to be able to sleep like a baby. Indeed, in adults, the total hours of sleep, and the quality of this sleep declines with age. Older people are especially prone to listless, fragmented sleep. A chronic drop in the quality and quantity of sleep can lead to diminished mental and physical health, and to a reduced lifespan (Mander et al., *Neuron*, 94, 19 (2017)).

Research has provided many clues to what induces sleep in humans. The pineal gland, at night, releases the hormone melatonin which is involved in regulating the sleep-wake cycle. This has made it a popular supplement for overcoming insomnia, although its effectiveness beyond the short term remains debatable.

However, our 'awake' state is much more complex, because nearly the whole brain is involved. This is perhaps why we are perplexed by the often-disrupted sleep of the elderly, where wakefulness repeatedly encroaches upon blissful sleep.

It is known that in older people with sleep disturbances, degeneration of nerve cells is seen in brain centres involved in the coordination of voluntary movements.

### **What does the new study suggest?**

A recent study has added a new dimension to our knowledge (Li et al., *Science*, 375, 2022). The study points to the hypothalamus, which lies in the centre of the brain and is the size and shape of an almond. An area in this part of the brain, the lateral hypothalamus, plays an outsized role in wakefulness, feeding behaviour, learning and sleep. Emanating from here are a bunch of nerve cells that fan out and project their nerve ending to all the parts of the central nervous system that are associated with the state of arousal. The chemical message released by these neurons is in the form of small proteins, called hypocretins and also known as orexins (The two names come from two groups of scientists who independently discovered these neuropeptides in 1998).

Like all neurons, Hcrt/OX neurons have endings called synapses, which may be next to the synapse of another neuron, or next to a muscle cell. Electrical signals pass along the length of neurons until they come to the synapse, where they are fleetingly transformed into chemical signals, which cross over and generate a response in the adjacent neuron. In the language of neuroscience, an excitatory signal will lead to the firing of the next neuron – electrical signals are conducted to a synapse at the other end of that neuron. Inhibitory signals tamp down the firing of an active neuron. Hypocretin tends to be excitatory, stimulating the neurons that it reaches.

Hypocretin stimulates wakefulness, and with it, motivated behaviour such as seeking food or a mate, as well as responsiveness to cold, nausea or pain. Of the 86 billion neurons in the human brain, less than 20,000 produce hypocretin, but their influence is profound. Most of all, hypocretin is important for maintaining prolonged periods of wakefulness. Directly injecting hypocretin into the cerebrospinal fluid (so that it is quickly delivered inside the brain) will keep you wide-awake for several hours. And neurons that produce hypocretin are no longer active when you are asleep.

In experiments, mice deprived of food stay awake and busy for a very long time while they search for food. Mice lacking hypocretin, in which the hypocretin gene has been knocked out, are far less motivated in their hunt.

### **Fractionation of sleep**

What happens to the sleep of the elderly? Li et al. show that with age, changes occur in these hypocretin-producing neurons. They become hyperexcitable, conducting signals and releasing neuropeptides at a very low threshold, at the slightest provocation. The unwanted activation of inactive hypocretin neurons leads to the fractionation of sleep. Changes in aged neurons thus make it more difficult to inhibit their activity.

There is a rare disorder of the nervous system triggered by the loss of Hcrt/OX neurons. Narcolepsy has strange characteristics – an overwhelming desire to sleep in the daytime, even though the total hours of sleep remain unchanged; a tendency to hallucinate as the sleep-wake phases are blurred; frequent loss of muscle tone – cataplexy – during which muscles become flaccid. Only a handful of cases have been documented in India, mostly men in their thirties (Ray, Indian Journal of Medical Research, 148, 748 (2018)). Patients with this condition have vanishingly low amounts of hypocretin in their cerebrospinal fluids.

Finally, can sufferers of fractured sleep dream of ways to bring better constancy to their sleep? In aged mice, the analgesic Flupirtine, although beset with toxicity issues, appears to raise back the threshold at which hypocretin neurons get excited, thus restoring the structure of sleep.

**Source: The Hindu**

## **8. The legal considerations of blockchain gaming in India**

### **Relevant for GS Prelims & Mains Paper III; Science & Technology**

Love cats but can't take up the responsibility of bringing one home? Imagine experiencing the joy of adopting and breeding a cat, except, virtually. What's more, your cat cannot be replicated and can never be taken away from you. Games based on blockchain technology, such as Dapper Labs' CryptoKitties, where each CryptoKittie is a non-fungible token ("NFT"), facilitate just that. Launched in 2017 as the first ever blockchain game, CryptoKitties now has over 1,28,000 current users worldwide.

The vast scope and potential of blockchain technology has attracted the gaming industry over the past few years. With the success that CryptoKitties has garnered, more blockchain games, such as Axie Infinity, have now been introduced. The popularity and success of blockchain games has been such that it has pushed close to 60% of American and UK-based online game developers to start using blockchain technology, according to Business Insider. Even major companies such as Ubisoft and Electronic Arts have expressed their interest in introducing elements of blockchain technology into their games in the near future.



Closer home, several Indian companies have also commenced their foray into blockchain game development. Prominent amongst them are Avisa Ventures and NODWIN Gaming.

To comprehend this dynamic environment, we have published this primer, where we explore the concept of blockchain games, the legal validity of making such games available in India, the various intellectual property protections that game developers and players may avail under Indian law, and whether the current regulatory framework in India is sufficient to protect the interests of game developers and players.

### **But first, what is blockchain?**

Blockchain is a decentralised database that stores information. It relies on technology that allows for the storage of identical copies of this information on multiple computers in a network.

### **What are blockchain games?**

- **NFTs**

NFTs represent in-game virtual assets that can be owned by players, such as maps, armor or land. These NFTs act as asset tags, identifying ownership of the in-game assets, and are stored on the blockchain. Being on the blockchain allows the player to have a secure record of ownership of the in-game assets and also gives the assets the ability to outlive the game itself. Based on the manner in which the games are designed, it also allows for the in-game assets to be transferred from one game to another. It also creates transparency, since ownership records can independently be verified by any third party as well. In doing so, it makes in-game assets marketable and creates a decentralized market, where they can be bought and sold by people.

- **Cryptocurrency**

Cryptocurrency, such as tokens based on the Ethereum blockchain, may be used for the purchase of in-game assets. These in-game purchases usually enable gamers to buy items like extra lives, coins and so on directly from the game.

- **Gaming coins**

Gaming coins, such as Axie Infinity (ACS) and Enjin Coin (ENJ), are in-game cryptocurrency which may be acquired and then used for the purchase of in-game assets. These gaming coins may be purchased from crypto exchanges (and eventually be traded on these crypto exchanges as well) or, in certain cases, be acquired as winnings in games that have adopted the 'play-to-earn' model. In such games, gamers are rewarded for dedicating their time and skill to play the game with gaming coins and in-game assets (and, in certain cases, with cryptocurrency as well).

### **Are blockchain games legal in India?**

To revisit our definition of blockchain games: they are online video games that are developed integrating blockchain technology into them. Since blockchain is merely the underlying technology, there is no express regulation of it in India. This renders any questions over its legality moot. It would, however, be pertinent to explore the legality of the games from the lens of existing Indian gaming regulation.

### **Games of skill vs. games of chance**

Most Indian states regulate gaming on the basis of a distinction in law between 'games of skill' and 'games of chance'. While staking money or property on the outcome of a 'game of chance' is prohibited and subjects the guilty parties to criminal sanctions, placing any stakes on the outcome of a 'game of skill' is not illegal per se and may be permissible. As per two seminal judgments of the Supreme Court on this aspect, the Supreme Court recognized that no game is purely a 'game of skill' and almost all games have an element of chance.

As such, a 'dominant element' test is to be utilized to determine whether chance or skill is the dominating element in determining the result of the game. This 'dominant element' may be determined by examining whether factors such as superior knowledge, training, experience, expertise or attention of a player have a material impact on the outcome of the game. While the outcomes of any 'games of skill' are affected by these

factors, outcomes of 'games of chance' are premised on luck and are largely independent of the skills of the players involved.

### **Common gaming house**

A second concept common to the gaming law in most states is the idea of a 'common gaming house'. Owning, keeping, or having charge of a common gaming house or being present for the purpose of gaming in any such common gaming house is ordinarily prohibited in terms of these state gaming laws. A common gaming house is defined as "any house, walled enclosure, room or place in which... instruments of gaming are kept or used for the profit or gain of the person owning, occupying, using or keeping such house, enclosure, room or place, whether by way of charge for the use of the instruments of gaming, or of the house, enclosure, room or place, or otherwise howsoever". The legality of offering, or engaging, in gaming in terms of such state gaming laws, therefore, hinges on whether it is being offered for the profit or gain of any person organizing the game. Pertinently, courts have clarified in the past that the mere charging of an extra fee to facilitate playing the game and / or to maintain the facilities may not necessarily be seen as making a profit or gain.

### **Where does blockchain gaming lie within this framework?**

It is important to note that most of the gaming laws were brought into effect prior to the internet era and, therefore, only contemplate regulation of gaming activities taking place in physical premises. Other than states such as Sikkim, Nagaland, and Telangana, which recognize online gaming, in most Indian states and union territories, there is currently a lacuna in gaming law and there are lingering question marks on its interpretation and applicability to online gaming.

That being said, as the law currently stands, each blockchain game must first pass muster as a 'game of skill', as against a 'game of chance', to legally be made available in most Indian states. It is also relevant to note that in the past, the Supreme Court has rejected the notion of video games being 'games of skill', holding that the outcomes of these games could be manipulated by tampering with the machines used to play and, therefore, the element of skill of players could not be a dominant factor of the game.

Further, by making in-game assets available for purchase, developers and publishers stand to earn revenue from the sale of such assets. They may also embed certain rules when implementing the code for in-game assets such that a fee is paid to them every time a certain action is taken, including when an item is transferred from one player to another.

A Delhi District Court has, in the past, held that a gaming portal would be covered within the definition of a 'common gaming house', if it were to take commission / earn revenue from the game offered. This is because such portals merely seek to replace the brick and mortar common gaming houses that Indian law currently envisages and has outlawed.

Since developers and publishers of blockchain games are likely to earn revenue / charge fee for offering such games, it does raise questions over whether they may be seen as playing a role analogous to that played by common gaming houses under Indian law.

### **Legality of blockchain games that rely on cryptocurrency**

The Finance Ministry of the Government of India had announced in late-2021 that The Cryptocurrency and Regulation of Official Digital Currency Bill, 2021, was to be tabled in the Parliament soon and would seek to prohibit all private cryptocurrencies. If the legislature does indeed successfully place a ban on private cryptocurrencies, then, to the extent that existing blockchain games rely on cryptocurrencies, they would be considered illegal in India.

Independent of this, the Minister of Finance, in her budget speech for 2022-2023, announced that the income from the transfer of any 'virtual digital assets' (which include cryptocurrency and non-fungible tokens) would be subject to income tax at the rate of 30%. Interestingly, those who have received any such virtual digital

assets by way of a gift shall be taxed at the rate of 30%. Policy pronouncements of this nature would need to be carefully considered by publishers of blockchain games while designing their pricing models.

### **What intellectual property protections may be available to blockchain games?**

#### **Patents**

For a blockchain game or any of its elements to be patented in India, it will need satisfy the patentability requirements of: Page | 178

- being a new product or process, i.e., having novelty;
- involving an inventive step, i.e., having a feature that involves technical advancement as compared to the existing knowledge or having economic significance or both and that makes the invention not obvious to a person skilled in the art); and
- being capable of industrial application, i.e., capability of being made or used in an industry
- being a new product or process, i.e., having novelty;
- involving an inventive step, i.e., having a feature that involves technical advancement as compared to the existing knowledge or having economic significance or both and that makes the invention not obvious to a person skilled in the art); and
- being capable of industrial application, i.e., capability of being made or used in an industry.

In terms of Section 3(k) of the Patent Act, 1970, computer programs are per se not inventions and hence, cannot be patented. However, judicial pronouncements in the past have clarified that if an invention has a technical contribution or a technical effect and is not merely a computer program per se, then it would be patentable. The Office of the Controller General of Patents, Designs and Trade Marks has also issued the Guidelines for Examination of Computer Related Inventions ("CRI Guidelines"), stating that 'databases' would be considered computer programs and are, therefore, not patentable.

Thus, a patent for a blockchain game may be sought if it meets the requirements of novelty, involving an inventive step, and industrial application. While we do not believe that a game, as a whole, would be patentable, game developers or publishers may seek patent protection for any element of the game (such as its game play method) which has led to technological advancement. For instance, in the US, we note that patents have been granted for specific elements of blockchain games, such as 'wagering gaming systems for utilizing bitcoins and bitcoin fractions', 'game data offloading to a blockchain', and a 'system and method for digital token exchange and delivery.

As for the CRI Guidelines, since neither are they legally binding, nor are developers or publishers likely to seek patent protection for the entirety of the blockchain, we believe that these are unlikely to act as an impediment to seeking patent protection.

#### **Trademarks**

A trademark is used as an identifying mark to determine the source of a particular good or service, and is obtained to protect the goodwill and reputation of the brand. Any distinguishing mark in a blockchain game or NFT that would allow consumers to identify the source of that particular game or NFT may be trademarked. In India, certain underlying aspects of the blockchain game may be trademarked, including the name of the game, a tag line attached to it, the logo of the game, the character names in the game, and the name of the in-game currency (similar to the trademark held by Stiftung Ethereum for the name ETHEREUM' in the United States), as they would be considered as a trademark.

In the case of an NFT, if the inventor of an NFT decides to give proprietary names to their own tokens, then such names may be protected as trademarks. It is important to clarify that trademark protection, if any, can be sought for underlying identifiers of the game / NFT, such as the name and tag line, not for the overall game / NFT itself.

#### **Copyrights**

In India, artistic work, musical work, cinematographic films, dramatic works, sound recordings and computer software are capable of being protected under copyright law. Although there is no specific provision in the Copyright Act that deals with video games, copyright protection of video games may be sought under the category of 'multimedia products'.

Similar to the position with trademarks, the process of obtaining a copyright for a blockchain game would be the same as any other online video game. Certain aspects of blockchain games, such as the artwork and sounds used in the game as audiovisual work along with the underlying source code as a literary work can be copyrighted. For example, the user manual for the game, characters in the game, the background music and source codes for the digital games can be protected under copyrights.

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### Steps forward

The use of blockchain technology for online games is likely to be beneficial for game developers, publishers, and players. However, key to their growth is regulation which ensures that it is permissible to offer such games in the Indian territory and also offers protection in the form of intellectual property rights. Other concerns, such as privacy and cyber security, along with how financial regulations would apply to blockchain games, would also need to be addressed. Most recently, the Advertising Standards Council of India ("ASCI") has introduced guidelines for advertising of virtual digital assets and linked services, requiring, among others, that disclaimers be included in such advertisements and that terms such as 'currency' not be used in them.

As a larger number of game developers and publishers prepare to step foot in this this as yet uncertain/unknown legal landscape, we recommend:

- seeking legal counsel on whether their game is likely to be identified as a 'game of skill' and whether they are likely to be identified as a 'common gaming house', if they were to be subject to judicial scrutiny;
- scrutinizing their games to understand which elements, if any, can be modified such that superior knowledge, training, experience, expertise or attention of players becomes the dominant element of such games;
- consider / re-consider their use of cryptocurrency in providing their games, or seek out alternatives to the use of cryptocurrency, in view of the possible ban on them pursuant to the introduction of The Cryptocurrency and Regulation of Official Digital Currency Bill, 2021;
- factoring the recently introduced tax on virtual digital assets into their pricing model;
- seeking requisite intellectual property protection for elements of their games that are capable of such protection; and
- ensuring that any advertising be compliant with the ASCI's Guidelines for Advertising of Virtual Digital Assets and Linked Services.

Source: The Indian Express

## 9. The genetic variants causing severe COVID-19

Relevant for GS Prelims & Mains Paper III; Science & Technology

**What is the GenoMICC research project? Will the identification of new genes aid the development of new treatments for the disease?**

Scientists in the United Kingdom as part of a research project, GenOMICC (Genetics of Mortality in Critical Care), have identified 16 new genetic variants that make a person more susceptible to a severe COVID-19 infection.

**What is the GenOMICC study?**

The GenOMICC—reportedly the largest of its kind—is a research study that brings together clinicians and scientists from around the world to find the genetic factors that lead to determine the outcome in critical illnesses. While millions suffer from infectious diseases every year, even though most cases are mild, some people become extremely unwell and need critical care. This may be because of their genes and the GenOMICC project is about identifying them. The scientists involved compare the DNA of critically-ill patients with



members of the general population. However, ferreting out such differences requires a large number of people and comparing their genetic structures at multiple levels of resolution. Since 2015, the GenOMICC has been studying emerging infections such as SARS (severe acute respiratory syndrome), MERS (Middle East respiratory syndrome), flu, sepsis, and other forms of critical illness.

### How was the GenOMICC study for COVID-19 done?

Researchers from the GenOMICC consortium, led by the University of Edinburgh in partnership with Genomics England, sequenced the genomes of 7,491 patients from 224 intensive care units in the United Kingdom. Their DNA was compared with 48,400 other people who had not suffered from COVID-19, and that of a further 1,630 people who had experienced mild symptoms. Determining the whole genome sequence for all participants in the study allowed the team to create a precise map and identify genetic variation linked to severity of COVID-19.

### What are the key findings?

The team found key differences in 16 genes in ICU patients compared to the DNA of the other groups. It also confirmed the involvement of seven other genetic variations already associated with severe COVID-19 discovered in earlier studies by the same team. The 16 new genetic variants included some that had a role in blood clotting, immune response and the intensity of inflammation. A single gene variant, the team found, disrupted a key messenger molecule in immune system signalling — called interferon alpha-10 — that increased a patient's risk of severe disease. There were variations in genes that control the levels of a central component of blood clotting — known as Factor 8 — that were linked with critical illness in COVID-19. This highlights the gene's key role in the immune system and suggests that treating patients with interferon, which are proteins released by immune cells to defend against viruses, may help manage disease in the early stages.

### How useful are these findings?

The overarching aim of genome association studies is to not only correlate genes but also design treatments. For instance, the knowledge that interferons play a role in mediating a severe infection is already being used in drug therapies in the management of severe COVID. A study called the COVIFERON trial tested three kinds of interferon on the management of severe COVID but found no significant benefit in alleviating disease. Genomics studies reveal an association with certain conditions but don't necessarily explain how the genes direct the chain of chemical reactions that bring about an adverse outcome. But the knowledge of the gene helps to design targeted drugs. New technologies, such as CRISPR, allow genes to be tweaked or silenced and therefore this approach could be used to make new medicines. The GenOMICC study isn't the only one of its kind. Several consortia globally are working on identifying genes that may explain different disease outcomes.

- The GenOMICC is a research study that brings together clinicians and scientists from around the world to find the genetic factors that lead to determine the outcome in critical illnesses.
- To understand the genetic causes of severe COVID-19, the DNA of 7,491 critical patients was compared with 48,400 people who had not suffered from COVID-19, and that of a further 1,630 people who had only experienced mild symptoms.
- The study found key differences in 16 genes in ICU patients compared to the DNA of other groups. The new variants included some that had a role in blood clotting, immune response and the intensity of inflammation.

**Source: The Hindu**

## 10. A closer look at the Man-Portable Air-Defence Systems

### Relevant for GS Prelims & Mains Paper III; Science & Technology

On March 13, United States President Joe Biden approved a \$200-million arms package for Ukraine, which would include U.S. made Stinger Missiles, which are a type of shoulder-fired Man-Portable Air-Defence Systems (MANPADS). More than 17,000 anti-tank weapons and 2,000 Stinger missiles have already been sent by the

U.S. and NATO in the first week of March itself. Analysts have said that anti-tank and anti-aircraft missiles have been effective in countering Russian military advances in the air and on the ground.

### **What are MANPADS?**

Man-Portable Air-Defence Systems are short-range, lightweight and portable surface-to-air missiles that can be fired by individuals or small groups to destroy aircraft or helicopters. They help shield troops from aerial attacks and are most effective in targeting low-flying aircrafts. MANPATs or Man-Portable Anti-Tank Systems work in a similar manner but are used to destroy or incapacitate military tanks.

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MANPADS can be shoulder-fired, launched from atop a ground-vehicle, fired from a tripod or stand, and from a helicopter or boat. Weighing anywhere between 10 to 20 kilograms and not being longer than 1.8 metres, they are fairly lightweight as compared to other elaborate weapon systems, making them easy to operate by individual soldiers. Operating MANPADS requires substantially less training.

According to U.S.-based policy think-tank, the RAND Corporation, MANPADS have a maximum range of 8 kilometres and can engage targets at altitudes of 4.5 km. Most MANPADS have passive or 'fire and forget' guidance systems, meaning that the operator is not required to guide the missile to its target, enabling them to run and relocate immediately after firing. The missile stays locked-on to the targeted object, not requiring active guidance from the soldier. The missiles are fitted with infrared (IR) seekers that identify and target the airborne vehicle through heat radiation being emitted by the latter.

### **When were MANPADS used in the past?**

The first MANPADS were introduced by the United States and Soviet Union in the 1960s. Russian and U.S. MANPADS were also used during the Vietnam war. The U.S. supplied MANPADS to the Mujahideen in Afghanistan in the 1980s, which the latter used against the Soviet forces. Countries such as India, Pakistan, Germany, U.K., Turkey and Israel have also used MANPADS in their defence efforts.

As of 2019, 20 countries had developed the wherewithal to manufacture MANPADS and have together made 1 million such systems for defence and export purposes.

Over time, non-state actors such as rebel and terrorist groups have also illicitly acquired MANPADS, using them during civil wars and other high-intensity conflicts. MANPADs have been used in the Syrian war and in Libya. Non-state groups in African countries like Sudan, South Sudan, Angola, Somalia and Congo have also acquired and used MANPADs.

Russia is by far the biggest exporter of MANPADs, having sold over 10,000 such systems between 2010 and 2018 to various countries including Iraq, Qatar, Kazakhstan, Venezuela, and Libya.

### **What are the common variants of MANPADS?**

The most common make of MANPADs is the U.S.-made Stinger missiles. These weigh about 15 kg, have a range of 4,800 metres or 4.8 km, and can engage low-flying aircrafts at an altitude of 3,800 metres. They have a passive guidance system, which uses infrared technology. Stingers have been sent or are currently being sent to Ukraine by the U.S., Germany, the Netherlands and Denmark. In January, the U.S. State Department gave clearance to Baltic countries Estonia, Lithuania and Latvia to provide U.S.-made stingers to Ukraine.

Stinger's Russian or Soviet-made counterparts are the Igla MANPADS, which also employ infrared technology. They were used in Iraq when it was invaded by the U.S. in 2003. They have also been used by India, for instance, as part of Operation Trishul Shakti of 1992, during the Siachen conflict.

Starstreak, the British army's equivalent of the Stinger missiles, have also been used in the past and the U.K.'s Secretary of State for Defence, Ben Wallace, said recently that the U.K. is formulating a plan to provide Ukraine with a shipment of Starstreaks.

Sweden makes the RBS-70 MANPADS series while China's version, FN-6, is akin to the Stinger.

#### **How effective are MANPADS in the Ukraine crisis?**

Ukraine still has some of Soviet era longer-range air-defence systems that can target Russian aircraft, which is why Russia is flying them at low altitudes, which in turn makes them more vulnerable to short-range systems like MANPADS.

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Justin Bronk, a research fellow at the Royal United Services Institute, was quoted by the BBC as saying that there's been visual confirmation of at least 20 Russian aircraft — both helicopters and jets — being downed in Ukraine since the current conflict started. Ukraine's Ministry of Defence, meanwhile, has said that it has shot down 48 Russian planes and 80 helicopters.

Meanwhile, Deutsche Welle quoted Ukrainian analyst Mykola Bielieskov of the Kyiv-based National Institute for Strategic Studies, an institute advising the country's president Volodymyr Zelenskiy on security issues, who said that anti-tank and anti-aircraft systems are "precisely" what Ukraine needs right now.

#### **What are the concerns around MANPADS?**

Many observers have pointed out that sending MANPADS to Ukraine may have its share of not so positive effects. The U.S. has also mentioned the 'risks' involved in sending such weapons to Ukraine.

According to the Global Organised Crime Index, "Ukraine is believed to have one of the largest arms trafficking markets in Europe. While it has long been a key link in the global arms trade, its role has only intensified since the beginning of the conflict in eastern Ukraine."

After the annexation of Crimea by Russia in 2014, weapons supplied by other countries to aid Ukraine ended up in the wrong hands in multiple cases. Reports indicate that weapons in the state arsenal were illicitly acquired and smuggled by criminal and non-state rebel groups. The Organised Crime Index states that "arms are reportedly trafficked domestically, but the illicit arms trade is also linked to criminal arms markets in Russia, Belarus, Moldova, Georgia, and Turkey, as well as countries in the EU and the former Yugoslavia."

The index pointed out that cities in Ukraine such as Odesa, Dnipro, Kharkiv, and Kyiv are significant logistical centres for criminal networks. Meanwhile, the Small Arms Survey of 2017 pointed out that Ukraine has 1.2 million legal firearms and around 4 million illegal weapons, a lot of them fully-automatic military weapons.

Thus, observers fear that sending lightweight ground-based MANPADS to Ukraine may contribute to intensifying the network of illegal weapon trade. In other conflict-hit states as well, there is widespread evidence of MANPADS ending up with non-state and terrorist groups; the most prominent cases being Syria, Libya and Afghanistan. According to a Pentagon-financed study by the RAND Corporation from 2019, 57 non-state armed groups were confirmed or suspected to be possessing MANPADS.

Another concern around MANPADS is civilian attacks. According to the 2019 study mentioned above, more than 60 civilian aircraft have been hit by MANPADS since the 1970s, claiming the lives of more than 1,000 civilians.

**Source: The Hindu**

### **11. How adding lead tape to the irons helped Anirban Lahiri strike better**

**Relevant for GS Prelims & Mains Paper III; Science & Technology**

For years, Anirban Lahiri had been playing – by his own confession – 'horrible'. After two memorable titles seven years ago, it was feared that the golfer who promised so much would dwindle into obscurity. But as most

of the country was asleep on Monday night, Lahiri produced one of the finest performances by an Indian in international golf.

With odds stacked against him, the 34-year-old came agonisingly close to winning The Players Championship in Ponte Vedra Beach, Florida, finishing second behind Australia's Cameron Smith in one of the most prestigious tournaments in the golfing calendar.

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### **What is special about Lahiri's second-place finish?**

More than anything, it's about the true underdog spirit. The Indian had last won a tournament in 2015 and coming into The Players Championship, Lahiri had been nothing more than a journeyman golfer gritting it out on the highly-competitive PGA Tour without managing anything spectacular over the last few years.

His miserable form had continued in 2022 as well. Before last weekend, Lahiri had played 12 tournaments this year. He could make only five cuts, had fallen outside the top 200 in the FedEx Cup (the championship trophy for the PGA Tour) and slipped to 332 in the world rankings. He was one of the lowest-ranked players in the competition, and with the stormy weather in Florida rattling the field, not a lot was expected from the man from Bengaluru.

Yet, he battled the odds and remained in contention for the prestigious title till the final shot.

### **What is the Players Championship and why is it such a big deal?**

The competition is often referred to as the 'fifth Major', and mentioned in the same breath as the four original tournaments – PGA Championship, the Masters, the US Open and the Open Championship. This tournament is to golf what, for instance, the Indian Wells Masters 1000 is to tennis – in that, it is the best-attended tournament outside the four Majors.

The playing field at the Players Championship is considered to be one of the strongest in golf, with 144 players qualifying based on their wins on the PGA Tour in the prior season, Major wins in the previous three to five years and FedEx Cup standings. Lahiri qualified for the championship based on his FedEx Cup ranking, after being in the top-125 in the 2020-21 season.

Additionally, the Stadium Course – which has been hosting the Players Championship since 1982 – caters to all styles of play, making it difficult for one type of player to dominate. Not surprisingly, no golfer has been able to defend his title in the history of this tournament.

### **What were the conditions like last weekend and how did the favourites perform?**

World number 1 John Rahm called it 'the weirdest event we can possibly have'. It was pouring down on the first three days of the competition, followed by strong winds. According to golf.com, the wind speed on Saturday afternoon was 26mph, with 'gusts as high as 40mph'. The conditions led to plenty of stops and starts, forcing a rare Monday finish after it became impossible to conclude all four rounds by Sunday. And plenty of star players fell by the wayside.

Among the favourites who were not able to cope with the drastic weather conditions and missed the cut were three-time Major winner Jordan Spieth, four-time Major champion Brooks Koepka, defending FedEx Cup champion Patrick Cantlay and two-time Major winner Collin Morikawa. Established players like Rahm, Rory McIlroy and Dustin Johnson, too, found the going tough.

To get a sense of how open and tough the field was, at one point during the final round, around 25 players were within three shots of the leader. Yet, Lahiri stood firm and did not get bogged down by the pressure from the chasing pack.

### **So, what worked for Lahiri?**



While there was never any doubt over his quality, one tiny tweak seems to have made a significant impact on Lahiri's game. Statistically speaking, Lahiri has been one of the worst strikers of the golf ball this season. According to official data, out of 217 players, he is ranked 212th in approach shots – the strokes played after the tee shot to propel the ball towards the hole.

At the Championship, Lahiri seemed a different player. He looked stronger than ever before in this part of his play and according to Golf Channel, was gaining more than 'five-and-a-half shots on the field with his iron play and was seventh-best among those who made the cut'.

This, Lahiri said, was due to a slight alteration to his equipment. The Indian added 3.5-gram lead tape to his irons – the clubs used to hit the ball in the direction of the hole – which he said added heft to his game.

Rusty Estes, one of the respected equipment specialists who worked with Lahiri on his clubs, told the PGA Tour website that 'added weight gave Lahiri increased face awareness and gave him a more consistent swing.' Lahiri said the tweak made him more confident about what he acknowledged was his 'weak link'. "My irons were pretty much the same as when I came here seven years ago. (I) said, 'Let's experiment.' It can't be worse than what it is. I've been hitting it so bad," he said. "I was like, let's just throw some lead tape on and see what happens, because I've felt like I'm swinging good. It made a huge difference, obviously, you can see."

#### **Was equipment change the only factor?**

In addition to the change in equipment, Lahiri displayed an attitude and fighting spirit that made him withstand all the pressure. He was aggressive even while leading and when he found himself in tricky situations, like on the eighth hole in the final round where he had a wild tee shot that resulted in a double-bogey, he fought back admirably.

Eventually, it can be said that Lahiri's tee shot on the eighth hole was the turning point for him. But he was 'relieved' – more than happy – with his overall performance.

"I've gone through two years of playing horrible. It's been a long time since I've been in this position and since I've played in a quality field like this," he said after the final round. "It's huge because when you go through such a lean period for such a long time, you start asking yourself, 'man, was that a flash in the pan? What are you doing? You haven't played good in so long.' The belief takes a hit."

#### **What does Lahiri gain from this?**

In terms of ranking, Lahiri is set to jump into the top-100 in the world. He also pockets a cool \$2.18 million, one of the highest paydays for an Indian sportsperson in terms of prize money from one tournament. The ranking points could also help him retain his status on the PGA Tour for next season.

**Source: The Indian Express**

## **12. How far has India progressed on its goal to achieve 500 GW of renewable energy by 2030? What are some of the obstacles that the domestic solar industry faces?**

### **Relevant for GS Prelims & Mains Paper III; Science & Technology**

India added a record 10 Gigawatt (GW) of solar energy to its cumulative installed capacity in 2021. This has been the highest 12-month capacity addition, recording nearly a 200% year-on-year growth. India has now surpassed 50 GW of cumulative installed solar capacity, as on 28 February 2022. This is a milestone in India's journey towards generating 500 GW from renewable energy by 2030, of which 300 GW is expected to come from solar power. India's capacity additions rank the country fifth in solar power deployment, contributing nearly 6.5% to the global cumulative capacity of 709.68 GW.

Even as India continues down this impressive journey, there are some areas of concern to highlight. First, of the 50 GW installed solar capacity, an overwhelming 42 GW comes from ground-mounted solar photovoltaic (PV) systems, and only 6.48 GW comes from roof top solar (RTS); and 1.48 GW from off-grid solar PV.

### **Why is India falling short in roof-top solar installations?**

The steep rise in large, ground-mounted solar energy is indicative of the strong push towards increasing the share of utility-scale solar projects across the country. RTS deployment stands at 6.48 GW in 2021, far short on the Union Government's target of 40 GW of RTS by end 2022.

The large-scale solar PV focus fails to exploit the many benefits of decentralised renewable energy (DRE) options, including reduction in transmission and distribution (T&D) losses. One of the primary benefits of solar PV technology is that it can be installed at the point of consumption, significantly reducing the need for large capital-intensive transmission infrastructure. This is not an either/or situation; India needs to deploy both large and smaller-scale solar PV, and particularly needs to expand RTS efforts.

However, there is limited financing for residential consumers and Small and Medium Enterprises (SMEs) who want to install RTS. Coupled with lukewarm responses from electricity distribution companies (DISCOMS) to supporting net metering, RTS continues to see low uptake across the country. Governments, utilities, and banks will need to explore innovative financial mechanisms that bring down the cost of loans and reduce the risk of investment for lenders. Increased awareness, and affordable finance for RTS projects could potentially ensure the spread of RTS across the scores of SMEs and homes around the country. Aggregating roof spaces could also help reduce overall costs of RTS installations and enable developing economies of scale.

### **What are the challenges to India's solar power capacity addition?**

Despite significant growth in the installed solar capacity, the contribution of solar energy to the country's power generation has not grown at the same pace. In 2019-20, for instance, solar power contributed only 3.6% (50 billion units) of India's total power generation of 1390 BU.

The utility-scale solar PV sector continues to face challenges like land costs, high T&D losses and other inefficiencies, and grid integration challenges. There have also been conflicts with local communities and biodiversity protection norms. Also, while India has achieved record low tariffs for solar power generation in the utility-scale segment, this has not translated into cheaper power for end-consumers.

### **What's the state of India's domestic solar module manufacturing capacity?**

Domestic manufacturing capacities in the solar sector do not match up to the present potential demand for solar power in the country. Crisil's report on the subject highlights that as on March 31, 2021, India had 3 GW capacity for solar cell production and 8 GW for solar panel production capacity. Moreover, backward integration in the solar value chain is absent as India has no capacity for manufacturing solar wafers and polysilicon. In 2021-22, India imported nearly \$76.62 billion worth solar cells and modules from China alone, accounting for 78.6% of India's total imports that year. Low manufacturing capacities, coupled with cheaper imports from China have rendered Indian products uncompetitive in the domestic market.

This situation can, however, be corrected if India embraces a circular economy model for solar systems. This would allow solar PV waste to be recycled and reused in the solar PV supply chain. By the end of 2030, India will likely produce nearly 34,600 metric tonnes of solar PV waste. The International Renewable Energy Agency (IRENA) estimates that the global value of recoverable materials from solar PV waste could exceed \$15 billion.

Currently, only the European Union has taken decisive steps in managing solar PV waste. India could look at developing appropriate guidelines around Extended Producer Responsibility (EPR), which means holding manufacturers accountable for the entire life cycle of solar PV products and creating standards for waste recycling. This could give domestic manufacturers a competitive edge and go a long way in addressing waste management and supply side constraints.

**What are the key takeaways from India's solar story?**

India has grown from strength to strength in overcoming barriers to achieve the 50 GW milestone in Feb 2022. The destination is clear, and the journey is progressing. As India attempts to deal with some of the shortcomings identified above, India's solar story will continue to provide important lessons for other developing countries that are looking to transition to clean energy.

In addition to an impressive domestic track record, through the International Solar Alliance (ISA) established by India and France at COP-21 in 2015, there is a global platform to bring countries together to facilitate collaboration on issues such as mobilising investments, capacity building, program support and advocacy and analytics on solar energy. Technology sharing and finance could also become important aspects of ISA in the future, allowing a meaningful cooperation between countries in the solar energy sector.

**Source: The Hindu**

**13. An accidental missile launch****Relevant for GS Prelims & Mains Paper III; Science & Technology**

Making a statement in both Houses of Parliament on the accidental launch of the supersonic missile which ended up in Pakistan last week, Defence Minister Rajnath Singh informed that the government has taken serious note of the incident and a formal high level inquiry has been ordered which would determine the "exact cause" of the said accident.

**What is the incident and what did the Government say?**

Briefing on the incident which occurred on March 9, Mr. Singh said that during the routine maintenance and inspection, a missile was "accidentally released" at around 7 PM. It was later learnt that the missile had landed inside the territory of Pakistan. He further added, "While this incident is regretted, we are relieved that nobody was hurt due to the accident."

Stating that the Government attaches highest priority to safety and security of the weapon systems and any shortcoming if found, would be immediately rectified, Mr. Singh said, "I would also like to state that a review of the Standard Operating Procedures for operations, maintenance and inspections is being conducted in the wake of this incident."

The minister emphasised that the missile system is very reliable and safe. "Our safety procedures and protocols are of the highest order and are reviewed from time to time. Our armed forces are well-trained and disciplined and are well experienced in handling such systems", he added.

**What was Pakistan's response?**

The incident came to light after the Pakistan military held a press conference late on Thursday in which it said that they tracked the supersonic surface to surface missile from the time it took flight in Indian territory, manoeuvred and entered Pakistani airspace travelling 124 kms and fell near Mian Channu in Khanewal district, damaging some civilian property.

The Pakistan Air Force (PAF) continuously monitored the flight path of the missile, travelling at 40,000 feet, from its point of origin near Sirsa in India till its point of impact. The missile stayed in Pakistani territory for 3 minutes and 44 seconds.

Major General Babar Iftikhar, Director-General of the Inter-Service Public Relations (ISPR) also said that the PAF had initiated "requisite tactical actions" as per their standard operating procedures (SOPs) though he did not elaborate on it. He further added that the missile endangered many international and domestic passenger flights both in Indian and Pakistani airspace as well as human life and property on ground.

### Which is the missile system in question and what is the larger implication of the incident?

The Government has not officially acknowledged which missile it was, but sources have indicated that it was the BrahMos supersonic cruise missile system. The description given by Pakistan on the technical characteristics of the missile fits that of BrahMos, product of a joint venture between India and Russia and named after the Brahmaputra and Moskva rivers.

BrahMos is a potent precision strike weapon with variants that can be launched from land, sea and air and a range of 290 kms deployed by all three Services. No similar capability exists in the region and intercepting a supersonic cruise missile which can also maneuver and fly low to evade detection is extremely difficult.

Since India became a member of the Missile Technology Control Regime (MTCR) in 2016, work has been on to extend the range of the missile for which several tests have been done. A hypersonic variant of the missile is also under development.

Both India and Pakistan are nuclear weapon states with a range of tactical and strategic missiles in their inventory. Given the tense relationship, any such accident could be mistaken for an attack with retaliatory measures taken by the other side, leading to further escalation.

Invoking this aspect, Pakistan said that “given the short distances and response times, any misinterpretation by the other side could lead to counter measures in self-defence with grave consequences.” It further called upon the international community to take serious notice of this incident of “grave nature in a nuclearised environment and play its due role in promoting strategic stability in the region.”

While handling and launch of such advanced and potent missiles are highly regulated with several redundancies to avoid such accidents, this incident shows the need to review and make protocols fool proof to avoid any recurrence.

**Source: The Hindu**

## 14. Corbevax approved for 12-14 year-olds: what is it, and how does it work?

### Relevant for GS Prelims & Mains Paper III; Science & Technology

The Centre has opened up Covid-19 vaccination for children between the ages of 12 and 14, allowing them to receive Corbevax, a vaccine against Covid-19 that is manufactured by Hyderabad-based Biological-E. Corbevax is India's first indigenously developed Receptor Binding Domain (RBD) protein sub-unit vaccine.

**What is it, and how does it work? Take a look:**



*Here's what you need to know about Corbevax*



An illustration showing a large, red, spiky virus particle being punched by a blue boxing glove. The glove is coming from the right, and the virus is on the left. The background is a light grey gradient.

**EXPRESS**  
**explained.**


## HOW DOES IT WORK?

- Corbevax is a Receptor Binding Domain Protein sub-unit vaccine
- This means that the vaccine triggers an immune response by using fragments, such as the spike protein, instead of the whole virus
- Corbevax contains the harmless S-protein. Once the immune system recognises the protein, it produces antibodies as white blood cells to fight the infection
- The traditional mode the vaccine is built on is widely considered to be one of the safest

**#QUIXPLAINED** \_\_\_\_\_

**2**

*How does Corbevax work?*



**EXPRESS explained.**

## INDIA'S VACCINE BASKET FOR CHILDREN AND YOUNG ADULTS

- In India, Covaxin is the allocated vaccine for 15–18 year olds. So far, the cumulative beneficiaries for vaccines in the age group are over 16 lakh
- On February 21, Corbevax got emergency-use authorisation from India's drug regulator for the age group of 12–18 years. It is now available for 12–14 year olds

*Text: Kaunain Sheriff M*

**#QUIXPLAINED**

**3**

*India's Covid-19 vaccine basket for children, young adults*

Corbevax, a protein sub-unit Covid-19 vaccine, is one that is built on the traditional sub-unit vaccine platform. Instead of the whole virus, the platform triggers an immune response by using fragments of it, like the spike protein. The sub-unit vaccine contains the harmless S-protein, and once the human immune system recognises it, it produces antibodies, such as white blood cells, that fight the infection.

Corbevax includes antigenic parts of the virus to trigger a protective immune response. The antigen has been developed by the Texas Children's Hospital Centre for Vaccine Development and in-licensed from BCM Ventures, Baylor College of Medicine's integrated commercialization team.

**Source: The Indian Express**

### **15. Which vaccine has been approved for children aged 12 to 14 years? How far has India's inoculation drive progressed?**

**Relevant for GS Prelims & Mains Paper III; Science & Technology**

India has begun vaccinating 12 to 14-year-olds as part of the vaccination drive that has so far administered around 180 crore doses and covered around 60% of the population.

#### **What is India's strategy for vaccinating adolescents?**

India began vaccinating children aged 15 to 17 years on January 3 though the only vaccine permitted was Covaxin manufactured by Bharat Biotech. About nine crore vaccine doses have been administered to this age group so far. The government estimates that there are 7.4 crore eligible in this group, therefore it's safe to assume that most have got at least one dose. The Drugs Controller General of India (DCGI) has recommended this vaccine based on safety and efficacy data submitted by Bharat Biotech from a trial involving 525 children across three age groups — 2 to 6 years, 6 to 12 years and 12 to 18 years. This week the Health Ministry announced that those from 12 to 14 years would now be eligible for vaccination. As of the latest available figures, 7.2 lakh in that age group have been vaccinated.

Corbevax is a protein-based vaccine manufactured by Biological E Ltd, that got emergency use authorisation from India's drug regulator on February 21, 2022, for the age group of 12 to 18 years. Government estimates suggest that 6 to 6.4 crore Indians are between 12 and 14 years old.

#### **What is the scientific evidence on the safety and efficacy for Corbevax?**

Corbevax was approved by the DCGI based on interim results of the ongoing phase II and III clinical trials. The vaccine had already been approved for adults last December. However, details of these efficacy studies have not been made public nor published in a peer-reviewed journal. The Centre had placed an order for 50 million doses of Corbevax at the cost of ₹145 per dose. However, there are two controversial aspects of the Corbevax trial.

One, the National Technical Advisory Group on Immunisation (NTAGI), which traditionally reviews available data on vaccine safety and recommends a vaccine to be publicly administered, has not scrutinised the Corbevax safety and efficacy profile for 12 to 14 year olds, according to NTAGI member, JayPrakash Mulayil.

Secondly, its unclear why, when Covaxin and Corbevax are approved for 12 to 18-year-olds, only Corbevax is allowed to be administered.

It appears India has a policy of apportioning a fixed quota of vaccines by companies, a practice different from other countries where anyone eligible has a choice of vaccines.

#### **How safe are the vaccines for adolescents?**

This question has divided experts in India. One group argues that even though COVID-19 is less severe in children and younger adolescents than older adults, the incremental risk from adverse reactions to the vaccine may potentially outweigh benefits from the vaccine. Others, however, say that the data suggests the rare risk of long COVID in children which implies that it is unconscionable to not make an approved vaccine available to an eligible person. With the re-opening of schools, the substantially downward trend in cases and a relaxation of COVID-appropriate behaviour in general means that it is extremely likely that many more children are likely to be sick with COVID. This is despite serology surveys showing that 90% of children have already been exposed



to the virus. The ongoing surge in cases in China, Hongkong and South Korea is already showing that the BA.2 variant is a sign that the pandemic is far from over and that India could soon see a reversal in case trends.

India has done a poor job of making public reports on adverse events following immunisation. Comparable reports from the US Centers for Disease Control say that for children aged 5 to 11 years who received Pfizer-BioNTech COVID-19 vaccine, approximately 97% were “non-serious.”

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The most common adverse events reported to the Vaccine Adverse Event Reporting System (VAERS) in the age group were related to “administration error” (because children were administered a smaller dose). However, the CDC’s overall recommendation is that adolescents would be better off vaccinated than not.

Given that there are no m-RNA vaccines administered in India, and protein sub-unit vaccines are considered ‘safer’, it is likely that risks to children here won’t be any worse than already observed elsewhere.

- India has begun vaccinating 12 to 14-year-olds as part of its vaccination drive.
- Corbevax is a protein-based vaccine manufactured by Biological E Ltd, that got emergency use authorisation from the Drugs Controller General of India (DCGI) on February 21, 2022, for the age group of 12 to 18 years.
- The question of the safety of vaccines for adolescents has divided experts in India.
- Given that there are no m-RNA vaccines administered in India, and protein sub-unit vaccines are considered ‘safer’, it is likely that risks to children here won’t be any worse than already observed elsewhere.

**Source: The Hindu**

## **16. Will a limited and conditional WTO nod to remove intellectual property rights on the use of COVID-19 vaccines help?**

### **Relevant for GS Prelims & Mains Paper III; Science & Technology**

At the World Trade Organisation (WTO) negotiations, a consensus is in sight on a pending proposal championed by India and South Africa in 2020 that sought to remove intellectual property rights restrictions on the use of COVID-19 vaccines, drugs and diagnostic devices. The reprieve, however, will come with certain conditions, which are still under discussion.

#### **What are the terms of the proposal?**

In October 2020, at the WTO’s Trade Related Aspects of Intellectual Property Rights (TRIPS) Council, India and South Africa proposed that the WTO do away with certain provisions of the TRIPS Agreement for the duration of the pandemic to facilitate access to technologies necessary for the production of vaccines and medicines. Such a waiver would aid scaling up of local production, critical to ensure wider access to affordable and effective vaccines. Most of these patents are held by pharmaceutical companies in the U.S. and the European Union. The waiver proposal was blocked at the TRIPS Council and the WTO ministerial Council though there have been several rounds of discussions involving ministers of several WTO member-countries. In the last year though 100 countries, including the U.S., supported the proposal, the EU remained a stumbling block. But now the EU too appears to be calling a truce.

#### **What is the latest development?**

Reports have emerged that India, South Africa, the U.S. and the EU have arrived at an agreement. A draft of this agreement, that has been circulated among 164 members of the WTO, is likely to be taken up for discussion this fortnight. A consensus of all members is necessary for a proposal to be approved. The draft says all patent rights that protect the manufacturing of COVID-19 vaccines will be waived of for three-five years. Usually, there are multiple patents that cover even a single COVID vaccine and the draft says all of these line-patents too would stand temporarily waived. All member countries, through their governments, can authorise the manufacture as well as export of vaccines produced in these conditions.



### **Is this a breakthrough?**

There's conflicting opinion on this. On the one hand, the pandemic isn't over, and despite the widespread adoption of vaccines, (many of them employing very novel technology platforms such as mRNA and adenovirus vaccine technology) the evidence is overwhelming that vaccines are only protective against severe disease but ineffective at curbing transmission. It is possible that vaccines developed using the early strains of the virus may become ineffective over time and newer ones, potentially employing newer approaches, may be necessary in the months and years ahead. As relatively few countries have expertise in making vaccines, a waiver of this sort could help improve global access. These same set of reasons, critics of the draft say, could be used to argue that such a waiver for vaccines is too little, too late. Global facilities such as COVAX, that are charged with ensuring all countries get vaccines now have too many vaccines — a flip from merely three months ago — when there was a scarcity. India too has multiple manufacturers and technology platforms, and greater than 60% of the population is fully vaccinated. All this, without patent waivers. While pharmaceutical patents have historically been impediments to the manufacture of affordable, high-quality drugs, the global nature of the pandemic has seen that even though richer nations hoarded vaccines, prioritising multiple inoculations for their citizens, over even a single shot for African countries, intellectual property rights on its own didn't prove to be a hurdle. There are other major lacunae in the draft agreement.

### **What are some of the hurdles in the draft agreement?**

Critics say that central to the process of vaccine manufacturing are 'trade secrets' that specify the ingredients and chain of steps necessary to make them. The current waiver doesn't automatically compel patent rights holders to share this information with a potential manufacturer for free. Another drawback is that this waiver is limited to vaccines. The original proposal sought a waiver on therapeutics and diagnostics and the agreement only says that a "discussion" on this can be held after six months. Access to new drugs and diagnostic technologies are necessary to keep people safe everywhere.

### **What do India's pharmaceutical companies say?**

Though no one has commented on the draft, prominent drug and vaccine companies in India haven't been very vocal on the need for a waiver. But the Organisation of Pharmaceutical Producers of India (OPPI), comprising Indian subsidiaries of western pharmaceutical companies, has been critical. Waiving of intellectual property rights will neither lead to increased production of vaccines nor practical solutions to fight the virus, as IP "is not the barrier" to vaccines. The Indian Drug Manufacturers Association, on the other hand, has supported it, with a caveat. They are more interested in "voluntary licences" by the patent holders to Indian companies with sufficient expertise in this field, and transferring technology to Indian companies against "reasonable" royalties.

**Source: The Hindu**

## **17. Recombination of two virus variants seen since 2020**

### **Relevant for GS Prelims & Mains Paper III; Science & Technology**

The Alpha and Wuhan strain recombinant was the first; the latest is a mixture of two Omicron sub-lineages.

Mutations are a natural phenomenon when viruses replicate. Generally, RNA viruses have a higher rate of mutations compared with DNA viruses. However, unlike other RNA viruses, coronaviruses have fewer mutations. This is because coronaviruses have a genetic "proofreading mechanism" that corrects some of the errors made during replication. This is applicable to SARS-CoV-2 viruses too. As a result, SARS-CoV-2 viruses have "higher fidelity in its transcription and replication process than that of other single-stranded RNA viruses" says a February 2021 paper in Nature.

### **Providing fitness**

The fate of new mutations depends on whether such mutations increase the fitness of the virus such as increasing the infectiousness of the virus and in light of many people being infected and/or vaccinated, the

ability of the mutations to allow the virus to escape from immunity. Such mutations that provide increased fitness to the virus increase in numbers and become the dominant strain or variant.

But changes to the virus through natural collection of mutations involves small changes in the genome. But like in the case of influenza viruses, when a person is simultaneously infected with two different SARS-CoV-2 variants or strains or sub-lineages, chunks of genetic material from one variant can get mixed with the other. This is called recombination.

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In the case of SARS-CoV-2 virus, such recombination has been seen right after the Alpha variant emerged. Alpha was the first variant to emerge in late-2020 in the U.K. At that time, the dominant strain that had spread to most countries was the Wuhan strain with a mutation called the D614G, which increased the transmissibility of the virus. According to a paper published on September 30, 2021 in the journal Cell, recombinant SARS-CoV-2 viruses were found in late 2020-early 2021 in the U.K.

### Recombinant sequences

The recombinant virus had a combination of the Alpha variant and the Wuhan strain. The recombinant virus had the mutations seen in the spike protein of the Alpha variant while the remaining genome with the wild strain. Since the mutations seen in the Alpha variant made the virus more transmissible, the recombinant virus was found to spread. The researchers were able to find four instances of the recombinant virus spreading, including “one transmission cluster of 45 sequenced cases over the course of two months”. The researchers identified 16 recombinant sequences from a large dataset of 2,79,000 genome sequenced by U.K. up to March 7, 2021. Despite the recombinant virus inheriting the spike region with mutations from the Alpha variant, it did not have better fitness than the Alpha variant and hence did not become dominant.

After Alpha, the variant to emerge was the Delta. There was a short window when both Delta and Alpha were present in many countries before Delta wiped out the Alpha variant. Another study found a SARS-CoV-2 recombinant of Alpha and Delta variants. In mid-August 2021, researchers in Japan found six clinical isolates that were recombinants of the Alpha and Delta variants. In a preprint posted in medRxiv on October 14, 2021, the researchers say the recombinant could have emerged through simultaneous infection by both variants in a person but were unable to find any patient with mixed infection. Again, this recombinant did not have added fitness to increase in frequency. It just died out.

### Sub-lineages

After Delta, the Omicron variant emerged and it was soon split into two sub-lineages BA.1 and BA.2. With both the Delta and Omicron variants being present simultaneously in many countries, there were “lots of opportunities to co-infect, recombine and transmit onwards”, says virologist Tom Peacock from Imperial College, London in a tweet. Researchers have so far found two possible recombinants — 1) Delta and BA.1, and 2) BA.1 and BA.2. The recombinant of Delta and BA.1 has been found in the U.K and France, while the recombinant of the Omicron sub-lineages BA.1 and BA.2 has been found in the U.K.

The recombination of Delta and BA.1 found in France is called XD, and it contains the “Spike protein of BA.1 and the rest of the genome from Delta. It currently comprises several tens of sequences.

The recombination of Delta and Omicron sub-lineage BA.1 found in the U.K. is called XF. According to Dr Peacock, XF has the spike and structural proteins from BA.1 and the remaining part of the genome from Delta. “It comprises several tens of sequences currently,” he says.

The recombination of two Omicron sub-lineages BA.1 and BA.2 has been found in the U.K and is called XE. It was also recently reported in two passengers who had arrived in Israel. It has the spike and structural proteins from BA.2 and the remaining genome from BA.1. The XE is the most prevalent with hundreds of genomes already sequenced.

“XD is maybe a little more concerning. It has been found in Germany, Netherlands and Denmark and it contains the structural proteins from Delta. If any of these recombinants were to act much differently than its parent it might be XD,” Dr Peacock tweeted.

#### **Cases in U.S.**

Recombination of Delta and Omicron variants was found in the U.S. as well. The researchers found the “existence of these three unique mutation profiles that present compelling evidence that a recombinant virus was generated during co-infection...This recombinant replicated sufficiently to reach copy numbers that were detected by sequencing,” they write in a preprint posted in medRxiv on March 9, 2022. They identified “20 cases of co-infection with the Delta and Omicron variants, and two cases infected by a virus resulting from the recombination of Delta and Omicron”.

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#### **Different route**

These two cases that contain only the recombinant virus of Delta and Omicron suggest that the actual recombination had happened in another person and increased in numbers in that person through replication and then effectively transmitted to a new host. “Yet, despite transmitting to a new host at least once, the transmission chain was not sustained; we have not observed any more of these recombinants in our sequencing data,” they write.

**Source: The Hindu**

### **18. Damien Hirst's formaldehyde sculptures, their acceptance and criticism**

#### **Relevant for GS Prelims & Mains Paper III; Science & Technology**

Damien Hirst, the United Kingdom's richest living artist according to the 2020 Sunday Times' Rich List, has produced some of the most controversial artworks of recent years, which includes the much-debated series of formaldehyde sculptures with dead animals. The sculptures have been a part of his practice since the 1990s and now an exhibition titled Natural History at Gagosian Gallery in London brings together more than 20 iconic works from the series, spanning over three decades, from 1991.

#### **When did Damien Hirst first come to attention?**

One of the leading names of the collective Young British Artists (YBA), Hirst was still pursuing his graduation in fine art from the prestigious Goldsmiths College in London when he became the main organiser of the group's exhibition, Freeze, that took place in 1988 at an empty Port Authority warehouse in London. He soon caught the attention of British advertiser and collector Charles Saatchi, who in 1990 bought Hirst's A Thousand Years (1990)—a depiction of the cycle of birth and death through a glass vitrine that had maggots hatching inside a white box, turning into flies and feeding on a severed cow's head kept on the floor.

#### **When did Hirst embark on the formaldehyde series?**

Even as a teenager studying art in Leeds, Hirst would reportedly draw corpses preserved in formaldehyde. His first actual installation came early on in his career when Saatchi paid him £50,000 for any work he desired. The outcome was The Physical Impossibility of Death in the Mind of Someone Living (1991), with a tiger shark in formaldehyde in a vitrine. The shark had been caught by a commissioned fisherman in Australia and the work received instant attention, even fetching Hirst a Turner Prize nomination. Subsequently, Hirst has made several works in the series. The ongoing exhibition at Gagosian includes, among others, Beginning with The Impossible Lovers (1991), a cabinet filled with glass jars with preserved cow's organs, I Am (1995) that has a sheep, and Myth Explored, Explained, Exploded (1993) with a small shark cut into three.

#### **How have the works from the series been received?**

Though Hirst's works using animals have been criticised by animal rights activists, the global art market itself is divided—evident from the response he received early on in his career, including his first major international showcase at the 1993 Venice Biennale, where he exhibited Mother and Child Divided with a cow and a calf cut

into sections and exhibited in separate tanks. In his 2010 paper “Damien Hirst’s shark: nature, capitalism and the sublime” artist Luke White wrote: “Being largely about life and death, his artworks are consequently based on anthropological and psychological concepts such as primordial fears and horror but also ecstatic joy, visualized in an iconic form and transmitted to the viewer through the experience of shock and excitement”.

While some animals were dead before Hirst decided to use them, others were killed for his art. In 2012, Hirst’s exhibition *In and Out of Love* at Tate Modern had two windowless rooms filled with live butterflies, brought every day during the show by a butterfly expert and swept by the museum staff after they died. While some were concerned that the butterflies were not in their natural habitat, others were delighted at the opportunity of observing them closely. It was later reported that more than 9,000 butterflies died during the 23-week exhibition.

In 2017, the art market website artnet estimated that Hirst had used almost one million animals for his works. In terms of market value, Hirst’s sheer popularity can be gauged from the fact that in September 2008, Sotheby’s foray into the primary market with Hirst’s *Beautiful Inside My Head Forever*—featuring whole animals in formaldehyde, medicine cabinets and spin paintings—exceeded all expectations, grossing \$200.75 million.

#### **What has Hirst said about the series?**

Several art historians and critics have pointed out that though controversial, Hirst’s works have precedence in art—among others artists such as Salvador Dali used live snails in *The Rainy Taxi*, and Joseph Beuys’ *Fat Chair* and other sculptures were made from fat. Hirst himself has not been bogged down by criticism and mortality has remained a central theme in his work. In a 2008 interview with Anthony Haden-Guest for *interviewmagazine.com*, the artist stated, “Death’s just something that inspires me, not something that pulls me down. I used to get called morbid at school. I have always loved horror films; I like being frightened.”

**Source: The Indian Express**

### **19. The UK online safety bill that seeks to regulate Big Tech**

**Relevant for GS Prelims & Mains Paper III; Science & Technology**

In what could become among the strictest regulations on Big Tech, the UK government has introduced the Online Safety Bill in the British Parliament. The passing of the law could see top executives at big-tech companies facing jail time, sooner than anticipated before, should they fail to comply with a slew of requirements put forth by the UK Office of Communications (Ofcom) — a government-approved regulatory and competition authority for broadcasting, telecom and postal industries.

#### **What are the key proposals of the bill?**

The bill proposes that executives of social media platforms whose companies fail to cooperate with the Ofcom’s information requests can now face prosecution or jail time within two months of the bill becoming law, instead of two years as it was previously drafted. These executives could be held criminally liable for destroying evidence, failing to attend or providing false information in interviews with Ofcom, and for obstructing the regulator when it enters company offices. Ofcom will also have the power to fine companies failing to comply with the laws up to 10 per cent of their annual global turnover, force them to improve their practices and block non-compliant sites.

Encrypted private messaging services will have to use “accredited technology” to identify child sexual exploitation and abuse (CSEA) content, and swiftly take down that content. To use this power, Ofcom must be certain that no other measures would be similarly effective and there is evidence of a widespread problem on a service.

Major service providers will also need to make clear in their terms of service what legal content is acceptable on their sites, and provide user-friendly ways to complain when things go wrong. The categories of content that



companies' terms of service will need to address will be set out in secondary legislation and approved by Parliament. For the first time, users will have the right to appeal if they feel their post has been taken down unfairly.

### **Are there any exceptions?**

The proposed law will put requirements on social media firms to protect journalism and democratic political debate on their platforms. News content will be completely exempt from any regulation under the Bill. Furthermore, social media platforms will only be required to tackle 'legal but harmful' content, such as exposure to self-harm, harassment and eating disorders, set by the government and approved by Parliament. Previously they would have had to consider whether additional content on their sites met the definition of legal but harmful material.

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### **Are there any concerns around the proposed law?**

Critics of the bill have raised concerns over threat to freedom of speech and dilution of security offered by encrypted platforms. They have also flagged the bill's ability to allow unchecked political speech to flourish on social media platforms, while cautioning handing significant amount of power to the Ofcom and the UK's secretaries of state.

"The bill provides extraordinary discretion to the Secretary of State and Ofcom to design 'codes of conduct' that will define 'legal but harmful' content. They will also have the power to impose additional requirements such as age verification and undermine end-to-end encryption. The regulator will also have significant leeway about what types of content and which platforms to target," said the UK-based think tank Institute of Economic Affairs.

The digital rights group, Open Rights Group, said the bill could encourage "state sanctioned censorship of legal content". "The Bill still contains powers for Ministers to decide what legal content platforms must try to remove. Parliamentary rubber stamps for Ministerial say-so's will still compromise the independence of the regulator. It would mean state sanctioned censorship of legal content," said the group.

### **Does the UK bill have any similarities with the Indian laws?**

Some of the proposals of the UK's Online Safety Bill mirror recent legislation in India around the regulation of social media intermediaries. Under the new IT Rules amendments, which kicked in last year, messaging services with more than 5 million users in India like WhatsApp and Signal need to enable the identification of the first originator of a particular message. India's IT Rules also require companies like Meta, Twitter, WhatsApp etc. to appoint a chief compliance officer to ensure that their platforms are compliant with the law. However, the chief compliance officer can be held liable in "any proceedings" related to third-party content on the platform.

**Source: The Indian Express**

## **20. Recycling heat generated by data centres to cut CO2 emission**

### **Relevant for GS Prelims & Mains Paper III; Science & Technology**

Microsoft has partnered with Fortum, a Finnish energy company to heat homes, services and businesses in Finland with sustainable waste heat from a new datacentre region that Microsoft has planned to build in the Helsinki metropolitan area in Finland. The software giant claims the waste heat recycling concept from the datacentre region to be the world's largest scheme to recycle waste heat from data centres. The joint project takes place at the intersection of two megatrends: digitalisation and energy transition.

### **What is a datacentre?**

A datacentre is a physical facility that organisations use to store their critical applications and data, process data and disseminate them to users. It is designed based on a network of computing and storage resources that

enables delivery of shared applications and data. The key components of a datacentre are routers, switches, firewalls, storage systems, servers, and application-delivery controllers.

Many large datacentres are located in dedicated buildings. Smaller datacentres may be situated in specially designed rooms within buildings constructed to serve multiple functions. Since datacentres consume large amounts of energy, it's important to ensure the physical structures that house them are well-designed and insulated to optimise temperature controls and energy efficiency.

### **How much heat datacentres generate?**

The temperatures recorded in the hot aisles of a datacentre hover between 80 and 115 degrees Fahrenheit, according to Lifeline datacentres, a provider of datacentre facilities and services.

Global cybersecurity firm Kaspersky estimates over 75% of a datacentre's electricity becomes waste heat. It noted that in winter, a datacentre can provide heating up to 85 degrees Fahrenheit, similar to a gas boiler, with better energy efficiency than a heat pump in a new house.

### **What's the scale of their carbon footprint?**

On a global level, datacentres consume around 200 terawatt-hours (TWh) of electricity, which is more than 1% of the world's total electricity. They contribute to 0.3% of all global CO<sub>2</sub> emissions, according to the International Energy Agency.

Datacentre energy usage in some countries could increase to 15% to 30% of their total domestic electricity consumption by the end of the decade, according to predictive models by Eric Masanet and Nuoai Lei of Northwestern University. Ireland's energy regulator says datacentres could use almost 30% of the country's electricity by 2027, endangering climate goals.

### **What is Microsoft's plan to cut carbon emission in Finland?**

According to Microsoft, the recycled waste heat, along with other carbon reduction measures, can help the city of Espoo and its neighbouring communities to reach their CO<sub>2</sub> emission reduction targets. It can also help decommission Fortum's last coal-fired heat unit in the city.

The heat recycling system can provide clean heat to homes, businesses and public buildings in Helsinki, and can reduce up to 400,000 tons of CO<sub>2</sub> emissions annually, according to estimates by Fortum.

The company highlighted that once the new data centre region's waste heat capture is in operation, a total of about 60% of the area's heating will be generated by climate-friendly waste heat. Of this, 40% results from the datacentre region and the rest from other waste heat sources like purified waste water.

### **How will this work?**

Fortum will capture the excess heat generated by the new datacentre region and transfer the clean heat from the server cooling process to homes, services and business premises that are connected to the district heating system.

District heating is the most popular method of heating premises in Finland. It is a system of generating heat in a centralised location by capturing heat and then distributing it to buildings for residential and commercial heating needs. The heat is transferred to customers as hot water which is pumped through insulated underground pipes.

The new generation of district heating is based on replacing fossil fuels with flexible solutions like renewable electricity, heat pumps and waste heat utilisation. Artificial intelligence will help optimise operations of the entire system.

### **Which other countries recycle waste heat from datacentres?**

District heating is popular in the Nordic and Baltic countries, as well as in Russia and China, which have high heat demands during winters. Datacentres thrive in cold climates. Their location in cold climates helps to cut down on the need to cool server rooms. Cold weather is also an asset as technology companies shift to selling their heat which doesn't have a lot of demand in hot weather.

### Which other companies are doing this?

Facebook is putting its waste heat to use heating nearby homes in Odense, Denmark. The company claims that its servers can heat 6,900 homes in the area, according to a blog by Aquicore. Apple is building a datacentre in Denmark and plans to run it with renewable energy and use waste heat to warm up nearby office buildings.

Fast fashion retailer H&M has been distributing waste heat to nearby homes in Denmark since 2013 and has plans to build a new, 1 MW datacentre that will be capable of heating up to 2,500 apartments at full load.

An IBM datacentre in Switzerland is heating a nearby community pool. In Canada, communications company Quebecor donates its heat to the editorial office of a local newspaper.

**Source: The Hindu**

## 21. Understanding hypersonic weapons

### Relevant for GS Prelims & Mains Paper III; Science & Technology

On Saturday, the Russian Defence Ministry spokesperson Major General Igor Konashenkov said the "Kinzhal aviation missile system with hypersonic aeroballistic missiles destroyed a large underground warehouse containing missiles and aviation ammunition in the village of Deliatyn in the Ivano-Frankivsk region." On Monday, U.S. President Joe Biden confirmed that Russia used hypersonic missiles in its offensive in Ukraine.

### What are hypersonic weapons?

They are manoeuvrable weapons that can fly at speeds of at least Mach 5, five times the speed of sound. The speed of sound is Mach 1, and speeds above Mach 1 are supersonic and speeds above Mach 5 are hypersonic. They are different from Ballistic missiles which even though are travel much faster, follow a fixed trajectory and travel outside the atmosphere to re-enter only near impact. On the other hand, hypersonic weapons travel within the atmosphere and can manoeuvre midway which combined with their high speeds make their detection and interception extremely difficult. This means that radars and air defences cannot detect them till they are very close and have only little time to react.

According to the October 2021 memo of the Congressional Research Service (CRS), 'Hypersonic Weapons: Background and Issues for Congress', there are two classes of hypersonic weapons, Hypersonic glide vehicles (HGV) and Hypersonic Cruise Missiles (HCM). HGVs are launched from a rocket before gliding to a target. HCM are powered by high-speed, air-breathing engines, or scramjets, after acquiring their target.

Hypersonic missiles are a new class of threat because they are capable both of manoeuvring and of flying faster than 5,000 kilometres per hour, which would enable such missiles to penetrate most missile defences and to further compress the timelines for response by a nation under attack, says a 2017 book Hypersonic Missile Nonproliferation published by RAND Corporation.

Gen. John E. Hyten who recently retired as the Vice Chairman of the U.S. Joint Chiefs of Staff had stated that hypersonic weapons could enable "responsive, long-range, strike options against distant, defended, and/or time-critical threats when other forces are unavailable, denied access, or not preferred."

### What is the status of Russian, Chinese and U.S. programmes?

According to Russian news agency TASS, the Kinzhal air-launched hypersonic missile system was unveiled by Russian President Vladimir Putin on March 1 and has an operating range of over 2,000 km. The basic carrier of the missile is the MiG-31K fighter jet as well as the Tu-22M3 bomber.

Speaking at a Business Roundtable's CEO quarterly meeting on Monday, Mr. Biden said, "And, if you notice, they've just launched a — their hypersonic missile, because it's the only thing that they can get through with absolute certainty. It's — as you all know, it's a consequential weapon. And — but — with the same warhead on it as a — as any other launched missile."

Stating that it doesn't make that much difference, except it's "almost impossible to stop it," he said, adding: "There's a reason they're using it."

Last October, top U.S. military officer Gen. Mark Milley, Chairman of the joint chiefs of staff confirmed that China had conducted a test of a hypersonic weapon which he termed was "close to a Sputnik moment" and was "very concerning", referring to the event in 1957 when the Soviet Union put the first satellite in space. Earlier in the month, The Financial Times had reported that China tested a nuclear-capable hypersonic missile in August that circled the globe before speeding towards its target, demonstrating an advanced space capability that caught U.S. intelligence by surprise. However, China has denied that it was nuclear capable. This has put the spotlight on the global development of hypersonic weapons by several countries, especially the advancements made by China and Russia. In addition to the Chinese test, in early October, Russia announced that it had successfully test launched a Tsirkon hypersonic cruise missile from a Severodvinsk submarine deployed in the Barents Sea which hit a target 350 kms away.

Talking of the test in November, Russian President Vladimir Putin declared that tests were almost complete and the Russian Navy would start receiving them in 2022. "Now, it is especially important to develop and implement the technologies necessary to create new hypersonic weapons systems, high-powered lasers and robotic systems that will be able to effectively counter potential military threats, which means they will further strengthen the security of our country," he said.

The U.S. has tested hypersonic weapons for decades. The first vehicle to exceed Mach 5 was a two-stage rocket launched in 1949 which reached a speed of Mach 6.7, under Project Bumper. While the U.S. has active hypersonic development programmes, the CRS memo said it was lagging behind China and Russia because "most U.S. hypersonic weapons, in contrast to those in Russia and China, are not being designed for use with a nuclear warhead." "As a result, U.S. hypersonic weapons will likely require greater accuracy and will be more technically challenging to develop than nuclear-armed Chinese and Russian systems," it stated The U.S. is now looking to accelerate its own programmes, though it is unlikely to field an operational system before 2023. The Pentagon's budget request for hypersonic research for financial year 2022 is \$3.8 billion, up from \$3.2 billion it requested a year earlier. The Missile Defence Agency additionally requested \$247.9 million for hypersonic defence.

However, as stated by the U.S. Principal Director for Hypersonics Mike White, the Department of Defence has not yet made a decision to acquire hypersonic weapons and is instead developing prototypes to assist in the evaluation of potential weapon system concepts and mission sets.

Debunking some of the claims surrounding hypersonic weapons, Physicists David Wright and Cameron Tracy wrote in the Scientific American dated August 1, 2021 stating their studies indicate that hypersonic weapons "may have advantages in certain scenarios, but by no means do they constitute a revolution." "Many of the claims about them are exaggerated or simply false. And yet the widespread perception that hypersonic weapons are a game-changer has increased tensions among the U.S., Russia and China, driving a new arms race and escalating the chances of conflict," they wrote. The U.S. has six known hypersonic programmes, divided among the Air Force, Army and Navy, according to them.

#### **What is the status in other countries?**

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The CRS Memo noted that although the United States, Russia, and China possess the most advanced hypersonic weapons programmes, a number of other countries — including Australia, India, France, Germany, and Japan — are also developing hypersonic weapons technology. India operates approximately 12 hypersonic wind tunnels and is capable of testing speeds of up to Mach 13, according to CRS. “Reportedly, India is also developing an indigenous, dual-capable hypersonic cruise missile as part of its Hypersonic Technology Demonstrator Vehicle (HSTDV) programme and successfully tested a Mach 6 scramjet in June 2019 and September 2020,” the memo stated. This test was carried out by the Defence Research and Development Organisation (DRDO) and demonstrated the scramjet engine technology, a major breakthrough. In a scramjet engine, air goes inside the engine at supersonic speed and comes out at hypersonic speeds.

After the test in 2020, DRDO had said that with this demonstration many critical technologies such as aerodynamic configuration for hypersonic manoeuvres, use of scramjet propulsion for ignition and sustained combustion at hypersonic flow, thermo-structural characterisation of high temperature materials, separation mechanism at hypersonic velocities have been validated.

A hypersonic version of the BrahMos supersonic cruise missile, a joint development of India and Russia, is also under development.

- They are manoeuvrable weapons that can fly at speeds of at least Mach 5, five times the speed of sound.
- Hypersonic weapons travel within the atmosphere and can manoeuvre midway which combined with their high speeds make their detection and interception extremely difficult. This means that radars and air defences cannot detect them till they are very close and have only little time to react.
- U.S. President Joe Biden confirmed that Russia used hypersonic missiles in its offensive in Ukraine.

**Source: The Hindu**

## **22. All about Lapsus\$, the hacker group that has targeted Microsoft, Samsung, Okta, Nvidia**

### **Relevant for GS Prelims & Mains Paper III; Science & Technology**

Microsoft on Wednesday published a detailed cybersecurity blog confirming that its systems were breached by the hacker group Lapsus\$. The post also states that Microsoft has observed a common thread of tactics being deployed to hack into the computer systems and networks of multiple organisations.

The response comes after other prominent companies such as Nvidia, Samsung, Ubisoft, Okta, etc were believed to have been targeted by the same group. Okta had initially denied a breach, but later released a statement saying it believed that close to 366 of its customers were likely impacted.

South America-based Lapsus\$ is known for publicly posting details about their hacks and sharing screenshots of stolen data on platforms such as Telegram and Twitter. Here’s a look at what this latest cybersecurity issue is all about.

### **How was Microsoft hacked?**

The Lapsus\$ group claimed this week that it has stolen data from Microsoft, adding that it had accessed source code for core Microsoft products Bing, Cortana, and Bing Maps. Microsoft, however, said that while no customer code or data was involved, their investigation found that a single account was compromised, thus granting limited access to the hackers.

The statement added, “Our cybersecurity response teams quickly engaged to remediate the compromised account and prevent further activity.” The company said it does not view the secrecy of source code as a security threat and that viewing it does not mean an increased risk to products.

“Our team was already investigating the compromised account based on threat intelligence when the actor publicly disclosed their intrusion. This public disclosure escalated our action allowing our team to intervene and interrupt the actor mid-operation, limiting broader impact,” read the statement.

### **Who else has been targeted by Lapsus\$? Why is the attack on Okta in focus?**

Microsoft said they’ve observed Lapsus\$ has targeted several organisations. Lapsus\$ too has been posting about these hacks on their official Telegram channel and other social media accounts. The group does not shy away from taking credit for these attacks, unlike other groups, which prefer to stay under the radar.

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According to reports, NVIDIA, Samsung, Ubisoft and Okta are some of the organisations the hackers have targeted. The Okta hack in particular is worrisome because the San Francisco-based company provides online authentication services to several prominent players such as FedEx Corp, T-Mobile, Moody’s Corp and Coinbase Global and even cloud services provider Cloudflare.

Okta stated that around 366 of its customers are impacted, though it insisted that the attackers never gained direct access to their overall system. According to Okta’s statement, hackers got access via “a machine that was logged into Okta”. The attack was detected as part of an unsuccessful attempt to compromise the account of a customer support engineer in Jan 2022, and Okta had alerted those at risk as part of the process at the time. The statement claims the scenario is equivalent to one “walking away from your computer at a coffee shop, whereby a stranger has (virtually in this case) sat down at your machine and is using the mouse and keyboard.”

According to Lotem Finkelstein, Head of Threat Intelligence and Research at Check Point Software, “If true, the breach at Okta may explain how Lapsus\$ has been able to achieve its recent string successes. Thousands of companies use Okta to secure and manage their identities. Through private keys retrieved within Okta, the cyber gang may have access to corporate networks and applications. Hence, a breach at Okta could lead to potentially disastrous consequences.”

Okta’s services are used by other players for Single Sign-On and Multi-factor Authentication to let other users log in to online apps and websites.

Meanwhile, Nvidia has said it is “still working to evaluate the nature and scope of the event.” The incident was termed a ransomware attack.

Regarding Samsung, the group had posted screenshots showing it had access to nearly 200GB of data, including source code used by Samsung for encryption and biometric unlocking functions on Galaxy devices.

Samsung’s statement had said that no personal data belonging to employees or customers was stolen, though it said there was a security breach relating to “internal company data”. The statement had acknowledged that the breach did involve source code related to the Galaxy devices.

### **How exactly has Lapsus\$ managed to carry out these attacks?**

Microsoft’s blog post has given some clues on how these attacks took place, though the group appears to have deployed a wide variety of methods. The blog post refers to Lapsus\$ as DEV-0537, and according to Microsoft, the hackers rely on “large-scale social engineering and extortion campaigns against multiple organizations...”

In social engineering attacks, cybercriminals try to lure individuals into revealing critical personal information via phishing attacks. This information can then be used to compromise other accounts. For instance, they might ask one to take a survey revealing personal details such as their mother’s maiden name or favourite dish or date of birth, etc. All of this information might be used to either guess passwords or even answers to security questions for an account.

According to Microsoft, the group relies on a “pure extortion and destruction model without deploying ransomware payloads.” It started by targeting organisations in the United Kingdom and South America but has

expanded globally. Their targets are across a range of sectors: government, technology telecom, media, retail and healthcare. It is also attacking cryptocurrency exchanges to steal cryptocurrency holdings.

Microsoft states that the group is also relying on some tactics that are less frequently used by other threat actors. These include methods such as “SIM-swapping to take over accounts, accessing personal email accounts of employees at target organisations.”

In some cases, it has even paid employees or suppliers at an organisation in order to gain access to privileged networks and systems. Another example talks about the group calling up an organisation’s helpdesk to reset a target’s credentials. The group used other information gathered about the target in order to trick the helpdesk into giving access.

For now, Microsoft has recommended that businesses rely on Multi-Factor Authentication (MFA) to protect themselves from such attacks. It also recommends against weak MFA factors such as text messages, since these are susceptible to SIM swapping. It has also cautioned against simple voice approvals, push notifications, or even “secondary email” based MFA methods.

It also recommends increasing awareness among employees and IT help desks around social engineering attacks.

**Source: The Indian Express**

### **23. The Artemis programme, NASA’s new moon mission**

#### **Relevant for GS Prelims & Mains Paper III; Science & Technology**

On March 17, the National Aeronautics and Space Administration (NASA) rolled out its Artemis I moon mission to the launchpad for testing at the Kennedy Space Centre in Florida, United States. The Space Launch System (SLS) rocket and Orion capsule of the mission were hurled out to the launchpad by NASA’s Crawler-Transporter 2 vehicle.

#### **What is the Artemis mission?**

NASA’s Artemis mission is touted as the next generation of lunar exploration, and is named after the twin sister of Apollo from Greek mythology. Artemis is also the goddess of the moon.

Artemis I is the first of NASA’s deep space exploration systems. It is an uncrewed space mission where the spacecraft will launch on SLS — the most powerful rocket in the world — and travel 2,80,000 miles from the earth for over four to six weeks during the course of the mission. The Orion spacecraft is going to remain in space without docking to a space station, longer than any ship for astronauts has ever done before.

The SLS rocket has been designed for space missions beyond the low-earth orbit and can carry crew or cargo to the moon and beyond. With the Artemis programme, NASA aims to land humans on the moon by 2024, and it also plans to land the first woman and first person of colour on the moon.

With this mission, NASA aims to contribute to scientific discovery and economic benefits and inspire a new generation of explorers.

NASA will establish an Artemis Base Camp on the surface and a gateway in the lunar orbit to aid exploration by robots and astronauts. The gateway is a critical component of NASA’s sustainable lunar operations and will serve as a multi-purpose outpost orbiting the moon.

Other space agencies are also involved in the Artemis programme. The Canadian Space Agency has committed to providing advanced robotics for the gateway, and the European Space Agency will provide the International

Habitat and the ESPRIT module, which will deliver additional communications capabilities among other things. The Japan Aerospace Exploration Agency plans to contribute habitation components and logistics resupply.

**What is the mission trajectory?**

SLS and Orion under Artemis I will be launched from the Kennedy Space Centre in Florida, U.S. in the summer of 2022. The spacecraft will deploy the interim cryogenic propulsion stage (ICPS), a liquid oxygen/liquid hydrogen-based propulsion system that will give Orion the thrust needed to leave the earth's orbit and travel towards the moon.

On its way to the moon, Orion will be propelled by a service module provided by the European Space Agency (ESA). The spacecraft will communicate with the control centre back on Earth through the deep-space network. It will fly around 100 km above the surface of the moon and use its gravitational pull to propel Orion into an opposite deep orbit around 70,000 km from the moon, where it will stay for approximately six days. The aim of the exercise is to collect data and to allow mission controllers to assess the performance of the spacecraft.

To re-enter the earth's atmosphere, Orion will do a close flyby within less than 100 km of the moon's surface and use both the service module and the moon's gravity to accelerate back towards the earth. The mission will end with the spacecraft's ability to return safely to the earth.

**What are the future missions in the Artemis programme?**

The second flight under the programme will have crew on board and will test Orion's critical systems with humans onboard. Eventually, the learnings from the Artemis programme will be utilised to send the first astronauts to Mars. NASA plans on using the lunar orbit to gain the necessary experience to extend human exploration of space farther into the solar system.

Source: The Hindu

**24. T cell immune responses seen a year after infection**

Relevant for GS Prelims & Mains Paper III; Science & Technology

Like in most countries where the Omicron variant had become dominant and caused a high spike in daily cases, the third wave in India propelled by Omicron caused a large number of reinfections in unvaccinated people and breakthrough infections even among the fully vaccinated. However, across the world, the Omicron variant was found to cause only mild disease in fully vaccinated people and in those with previous infection. This was real-world proof that previous infection and/or full vaccination with two doses provide protection against progression of disease to a severe form.

**Protective effect**

Laboratory studies undertaken in all countries have only studied the neutralisation ability of sera of people who have recovered from COVID-19 and people who have been fully vaccinated. This could only shed light on the ability of past infection and/or vaccination to prevent infection by highly transmissible variants with immune escape. But no studies have been done to evaluate the protective effect of memory T cell immune responses against severe disease 12 months after primary infection. A new study from Wuhan addresses this gap. The results were published in the journal The Lancet Microbe.

**Independent of severity**

The researchers found that neutralising antibodies were detectable even 12 months after infection in "most individuals", and it remained stable 6-12 months after initial infection in people younger than 60 years. The researchers found that "multifunctional T cell responses were detected for all SARS-CoV-2 viral proteins tested".



And most importantly, the magnitude of T cell responses did not show any difference immaterial of how severe the disease was. While the ability of antibodies to neutralise was nearly absent against the Beta variant, it was reduced in the case of the Delta variant.

In contrast, the T cell immune responses were detectable in all the 141 individuals tested 12 months after infection and even when they had lost the neutralising antibody response. And the T cell responses were responding against the Beta variant in most of the 141 individuals.

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### **Neutralising antibodies**

"SARS-CoV-2-specific neutralising antibody and T cell responses were retained 12 months after initial infection. Neutralising antibodies to the D614G, Beta, and Delta were reduced compared with those for the original strain, and were diminished in general. Memory T cell responses to the original strain were not disrupted by new variants," they write. "Our findings show that robust antibody and T cell immunity against SARS-CoV-2 is present in majority of recovered patients 12 months after moderate-to-critical infection."

### **Robustness of T cells**

The study reveals the durability and robustness of the T cell responses against variants, including Delta, even after one year of infection. Most importantly, the robust and longstanding T cell responses were seen in people who have not been reinfected or vaccinated. This would mean even in the absence of vaccination, a person who has been infected by the virus even one year ago would have robust immune responses, which would offer protection against disease progressing to a severe form requiring hospitalisation. But the neutralising antibodies were found to diminish at the end of 12 months.

It might be recalled that except the Oxford vaccine (AstraZeneca), none of the trials evaluated the ability of the vaccines to prevent infection. The endpoint of all vaccine efficacy studies was to evaluate if vaccinated people developed symptomatic disease or not.

### **Lack of studies**

However, the booster doses aggressively pushed by vaccine manufacturers are for preventing infection. And even when the neutralising antibodies increase after a booster shot, they do drop after a few months. No studies have been done to evaluate if booster doses improve T cell immune responses, which is the most important criterion of vaccination.

In the case of neutralising antibodies, the researchers found that 121 (85.8%) were positive for neutralising antibodies at the 6 months while there was a slight reduction at the end of 12 months as only 115 (81.6%) were positive for neutralising antibodies.

The neutralising antibody titres did not show any difference based on disease severity — mild or moderate — or in those younger than 60 years. However, the neutralising antibody titres declined in older people and in people with critical disease.

### **Response to strains**

A year after infection, 115 of 141 (82%) individuals had neutralising antibodies against the original strain from Wuhan, China. "In contrast, only 68 (48%) had neutralising antibodies against D614G, 32 (23%) had neutralising antibodies against the Beta variant, and 69 (49%) had neutralising antibody responses against the Delta variant", they write.

**Source: The Hindu**

## **25. What are the missiles India test-fired at the Odisha coast**

**Relevant for GS Prelims & Mains Paper III; Science & Technology**

The Defence Research and Development Organisation (DRDO) on Sunday (March 27) conducted two successful flight tests of the Army version of Medium Range Surface to Air Missile (MRSAM) at the Integrated Test Range, Chandipur, off the coast of Odisha. Explained below are key features of the missile.

### **What kind of flight tests were carried out today for MRSAM?**

The tests were part of the live firing trials against high-speed aerial targets. The missiles are reported to have intercepted and destroyed the targets. The first launch was to intercept a medium-altitude long-range target and the second launch was for providing capability of a low-altitude short-range target. These tests were user trials by the Indian Army.

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### **What is a MRSAM?**

The MRSAM is a surface-to-air missile jointly developed by DRDO and Israel Aerospace Industries (IAI) for use by the Indian Army. The missile will replace the ageing Air Defence systems of the Army. The MRSAM weapon system comprises multi-function radar, mobile launcher system and other vehicles. It has Army, Navy and Air Force variants.

The mobile launcher can transport, place and launch eight canisterised missiles. These can be fired either in single mode or in ripple firing mode in a vertical firing position.

The missile's management system uses the radar to track and correctly identify the target, calculates the distance from it and gives all the information to the Commander for a decision to be made on interception. The missile itself is 4.5 metres in length with a weight of around 275 kg. It is equipped with fins and canards to stabilise its flight and provide it manoeuvrability.

### **How is the MRSAM powered?**

The missile is powered by a solid propulsion system coupled with a thrust vector control system. The missile can move at a maximum speed of Mach 2 (twice the speed of sound). It can engage multiple targets upto a range of 70 km.

**Source: The Indian Express**

## **26. The role of VRR for a flawless gaming experience**

### **Relevant for GS Prelims & Mains Paper III; Science & Technology**

Google is said to be testing support for variable refresh rates (VRR) in the Chrome OS 101 Dev Channel, according to a report by About Chromebooks. The feature could improve gaming experience on Chromebooks. Several other device makers have used a form of the VRR in their products to provide superior experience, particularly in gaming.

### **What is VRR?**

Refresh rate is the number of times a display is capable of refreshing in a second. It is measured in hertz (Hz). So, a 30 Hz or a 60 Hz display can refresh 30 or 60 times per second, respectively. The higher the refresh rate, the better the quality of viewing experience. Displays with over 120 Hz can deliver a smoother and more comfortable viewing experience. This is necessary while playing video games or watching videos.

VRR supports a wide range of refresh rates, allowing its refresh rate to change in real-time based on the frames-per-second (FPS) rate coming from a source device such as a gaming console. For example, displays that support refresh rates from 10 Hz to 120 Hz, or 1Hz to 120 Hz, can adjust to different content styles for a seamless entertainment or gaming experience.

### **How does the technology work?**

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VRR, which is also termed as dynamic refresh rate or adaptive refresh rate by different device makers, is designed to eliminate syncing issues that arise when the refresh rate of a display does not match with the FPS of the content from a source device. Issues such as screen-tearing, judder (wobbling effect) and lag are common when refresh rate and FPS are not synchronised.

This screen technology enables a monitor or a TV to communicate with a gaming console or a media streaming device much more effectively. Consequently, when the source device sends video frames as fast as it can, the display is able to adapt its own refresh rate continuously and seamlessly within its specific range to match that of the source.

VRR is provided by AMD's FreeSync, Nvidia's G-Sync, HDMI 2.1, Apple's ProMotion, and Qualcomm's Q-Sync to name a few. Among these, AMD and Nvidia's VRR have been used in PCs for a number of years, and also in PlayStation and Xbox gaming consoles.

### **Can it improve gaming experience?**

Yes. It can improve gaming experience in both console and PC-based gaming. Once the console is connected to a monitor that supports one of the VRR solutions, it can eliminate judder and artefacts caused by mismatches in FPS. This in turn significantly improves image quality in games and videos. The higher the FPS the smoother the experience for gamers.

The makers of the latest gaming consoles offer a growing number of video games that play at 120 FPS and have optimised many popular older games to play at 120 FPS as well. Using a display that supports VRR technology, players can expect smooth and lag-free visuals in fast-paced games, giving them a greater advantage in first-person shooters, racing, or real-time strategy titles.

Besides, the screen technology can give players an important edge, especially in competitive multi-player games where split-second decisions are crucial for victory. Casual gamers will also be able to appreciate extra responsiveness in gameplay. One of the common problems gamers experience is screen-tearing when the FPS output from a source is higher than the refresh rate a display can handle, which results in the display showing two or more frames in its top and bottom halves. This syncing issue can be fixed with one of the VRR solutions.

### **Is it available in mobile devices?**

Premium smartphones offer a kind of VRR solution. Samsung first introduced VRR technology in its Galaxy Note 20 Ultra and later in the subsequent iterations of its flagship devices.

The latest Galaxy S22 and S22+ feature adaptive refresh rate from 48 Hz to 120 Hz, whereas the more premium S22 Ultra offers adaptive refresh rate from 1 Hz to 120 Hz.

Apple's ProMotion has an adaptive refresh rate of up to 120 Hz on its new iPad Pro (10.5-inch) and iPad Pro 2nd generation (12.9-inch). Its latest iPhone 13 Pro models also feature an adaptive refresh rate from 10 Hz to 120 Hz.

In mobile devices, a VRR solution can not only improve the gaming experience of users by keeping up with intense gameplay but also save battery power on them as the adaptive refresh rate does not run at the highest rate all the time and switches to a lower refresh rate during less graphic-intensive tasks.

### **What does it mean for Chromebooks?**

Earlier this month, Google said that it is working with Valve to bring Steam to Chrome OS. "We are very excited to share that we'll be landing an early, alpha-quality version of Steam on Chrome OS in the Dev channel for a small set of Chromebooks coming soon," it noted on a support page. Additionally, the search giant may introduce gaming-focused Chrome OS devices, with at least one of those devices featuring a full RGB keyboard, according to a report by 9to5Google.

Google's development of new devices for the gaming market, testing of the VRR technology, and collaboration with Valve can be looked at as positive indicators for Chromebooks.

**Source: The Hindu**

## **27. What kind of microplastics were found in human blood in a recent study? Can these particles travel through the body?**

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**Relevant for GS Prelims & Mains Paper III; Science & Technology**

Microplastics are, as the name suggests, tiny particles of plastics found in various places — the oceans, the environment, and now in human blood. A study by researchers from The Netherlands (Heather A. Leslie et al, Environment International, Published online 24 March) has examined blood samples of 22 persons, all anonymous donors and healthy adults, and found plastic particles in 17 of them. A report on this work, published in The Guardian conveys that about half of these were PET (polyethylene terephthalate) plastics, which is used to make food grade bottles. The size of the particles that the group looked for was as small as about 700 nanometres (equal to 0.0007 millimetres). This is really small and it remains to be seen if there is a danger of such particles crossing the blood cell walls and affecting the organs. Also, a larger study needs to be conducted to firm up the present findings.

### **What are microplastics?**

Microplastics are tiny bits of various types of plastic found in the environment. The name is used to differentiate them from “macroplastics” such as bottles and bags made of plastic. There is no universal agreement on the size that fits this bill — the U.S. NOAA (National Oceanic and Atmospheric Administration) and the European Chemical Agency define microplastic as less than 5mm in length. However, for the purposes of this study, since the authors were interested in measuring the quantities of plastic that can cross the membranes and diffuse into the body via the blood stream, the authors have an upper limit on the size of the particles as 0.0007 millimetre.

### **What were the plastics that the study looked for in the blood samples?**

The study looked at the most commonly used plastic polymers. These were polyethylene terephthalate (PET), polyethylene (used in making plastic carry bags), polymers of styrene (used in food packaging), poly (methyl methacrylate) and poly propylene. They found a presence of the first four types.

### **How was the study conducted?**

In the study, blood from 22 adult healthy volunteers was collected anonymously, stored in vessels protected from contamination, and then analysed for its plastic content. The size of the bore in the needle served to filter out microplastics of a size greater than desired. This was compared against suitable blanks to rule out pre-existing plastic presence in the background.

### **What are the key results of this study?**

The study found that 77% of tested people (17 of the 22 persons) carried various amounts of microplastics above the limit of quantification. In 50% of the samples, the researchers detected PET particles. In 36%, they found presence of polystyrene. 23% of polyethylene and 5% of poly(methyl methacrylate) were also found. However, traces of poly propylene were not detected.

They found in each donor, on average, 1.6 microgram of plastic particles per milli litre of blood sample. They write in the paper that this can be interpreted as an estimate of what to expect in future studies. It is a helpful starting point for further development of analytical studies for human matrices research.

### **What is the significance of the study?**

Making a human health risk assessment in relation to plastic particles is not easy, perhaps not even possible, due to the lack of data on exposure of people to plastics. In this sense, it is important to have studies like this



one. The authors of the paper also remark that validated methods to detect the tiny (trace) amounts of extremely small-sized (less than 10 micrometre) plastic particles are lacking. Hence this study, which builds up a methods to check the same, is important. Owing to the small size of the participants, the study results cannot be taken as such to mould policy etc, but the power of this paper is in the method and in demonstrating that such a possibility of finding microplastics in the blood exists.

### **Does the presence of microplastics in blood have health impacts?**

It is not yet clear if these microplastics can cross over from the blood stream to deposit in organs and cause diseases. The authors point out that the human placenta has shown to be permeable to tiny particles of polystyrene (50, 80 and 24 nanometre beads). Experiments on rats where its lungs were exposed to polystyrene spheres (20 nanometre) led to translocation of the nanoparticles to the placental and foetal tissue. Oral administration of microplastics in rats led to accumulation of these in the liver, kidney and gut.

Further studies have to be carried out to really assess the impact of plastics on humans.

**Source: The Hindu**

## **28. The Startup India initiative evaluation**

### **Relevant for GS Prelims & Mains Paper III; Science & Technology**

A research paper from Dublin City University in Ireland, reviewing India's entrepreneurial policy Startup India, affirmed its positive impact in reducing regional entrepreneurial disparities. However, it cited shortcomings in addressing the under-representation of women and marginalised caste groups in the national startup ecosystem. The paper was published in the Economic and Political Weekly in December 2021. Startup India was introduced in 2016 as a "clarion call to innovators, entrepreneurs, and thinkers of the nation to lead from the front in driving India's sustainable growth and create large scale employment opportunities."

Minister for Commerce and Industry Piyush Goyal informed the Lok Sabha the other week that the entrepreneurial portal had more than 65,000 startups registered. Of which, 40 attained the 'unicorn' status in the last twelve months, bringing the total as of date to 90. He stated that India ranked third among global startup eco-systems.

### **Addressing regional entrepreneurial disparities**

The evidence collated by authors of the research paper suggested that the networking, training and mentoring facilities provided by Startup India alongside entrepreneurship outreach campaigns in tier-2 and tier-3 cities, helped address regional entrepreneurial disparities in India. The program was aimed at scouting entrepreneurs from these cities and integrate them into the portal. It would then facilitate a network between venture capital funds, angel networks, banks, incubators, accelerators, universities, legal partners, consultants and research & development institutions.

The paper states the initiative helped redirect many State govts' policymaking in favour of startups. Quoting from Startup India's Report (2018), the researchers mention, only four States had dedicated startup policies prior to its launch. After its launch and as of December 2019, 23 States and 2 Union Territories had formulated a dedicated startup policy.

# Recognised startups under Startup India

## HIGHEST

Maharashtra	<b>8353</b>
Karnataka	<b>5999</b>
Delhi	<b>5587</b>
Uttar Pradesh	<b>3880</b>
Gujarat	<b>2622</b>

## LOWEST

Meghalaya	<b>9</b>
Arunachal Pradesh	<b>4</b>
Mizoram	<b>4</b>
Sikkim	<b>4</b>
Ladakh	<b>1</b>
Lakshadweep	<b>1</b>

### Heavy concentration in megacities

Despite the initiative, the researchers pointed out that entrepreneurship continued to be “highly concentrated” in three megacities, namely, Mumbai, Bengaluru and Delhi NCR. The three cities accounted for 93% of all funding raised between 2014 and 2019. The paper pointed out that India’s venture capital industry is also clustered in and around these three cities.

The same notion was established by the Reserve Bank of India (RBI) in its Pilot Survey on the Indian Startup Sector (2019). The research involving 1,246 participants stated nearly three-fourths of the participants were from Karnataka, Maharashtra, Telangana, Delhi and Tamil Nadu.

Quoting from recent studies, the researchers stated that such concentration can lead to increased economic inequality and hinder emergence of entrepreneurs from industries other than those belonging to the clusters. The spurt of industries (in this case, startups) create employment opportunities, this furthers a demand for leisure and essential amenities among the populace. In turn, this furthers employment, economic activity and efficiency. However, this takes place at the expense of another area having previously failed to enable a suitable supportive ecosystem.

According to results computed by the researchers in the paper, 30% of all States and Union Territories in India have an equal or higher proportionate share in the Dept for Promotion of Industry and Internal Trade’s (DPIIT) recognised start-up pool in relation to their share in the country population.

### Ensuring representation

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Youtube channel: [PrepMateEdutech](https://www.youtube.com/PrepMateEdutech)

The researchers point out that the 40-page Startup India Action Plan document has no mention of the words 'caste', 'tribe', 'marginalised', 'indigenous' or 'social group'.

According to them, this contradicts the initiative's very notion of making entrepreneurship in India inclusive. The under-representation could be due to multiple factors, the paper states, such as caste-based economic exclusion, the urban and rural divide, lack of access to quality education and limited social networks. Additionally, the policy's reliance on technology does not take into consideration India's digital divide, especially with respect to urban and rural areas.

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With reference to government data from 2013, the paper concluded that SC and ST share in ownership of agricultural establishments including farming, livestock, fishery and forestry were higher in comparison to non-agricultural establishments. They were based majorly in rural areas in comparison to urban areas. Most of them operated without any hired workers, indicating that a significant number of these enterprises were necessity-based undertakings not creating any significant job opportunities. According to economist Thorsten Beck, necessity-based or subsistence entrepreneurship refer to businesses that are run informally and through self-employment. A large number of these are set up owing to lack of employment opportunities in the formal sector. "The evidence thus suggests the need for targeted measures to promote technology-and innovation-driven entrepreneurship among SC and ST communities. However, the Startup India policy document in its present form does not address this issue," the paper noted.

### **Women in the industry**

In February, the Minister of State for Commerce & Industry Som Prakash, in response to a question on women entrepreneurship under Startup India, had informed that of 62,000 startups registered with the DPIIT, 46% of them had at least one woman director. RBI's pilot survey had earlier stated that 5.9% of participating startups in its survey had a female founder in comparison to 55.5% of the opposite gender. The remaining 38.6% had both male and female co-founders.

Mr Som had also apprised the house of dedicated measures taken to spurt women entrepreneurship. 10% of the fund in the Fund of Funds operated by Small Industries Development Bank of India (SIDBI) has been reserved for women-led startups. Further, all the Alternate Investment Funds where the SIDBI takes equity have been mandated to contribute 20% in business which are women led, women influenced and women employment or women consumption centric. He also informed the house about capacity building programmes and the dedicated webpage for women on the portal. As per the established arrangement, the DPIIT allocates funds to SIDBI, which in turn invests the money in alternative investment firms (AIFs). The latter would then raise matching funds, and post fundraising, invest the money and disburse to startups, the paper informs. This is done to avoid any potential accusation of 'favouritism'.

**Source: The Hindu**

## **29. Why e-scooters have been catching fire in India**

### **Relevant for GS Prelims & Mains Paper III; Science & Technology**

Over the last five days, there have been at least four reported incidents of two-wheeler electric vehicles — made by the likes of Ola, Okinawa and Pure EV — abruptly bursting into flames, bringing to the fore safety issues related to such vehicles, especially the batteries that power them.

EVs are powered by lithium-ion batteries, of the kind used in cellphones and smartwatches, which are generally considered to be efficient and light compared to their counterparts. However, they may also pose a fire risk, as evidenced by the recent incidents.

### **What are lithium ion batteries, and how do they work?**

From electric cars to smartphones to laptops, lithium-ion (Li-ion) batteries are the most popular battery type today, powering millions of consumer electronics around the world. A Li-ion battery consists of an anode, cathode, separator, electrolyte, and two current collectors. The anode and cathode is where the lithium is stored, while the electrolyte carries positively charged lithium ions from the anode to the cathode and vice versa through the separator. The movement of the lithium ions creates free electrons in the anode, which creates a charge at the positive current collector.

The key things that make a Li-ion battery better than other kinds, and more suited for things like electric cars and smartphones are its light weight, high energy density, and ability to recharge. Apart from this, Li-ion batteries also typically have a longer lifespan compared to a lead acid battery.

A Li-ion battery can typically store 150 watts-hour per kg as compared to a lead-acid battery which stores only around 25 watts-hour per kg. In simple terms, it means that Li-ion batteries offer more efficiency compared to other battery types while keeping the form factor of a product relatively compact, which means an electric car fitted with Li-ion batteries will have a greater driving range, and smartphones will last longer through the day.

However, one of the biggest benefits of Li-ion batteries — its high energy density — can also be a potential reason behind the battery's undoing. According to a blog post by two-wheel EV maker Ather Energy, Li-ion batteries' high energy density means these cells can become unstable in certain conditions, hampering functionality. They work best within a safe operating limit. A battery management system (BMS) is applied to a Li-ion battery to make sure they operate safely.

#### **What is a battery management system?**

A BMS is basically an electronic system that is connected to all the cells in a Li-ion battery pack, which constantly measure their voltage and the current flowing through it. A BMS is also equipped with a myriad of temperature sensors, providing it information on temperatures at different sections of the battery pack. All this data helps the BMS calculate other parameters of a battery pack, like the charging and discharging rate, battery life cycle, and efficiency.

#### **So why did the Ola, Okinawa and other EVs' batteries catch fire?**

The actual reasons behind the Ola and Okinawa EVs catching fire are currently unknown as the companies have said they are investigating the matter. However, Okinawa said that from its preliminary observations, based on "credible sources, the media and local authorities", the fire in its scooter was a result of short circuiting due to "negligence in charging the vehicle".

However, these examples also serve as a cautious reminder to the consequences of faults within a Li-ion battery pack. According to industry experts, a number of reasons, such as manufacturing defects, external damage, or faults in the deployment in the BMS could result in these batteries becoming a fire risk.

On the other hand, temperature, experts pointed out, plays a tricky role in a Li-ion battery pack. "While Li-ion batteries typically perform better in warmer temperatures, extremely high temperatures could mean the battery pack's ambient temperature could shoot up as high as 90-100 degrees, which is when they become extremely prone to catching fire," a representative of an EV manufacturer said, requesting anonymity.

Aside from that, EVs and electronic devices are equipped with hundreds of batteries together in a battery pack. This means that even if a few batteries malfunction and cause a short circuit, it can kickstart a chain reaction resulting in a fire, given that a battery pack is tightly packed with a number of Li-ion cells. This effect is called thermal runaway, which, according to experts, is the reason why Li-ion batteries burst into flames immediately.

Apart from this, prior accidents of a vehicle which may have damaged the battery pack could also sometimes lead to it catching fire after a few cycles of charging.



Reacting to the recent incidents, in a media interview, Tarun Mehta, founder of Ather Energy, said manufacturers are not taking enough time to design products and that testing standards laid down by government bodies may not be enough to test all real-life situations accurately.

**What has been the reaction to these fires?**

As the companies themselves carry out internal investigations into the incidents, the Ministry of Road Transport and Highways has ordered a probe into the vehicles catching fire abruptly, and is learnt to have reached out to the Centre for Fire Explosive and Environment Safety (CFEES) to carry out investigations.

**What are some previous cases of fires due to faulty in Li-ion batteries?**

There have been a number of instances where devices or vehicles powered by Li-ion batteries have erupted into flames. Two of the instances that particularly stand out are Samsung's Note 7, and a Tesla Model S abruptly catching fire while it was standing in a parking garage in Shanghai.

In the case of the Tesla incident, the company said the fire was caused by a single battery module located at the front of the vehicle and that its investigation found no other system defect.

In Samsung's case, which impacts thousands of its smartphones in the Note 7 series, the company largely found manufacturing defects to be the reason behind the fire — in some cases, the insulation tape around the batteries was missing, resulting in short circuiting, and some batteries had sharp protrusions inside the cell that led to damage to the separator between the anode and cathode.

**Source: The Indian Express**

**30. Why is Nitin Gadkari travelling to Parliament in a hydrogen-powered car significant?****Relevant for GS Prelims & Mains Paper III; Science & Technology**

Union Transport Minister Nitin Gadkari Wednesday travelled to the Parliament House in a hydrogen-based Fuel Cell Electric Vehicle (FCEV), in what could be interpreted as a strong indication of a shift in stance by the Centre that has so far backed conventional battery-powered electric vehicles, or BEVs.

**In which vehicle did Gadkari travel?**

The Union Minister for Road Transport and Highways travelled in a Toyota Mirai vehicle, which sports three hydrogen tanks, and can be refuelled in an estimated five minutes. It also has a 1.24 kWh lithium ion battery pack. The car is powered by a 182 hp electric motor.

**Why did he travel in this car?**

On Wednesday, Gadkari's office posted on the microblogging site Koo: "Union Minister Shri @nitin.gadkari ji visited Parliament House by Hydrogen based Fuel Cell Electric Vehicle (FCEV) today. Demonstrating the car powered by 'Green Hydrogen', Shri Gadkari ji emphasised the need to spread awareness about Hydrogen, FCEV technology and its benefits to support hydrogen-based society for India."

Earlier this year, Gadkari had said in Goa that he would start using a vehicle that runs on green hydrogen as a pilot project. For the same, he said that Indian Oil Corporation had assured the supply of green hydrogen.

**How is this car different from other electric vehicles?**

Typically, there are four broad categorisations of electric vehicles—conventional hybrid electric vehicles (HEVs), plug-in hybrid vehicles (PHEVs), BEVs and FCEVs.

FCEVs such as Toyota's Mirai, Honda's Clarity and Hyundai's Nexo use hydrogen gas to power an on-board electric motor.

FCEVs combine hydrogen and oxygen to produce electricity, which runs the motor. Since they're powered entirely by electricity, FCEVs are considered EVs, but unlike BEVs, their range and refuelling processes are comparable to conventional cars and trucks.

The major difference between a BEV and a hydrogen FCEV is that the latter enables a refuelling time of just five minutes, compared to 30-45 minutes charging for a BEV. Also, consumers get about five times better energy storage per unit volume and weight, which frees up a lot of space for other things, while allowing the rider to go farther.

### **What is India's policy on hydrogen-powered vehicles?**

Prime Minister Narendra Modi, while speaking at the 3rd Re-invest Conference in November 2020, had announced plans to launch a comprehensive National Hydrogen Energy Mission.

In the Union Budget for 2021-22 last year, Finance Minister Nirmala Sitharaman proposed launching a Hydrogen Energy Mission in 2021-22 for generating hydrogen from green power sources.

Last month, the Ministry of New and Renewable Energy announced a 13-point Green Hydrogen Policy detailing the various incentives and ways to manufacture green hydrogen.

**Source: The Indian Express**

## **Social Issues**

### **1. What is manual scavenging, and why is it still prevalent in India?**

#### **Relevant for GS Prelims & Mains Paper I; Social Issues**

Three labourers in Mumbai, allegedly hired for manual scavenging, died on Thursday afternoon after inhaling toxic fumes in a septic tank. The incident took place around 3.15 pm in a public toilet. The deceased labourers have been identified as Sayyad Rauf alias Baba, 35, Ganpati Virswamy, 45, and Annadurai Velmil, 40.

Even though manual scavenging is banned in India, the practice is still prevalent in many parts of the country.

#### **What is manual scavenging?**

Manual scavenging is the practice of removing human excreta by hand from sewers or septic tanks. India banned the practice under the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 (PEMSR). The Act bans the use of any individual for manually cleaning, carrying, disposing of or otherwise handling in any manner, human excreta till its disposal.

In 2013, the definition of manual scavengers was also broadened to include people employed to clean septic tanks, ditches, or railway tracks. The Act recognizes manual scavenging as a "dehumanizing practice," and cites a need to "correct the historical injustice and indignity suffered by the manual scavengers."

#### **Why is manual scavenging still prevalent in India?**

The lack of enforcement of the Act and exploitation of unskilled labourers are the reasons why the practice is still prevalent in India. The Mumbai civic body charges anywhere between Rs 20,000 and Rs 30,000 to clean septic tanks. The unskilled labourers, meanwhile, are much cheaper to hire and contractors illegally employ them at a daily wage of Rs 300-500.

Last year, activist Bezwada Wilson from the Safai Karmachari Andolan, said on Twitter that 472 deaths due to manual scavenging had been recorded from 2016 to 2020.

**Past incidents**

In January 2019, three labourers suffocated to death while cleaning a sewage treatment plant on Mira Road. On May 3, 2019, three labourers choked to death while cleaning a septic tank in a private society in Nalasopara, near Mumbai. On May 11, three men in their 20s were killed after they inhaled toxic fumes while cleaning a septic tank at a housing society in Thane. A BMC worker, who had entered a manhole at Nana Chowk in Mumbai, died after inhaling toxic gases. And four other workers were hospitalised.

In February 2017, three labourers suffocated to death while they were cleaning a septic tank of a residential society in Mumbai's Malvani area. In Dombivali, a son and father died while cleaning a septic tank.

**Compensation**

After a two-year-long wait, widows of the three workers who died while cleaning a septic tank in May 2019 were set to get compensation from the state government's social justice department issuing a Government Resolution (GR). As per the Prohibition of Employment of Manual Scavengers and their Rehabilitation (PEMSR) Act, 2013 and the Supreme Court's decision in the Safai Karamchari Andolan v/s Union of India case, a compensation of Rs 10 lakh each was awarded by the High Court to the three women. The GR is a huge win for safai karamcharis within the state because it acknowledges the role of the State even when deaths occur in private societies. Many deaths recorded are in private societies, where labourers are illegally hired.

**Steps taken by BMC**

Following the death of at least 12 labourers in 2019, the Brihanmumbai Municipal Corporation (BMC) had, in January 2020, published a notice informing residents that cesspool vehicles and CP lorries will be available in each of Mumbai's 24 wards for the cleaning of septic tanks in public or private premises.

A civic official had then said, "The notice will help to create public awareness about the topic. The machines are available in each ward but people hardly know about them. So, they hire daily wage labourers to clean septic tanks, which is an illegal practice and, in many cases, has led to accidents."

In February last year, the BMC decided to buy 37 high-tech machines for the purpose. The officials said that while 24 machines will enable cleaning sewers in compact pipes or narrow lanes with a diameter of 300 mm, seven quick response machines for cleaning up quickly in case of urgent calls like a choke up, three 600 mm high capacity main sewer cleaning machines and three others for sludge and silt dewatering that will be used for cleaning septic tanks.

**Source: The Indian Express**

**2. How Karnataka HC verdict on hijab ban upholds Govt stand — and raises issues for appeal****Relevant for GS Prelims & Mains Paper I; Social Issues**

Shifting the debate from personal choice and an individual's agency to religious freedom; lack of scrutiny of the Karnataka government's order allowing colleges to restrict wearing a hijab; separation of freedom of conscience from religious freedom: these are the key grounds on which the Karnataka High Court verdict on the hijab ban is likely to be challenged in the apex court.

Endorsing the state's case, the 129-page verdict places the essential religious practice test at the centre of the debate on hijab sidestepping arguments made by the petitioners on the right to freedom of speech and expression and the right to equality — dismissing them as "derivative rights" that are lesser rights.

Indeed, the bench, right through, underlines "restrictions" reinforcing the government's case than interpreting "freedoms" the petitioners invoked.

"The petitions we are treating do not involve the right to freedom of speech & expression or right to privacy, to such an extent as to warrant the employment of these tests for evaluation of argued restrictions, in the form of school dress code," the bench said.

It argued that the "complaint of the petitioners is against the violation of essentially derivative rights," rather than "the core of substantive rights." Then the court used this argument to claim that the protection available to "substantive rights" cannot be "stretched too far even to cover the derivative rights of this nature."

That's not all. The court compared students in schools, which it called "qualified public spaces" with detainees in prison who cannot assert their individual fundamental rights.

"It hardly needs to be stated that schools are 'qualified public places' that are structured predominantly for imparting educational instructions to the students...Such 'qualified spaces' by their very nature repel the assertion of individual rights to the detriment of their general discipline & decorum," the court said.

The petitioners made several other arguments on direct and indirect discrimination against Muslim women caused by the February 5 Karnataka government order issued under the Karnataka Education Act, 1983 which cited public order, unity and integrity of the country to restrict wearing the hijab.

However, the court was dismissive of this. "By no stretch of imagination, it can be gainfully argued that prescription of dress code offends students' fundamental right to expression or their autonomy. In matters like this, there is absolutely no scope for complaint of manifest arbitrariness or discrimination inter alia under Articles 14 & 15, when the dress code is equally applicable to all the students, regardless of religion, language, gender or the like. It is nobody's case that the dress code is sectarian," it said.

The court's examination of the discrimination argument decoupled the government order from the petitioner's claim against the uniform. First, the court said that a uniform itself is not discriminatory and, subsequently, it held the government order "per se does not prescribe any uniform but only provides for prescription in a structured way."

While public order is one of the grounds on which freedom of religion can be restricted under the Constitution, the state government had pleaded to a drafting error in the language. Despite the government's admission, the Court did not go into the merits of the order and gave the benefit of the doubt to the state.

"We hasten to add that certain terms used in a Government Order such as 'public order', etc., cannot be construed as the ones employed in the Constitution or Statutes. There is a sea of difference in the textual structuring of legislation and in promulgating a statutory order as the one at hands. The draftsmen of the former are ascribed of due diligence & seriousness in the employment of terminology which the government officers at times lack whilst textually framing the statutory policies," the court said.

On freedom of conscience, the petitioners argued that a right distinct from the right to religious freedom exists to wear the hijab. The court, however, said that merely citing their conscience would not suffice and that the petitioners had to bring evidence to prove their conscience.

"There is no evidence that the petitioners chose to wear their headscarf as a means of conveying any thought or belief on their part or as a means of symbolic expression. Pleadings at least for urging the ground of conscience are perfunctory, to say the least," the court said.

**Source: The Indian Express**

### **3. Did the Karnataka High Court's hijab verdict overlook 'reasonable accommodation'?**

**Relevant for GS Prelims & Mains Paper I; Social Issues**

Website: [www.prepmate.in](http://www.prepmate.in)

Prepmate Cengage Books Preview: <https://prepmate.in/books/>

Telegram Channel: [@upscprepmate](https://t.me/upscprepmate)

Youtube channel: [PrepMateEduTech](https://www.youtube.com/channel/UCPrepMateEduTech)



The Karnataka High Court has ruled in favour of the State's circular that students in educational institutions should only wear prescribed uniforms, and where no code was prescribed, they should wear "such attire that would accord with equality and integrity and would not disrupt public order". The decision effectively upheld the denial of entry to students wearing the hijab. The court rejected an argument in support of permitting Muslim girls wearing head-scarves that was based on the principle of 'reasonable accommodation'. This meant that the court did not favour making any change or adjustment to the rule that could have enabled the students to maintain their belief or practice even while adhering to the uniform rule.

**What is it?**

'Reasonable accommodation' is a principle that promotes equality, enables the grant of positive rights and prevents discrimination based on disability, health condition or personal belief. Its use is primarily in the disability rights sector.

Article 2 of the UN Convention on the Rights of People with Disabilities (UNCRPD) defines reasonable accommodation as "necessary and appropriate modification and adjustments not imposing a disproportionate or undue burden, where needed in a particular case, to ensure to persons with disabilities the enjoyment or exercise on an equal basis with others of all human rights and fundamental freedoms".

The International Labour Organization (ILO), in its recommendation on HIV/AIDS and the world of work, defines it as "any modification or adjustment to a job or to the workplace that is reasonably practicable and enables a person living with HIV or AIDS to have access to, or participate or advance in, employment".

**How does the principle work?**

The general principle is that reasonable accommodation should be provided, unless some undue hardship is caused by such accommodation.

In 2016, the ILO came out with a practical guide on promoting diversity and inclusion through workplace adjustments. The need for workplace accommodation may arise in a variety of situations, but four categories of workers were chosen for the guide: workers with disabilities, workers living with HIV and AIDS, pregnant workers and those with family responsibilities, and workers who hold a particular religion or belief. These categories of workers come across different kinds of barriers at work. These may result in either loss of employment or lack of access to employment. "The provision of reasonable accommodation plays a major role in addressing these barriers and thus contributes to greater workplace equality, diversity and inclusion," says the ILO guide.

A modified working environment, shortened or staggered working hours, additional support from supervisory staff and reduced work commitments are ways in which accommodation can be made. Suitable changes in recruitment processes — allowing scribes during written tests or sign language interpreters during interviews — will also be a form of accommodation.

**What is the legal position on this in India?**

In India, the Rights of People with Disabilities Act, 2016, defines 'reasonable accommodation' as "necessary and appropriate modification and adjustments, without imposing a disproportionate or undue burden in a particular case, to ensure to persons with disabilities the enjoyment or exercise of rights equally with others". The definition of 'discrimination' in Section 2(h) includes 'denial of reasonable accommodation'.

In Section 3, which deals with equality and non-discrimination, sub-section (5) says: "The appropriate Government shall take necessary steps to ensure reasonable accommodation for persons with disabilities."

In *Jeeja Ghosh and Another v. Union of India and Others* (2016), the Supreme Court, while awarding a compensation of ₹10 lakh to a passenger with cerebral palsy who was evicted from a flight after boarding, said: "Equality not only implies preventing discrimination ..., but goes beyond in remedying discrimination against

groups suffering systematic discrimination in society. In concrete terms, it means embracing the notion of positive rights, affirmative action and reasonable accommodation.”

The Supreme Court elaborated on the concept in *Vikash Kumar v. UPSC* (2021). This was a case in which the court allowed the use of a scribe in the Union Public Service Commission examination for a candidate with dysgraphia, or writer’s cramp. The court ruled that benchmark disability, that is a specified disability to the extent of 40%, is related only to special reservation for the disabled in employment, but it need not be a restriction for other kinds of accommodation. It also said failure to provide reasonable accommodation amounts to discrimination.

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In the recent Karnataka verdict on wearing the hijab, the High Court did not accept the argument based on a South African decision that reasonable accommodation can be made for allowing minor variations to the uniform to accommodate personal religious belief. The appeal against the verdict in the Supreme Court provides an opportunity to see if the concept can be used in the realm of belief and conscience too.

**Source: The Hindu**

#### **4. The nutrition fallout of school closures**

**Relevant for GS Prelims & Mains Paper I; Social Issues**

##### **COVID-19 has exacerbated the problem of child hunger and malnutrition**

As many as 116 million children — actually, 116 million hungry children – is the number of children we are looking at when we consider the indefinite school closure in India. The largest school-feeding programme in the world, that has undoubtedly played an extremely significant role in increasing nutrition and learning among schoolgoing children, has been one of the casualties of the COVID-19 pandemic.

The flagship report of The State of Food Security and Nutrition in the World 2020 , released by the Food and Agriculture Organization in partnership with other UN organisations, painted a worrying picture, including the impact of COVID-19 on closure of schools and school meals. A real-time monitoring tool estimated that as of April 2020, the peak of school closures, 369 million children globally were losing out on school meals, a bulk of whom were in India.

##### **Pressing issue**

The recent Global Hunger Index (GHI) report for 2020 ranks India at 94 out of 107 countries and in the category ‘serious’, behind our neighbours Pakistan, Bangladesh and Nepal. The index is a combination of indicators of undernutrition in the population and wasting (low weight for height), stunting (low height for age), and mortality in children below five years of age. We are already far out in terms of achieving the ‘Zero Hunger’ goal, and in the absence of urgent measures to address the problem both through necessary administrative measures and their effective delivery, the situation will only worsen. To place the urgency in context, a report by the International Labour Organization and the UNICEF, on COVID-19 and child labour, cautions that unless school services and social security are universally strengthened, there is a risk that some children may not even return to schools when they reopen.

A mid-day meal in India should provide 450 Kcal of energy, a minimum of 12 grams of proteins, including adequate quantities of micronutrients like iron, folic acid, Vitamin-A, etc., according to the mid-day meal scheme (MDMS) guidelines, 2006. This is approximately one-third of the nutritional requirement of the child, with all school-going children from classes I to VIII in government and government-aided schools being eligible. However, many research reports, and even the Joint Review Mission of MDMS, 2015-16 noted that many children reach school on an empty stomach, making the school’s mid-day meal a major source of nutrition for children, particularly those from vulnerable communities. Further, these reports highlight the importance of innovative strategies to improving nutrition quality and food diversity under the MDM. This was insisted upon by NITI Aayog and the World Food Programme in their report on Food and Nutrition Security in India (2019).

Many state governments, like Tamil Nadu (a pioneering state in MDMS) and Puducherry introduced innovations to convert MDMS into a Nutritious Meal Programme.

In orders in March and April 2020, in the wake of the COVID-19 pandemic and closure of schools, the Government of India announced that the usual hot-cooked mid-day meal or an equivalent food security allowance/dry ration would be provided to all eligible school-going children even during vacation, to ensure that their immunity and nutrition is not compromised. Nearly three months into this decision, States were still struggling to implement this.

According to the Food Corporation of India's (FCI) food grain bulletin, the offtake of grains under MDMS from FCI during April and May, 2020 was 221.312 thousand tonnes. This was 60 thousand tonnes, or 22%, lower than the corresponding offtake during April and May, 2019 (281.932 thousand tonnes). There were 23 States and Union Territories that reported a decline in the grain offtake from FCI in April-May 2020, compared with corresponding months in 2019. The State of Bihar, for instance, which lifted 44.585 thousand tonnes in April and May 2019, had no offtake during these two months in 2020.

Data and media reports indicate that dry ration distributions in lieu of school meals are irregular. Further, since the distribution of dry ration started only in late May, a few experts — like Dipa Sinha of Ambedkar University — advocating on children's issues are calling for immediate distribution of the April quota, to which the children are entitled.

The other worrying angle to the lack of school meals and functioning schools is the fact that there are reports of children engaging in labour to supplement the fall in family incomes in vulnerable households. In July this year, the Madras High Court also took cognisance of the issue and asked the Tamil Nadu government to respond on the subject of how, with schools closed, the nutritional needs of children were being fulfilled. While many State governments have now initiated dry rations provision in lieu of school meals, there are still challenges for this to be fulfilled in ensuring last-mile delivery. Ensuring functioning of MDMS during the pandemic period, where children are under threat of nutrition and food insecurity, must be high priority. Serving hot meals, at the children's homes or even at the centre, may have challenges in the present scenario. Even States like Tamil Nadu, with a relatively good infrastructure for the MDMS, are unable to serve the mandated 'hot cooked meal' during the lockdown for multiple reasons.

### **Innovative strategies**

Local smallholder farmers' involvement in school feeding is suggested by experts, such as Basanta Kumar Kar, who has been at the helm of many nutrition initiatives. He suggests a livelihood model that links local smallholder farmers with the mid-day meal system for the supply of cereals, vegetables, and eggs, while meeting protein and hidden hunger needs, which could diversify production and farming systems, transform rural livelihoods and the local economy, and fulfill the 'Atmanirbhar Poshan' (nutritional self-sufficiency) agenda. The COVID-19 crisis has also brought home the need for such decentralised models and local supply chains.

There are also new initiatives such as the School Nutrition (Kitchen) Garden under MDMS to provide fresh vegetables for mid-day meals. Besides ensuring these are functional, what can be done, in addition, is provide hot meals can be provided to eligible children with a plan to prepare and distribute the meal in the school mid-day meal centre. This is similar to free urban canteens or community kitchens for the elderly and others in distress in States like Odisha. Also, adequate awareness about of the availability of the scheme is needed. Thirdly, locally produced vegetables and fruits may be added to the MDMS, also providing an income to local farmers. Besides, distribution of eggs where feasible (and where a State provision is already there) can be carried out. Most of all, the missed mid-day meal entitlement for April may be provided to children as dry ration with retrospective effect.

Across the country and the world, innovative learning methods are being adopted to ensure children's education outcomes. The GHI report calls for effective delivery of social protection programmes. With

continuing uncertainty regarding the reopening of schools, innovation is similarly required to ensure that not just food, but nutrition is delivered regularly to millions of children. For many of them, that one hot-cooked meal was probably the best meal of the day.

Source: The Hindu

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## Internal Security

### 1. The history of the Kuki insurgency in Manipur

#### Relevant for GS Prelims & Mains Paper III; Internal Security

Just before the first of the two phases of the Assembly Elections went underway in Manipur on February 28, all insurgent groups associated with the Kuki tribes in Manipur said they will vote for the Bharatiya Janata Party (BJP). This came days after Union Home Minister and BJP leader Amit Shah said at his rally in Churachandpur district of the State, that his party will end the Kuki insurgency problem in five years, if it is voted to power for the second time. The president of the Kuki National Organisation (KNO), P.S. Haokip, cited talks with the BJP leadership, which he said has promised the speedy settlement of Kuki political aspirations.

#### Who are the Kukis?

The Kukis are an ethnic group including multiple tribes originally inhabiting the North-Eastern states of India such as Manipur, Mizoram and Assam; parts of Burma (now Myanmar), and Sylhet district and Chittagong hill tracts of Bangladesh. While Kuki is not a term coined by the ethnic group itself, the tribes associated with it came to be generically called Kuki under colonial rule.

In Manipur, the various Kuki tribes, living mainly in the hills, currently make up 30% of the total 28.5 lakh population of the State. While Churachandpur is their main stronghold, they also have a sizable population in Chandel, Kangpokpi, Tengenpual and Senapati districts.

The rest of the population of Manipur is made up mainly of two other ethnic groups — the Meiteis or non-tribal, Vaishnavite Hindus who live in the valley region of Manipur, and the Naga tribes, historically at loggerheads with the Kukis, also living in the hilly areas of the State. Of the 60 seats in the Manipur Assembly, 40 are held by Meiteis and the rest 20 seats are held by Kukis and Nagas. Both the BJP and Congress are fielding Kuki and Naga candidates this time.

#### What led to the Kuki insurgencies in Manipur?

The Kuki insurgent groups have been under Suspension of Operation (SoO) since 2005, when they signed an agreement for the same with the Indian Army. Later, in 2008, the groups entered a tripartite agreement with the State government of Manipur and the UPA led Central government under former Prime Minister Manmohan Singh, to temporarily suspend their operations and give political dialogue a chance.

Manipur, formerly a princely state including parts of Burma, made the accession into India after Independence, but was only made a full-fledged State in 1972. The resentment over the “forceful” inclusion into India and delay in granting statehood led to the rise of various insurgent movements. The problem was intensified after Manipur was declared a ‘disturbed area’ in 1980, under the Armed Forces Special Powers Act (AFSPA), which gives sweeping powers to the military and has led to excesses. Post-independence insurgent movements in Manipur, carried out by valley-based groups or Meiteis, can be traced back to around the 1960s, when various groups demanded self-determination and separate statehood for Manipur, inspired by left ideology.

However, this wasn’t the case with the Kuki insurgency. The roots of Kuki militancy lie in conflicts of ethnic identity. First was the demand for self-determination solely for groups belonging to their ethnic fabric, meaning



the dream to form a Kukiland which includes Kuki inhabited regions of Myanmar, Manipur, Assam and Mizoram. The second reason for insurgency lies in the inter-community conflicts between the Kukis and the Nagas in Manipur.

While organisations like Kuki Inpi and Kuki National Assembly had already formed in the years following Independence, insurgent activity at the time was jointly carried out by Kuki outfits based in Myanmar and Mizoram for Kukiland. But the Kuki insurgency in Manipur grew in real terms in the 1980s and after the Kuki-Naga conflicts of the 1990s. This is when the Kuki National Organisation (KNO) and its armed wing Kuki National Army (KNA) were formed.

The community could not shed internal differences between tribes and take a single line of action. While some militant Kuki outfits demanded Kukiland, including parts which are not in India, some demanded Kukiland within India. At present, the demand has come to the formulation of an independent district—Kukiland Territorial Council within the purview of the Indian constitution, modelling the Bodoland Territorial Council, which was formed under the sixth schedule of the Constitution, after insurgent groups in Assam signed an agreement with their State government.

The Kuki-Naga conflict was started over securing identity and land as some Kuki inhabited areas coincided with Naga inhabited areas. Wanting to dominate trade and cultural activities in those areas the two communities often engaged in violent standoffs, with villages being torched, civilians killed and so on. Even though clashes have reduced in recent decades, tensions between the two ethnic groups still exist.

#### **Where do the Kukis stand today?**

The temporary SoO agreements were made in order to start political dialogue about giving some form of self-determination to the Kukis, but that has not happened, both under the UPA or NDA governments.

The SoO has been extended by the Government almost every year since 2008, with Kuki outfits threatening to breach the agreement by taking up arms again and boycotting the Government. In 2012, the groups held a nearly eight month long blockade of highways around their area, costing the Government a couple of crores in losses each day. The SoO agreement was last extended by Prime Minister Narendra Modi's government in September last year till February 28 this year. Both BJP and Congress governments have held talks with the representatives of Kuki groups but the Kukis are dissatisfied with the pace of the dialogue and also feel ignored, as the Government has been holding Naga Peace Talks with the main Naga insurgent outfit NSCN (IM), which demands the formation of Greater Nagaland, including parts of Manipur having Kuki inhabited regions.

It has to be seen how the BJP plans to resolve the insurgency and settle Kuki political aspirations as the more than 50% Meitei population of the State, a significant voter base, has always been against Kuki and Naga demands for self-determination, as they fear it would undermine Manipur's territorial integrity.

**Source: The Hindu**

## **2. India's own B-737 fleet, and what govt is doing in wake of China crash**

### **Relevant for GS Prelims & Mains Paper III; Internal Security**

India's aviation safety regulator has ordered "enhanced surveillance" for Boeing 737 aircraft in India, following the crash of one such plane in China on Monday (March 21).

#### **What does enhanced surveillance mean?**

Given the unusual circumstances of the accident involving a China Eastern-operated Boeing 737-800 aircraft, the Directorate General of Civil Aviation (DGCA) has deployed monitoring teams to ensure that the 737 fleets of Indian carriers are operated and maintained as per norms.

This will happen till the cause for the China Eastern crash, and the role of the aircraft in it, is ascertained.

**Why is this relevant?**

Boeing 737 is the world's most popular narrowbodied aircraft, and the American planemaker has sold more 737s than any other manufacturer has managed to sell their models. Notably, two Boeing 737 Max aircraft were involved in accidents in the six month period between October 2018 and March 2019, killing a total of 346 people.

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Following these two accidents, the DGCA had banned Boeing 737 Max planes in India in March 2019. After Boeing made necessary software rectifications to the satisfaction of the DGCA, the ban on the aircraft's commercial operations was lifted after 27 months in August last year.

**Was the China Eastern plane different from the 737 Max?**

Yes, Boeing 737 Max aircraft is an advanced version of Boeing 737-800, though both belong to the 737 family. The older version of 737 planes is called Boeing 737NG.

**How many of these are flown in India?**

Budget carrier SpiceJet has a total of 60 Boeing 737 family planes in its fleet. Of these, 13 are 737 Max and 47 are 737NG. Among the older version planes, SpiceJet has 36 Boeing 737-800s, five smaller Boeing 737-700s, and five larger Boeing 737-900s, according to information on the company's website.

Air India Express has 24 Boeing 737-800 planes, while Vistara has five 737-800 aircraft in its fleet.

Source: The Indian Express

## Disaster Management

### 1. Kavach, the Indian technology that can prevent two trains from colliding

**Relevant for GS Prelims & Mains Paper III; Disaster Management**

Things went as planned. The locomotive carrying Railway Minister Ashwini Vaishnaw and another with Railway Board Chairman VK Tripathi raced towards each other on the same track, but thanks to an automatic system applied brakes 200 meters apart, thus avoiding a collision. Kavach, this indigenously developed Automatic Train Protection System showcased on South Central Railway Friday, is earmarked for aggressive rollout on 2,000 km in 2022-23, according to the Budget proposals.

**What is Kavach?**

It is India's very own automatic protection system in development since 2012, under the name Train Collision Avoidance System (TCAS), which got rechristened to Kavach or "armour".

Simply put, it is a set of electronic devices and Radio Frequency Identification devices installed in locomotives, in the signalling system as well the tracks, that talk to each other using ultra high radio frequencies to control the brakes of trains and also alert drivers, all based on the logic programmed into them. One of its features is that by continuously refreshing the movement information of a train, it is able to send out triggers when a loco pilot jumps signal, called Signal Passed at Danger (SPAD), a grave offence in railway operations with respect to safety, and the key to accidents like collision. The devices also continuously relay the signals ahead to the locomotive, making it useful for loco pilots in low visibility, especially during dense fog.

TCAS or Kavach includes the key elements from already existing, and tried and tested systems like the European Train Protection and Warning System, and the indigenous Anti Collision Device. It will also carry features of the

high-tech European Train Control System Level-2 in future. The current form of Kavach adheres to the highest level of safety and reliability standard called Safety Integrity Level 4.

### What is new?

In the new avatar, India wants to position Kavach as an exportable system, a cheaper alternative to the European systems in vogue across the world. While now Kavach uses Ultra High Frequency, work is on to make it compatible with 4G Long Term Evolution (LTE) technology and make the product for global markets. Work is on to make the system such that it can be compatible with other already installed systems globally. The Research Designs and Standards Organisation (RDSO) in Lucknow along with private vendors are developing the system. India wants more private players to take up the development and subsequent production. Once rolled out, it may be world's cheapest Automatic Train Protection System with the cost of rollout pegged at around Rs 30 lakh to 50 lakh per kilometer, a fourth of the cost of equivalent systems globally.

In the next phase, the Kavach system will also be able to recalibrate as per temporary speed restrictions en route, something the system does not yet have.

### How far is the rollout?

So far, Kavach has been deployed on over 1,098 km and 65 locomotives in ongoing projects of the South Central Railway. In future it will be implemented on 3000 km of the Delhi-Mumbai and Delhi-Howrah corridors where the tracks and systems are being upgraded to host a top speed of 160 kmph.

In addition to a trial section of 250 km, at present Kavach is under implementation on 1200 km of South Central Railway, on Bidar-Parli Vaiinath-Parbhani and Manmad-Parbhani-Nanded, Secunderabad-Gadwal-Dhone-Guntakal sections.

Further, over 34,000 km on the High Density Network (HDN) and Highly Utilized Network (HUN) of on the Golden Quadrilateral have been included in its sanctioned plans. Four years ago, Prime Minister Narendra Modi had turned down an ambitious plan of the Railways to roll out ETCS-Level 2 system across its network and had asked the transporter to look for indigenous, cheaper solutions for such future upgrade.

Source: The Indian Express

## Miscellaneous

### 1. What was the Pal-Dadhvav massacre, whose centenary the Gujarat govt is observing

Relevant for GS Prelims



On Monday, March 7, the Gujarat government marked 100 years of the Pal-Dadhvav killings, calling it a massacre “bigger than the Jallianwala Bagh”. Before this, the incident had been featured on the state’s Republic Day tableau.

In Pal-Dadhvav massacre tribal revolutionaries fell to British bullets.

### **The incident**

The Pal-Dadhvav massacre took place on March 7, 1922, in the Pal-Chitariya and Dadhvaav villages of Sabarkantha district, then part of Idar state.

The day was Amalki Ekadashi, which falls just before Holi, a major festival for tribals. Villagers from Pal, Dadhvav, and Chitariya had gathered on the banks of river Heir as part of the ‘Eki movement’, led by one Motilal Tejawat. The movement was to protest against the land revenue tax (lagaan) imposed on the peasants by the British and feudal lords.

Tejawat, who belonged to Koliyari village in the Mewad region of Rajasthan, had also mobilised Bhils from Kotda Chhavni, Sirohi, and Danta to participate. Tejawat had been outlawed by the Udaipur state, which had announced a Rs-500 reward on his head.

The Mewad Bhil Corps (MBC), a paramilitary force raised by the British that was on the lookout for Tejawat, heard of this gathering and reached the spot.

An account in the Gujarati book ‘Gujarat na Krantiteertho’ (Gujarat’s revolution pilgrimages) (2009), written by Gujarat Sahitya Akademi chairperson Vishnu Pandya and his late wife Arti, says, “On a command from Tejawat, nearly 2000 Bhils raised their bows and arrows and shouted in unison- ‘We will not pay the tax’. The MBC commanding officer, HG Sutton, ordered his men to fire upon them. Bullets rained on them but where could they go? There was a stampede.”

Nearly 1,000 tribals (Bhils) fell to bullets, writes Pandya. Pandya’s account, collected from government gazettes and local historians, says others jumped into two wells. Tejawat was shot at twice, but was taken to safety by the villagers on a camel. He later “returned to the spot to christen it ‘Veerbhumi’.”

While the British claimed some 22 people were killed, the Bhils believe 1,200-1,500 of them died. In the Jallianwala Bagh massacre of April 13, 1919, 500-1,000 people are said to have been killed after General Reginald Edward Dyer’s forces opened fire on peaceful protesters.

### **Republic Day tableau**

The Pal-Dadhvav massacre was brought into focus at the Republic Day parade this year. The Republic Day tableau featured a seven-ft statue of Tejawat, inspired by the statue at the memorial. It also had a statue of British officers, including Sutton shooting at the tribals, and the two wells. A song describing Tejawat as ‘Koliyari no Vanio Gandhi’ was sung at the tableau.

### **Who was Tejawat**

Born into a merchant (Baniya) family in the adivasi-dominated Koliyari village, Tejawat was employed by a landlord, where he worked for eight years. “During this period he saw closely how the landlords exploited tribals and would threaten to beat them with shoes if they did not pay the tax,” Pandya’s book says.

Outraged by the atrocities and exploitation of the tribal people, Tejawat quit the job in 1920 and devoted himself to social work and reform. To this day, local tribals recount the Pal-Dadhvav massacre in songs sung at weddings and fairs. One such song is ‘Hansu dukhi, duniya dukhi’.

A Gujarat government release on the centenary of the massacre on Monday described the incident as “more brutal than the Jalliwala Bagh massacre of 1919”. Chief Minister Bhupendra Patel, who attended the event



virtually, was quoted as saying, “Azadi ka Amrut Mahotsav is being celebrated this year with the inspiration of the Prime Minister to bring such a forgotten event of freedom and the rarity of freedom struggle in the minds of the people” (sic).

### **Tribal population**

Gujarat has a near 14 per cent tribal population that resides along its northern-eastern stretch, called the ‘poorvi patti’, bordering the districts of Madhya Pradesh, Rajasthan and Maharashtra. Page | 224

Bhils are the dominant tribe in this stretch, which covers the districts of Aravalli, Sabarkantha, Banaskantha, Panchmahal, Chhota Udepur, Mahisagar, Narmada, Dahod, Tapi, Navsari and Dang.

**Source: Indian Express**

## **2. Why Mankading is no longer ‘unfair play’ in cricket**

### **Relevant for GS Prelims & Mains Paper III; Miscellaneous**

The Marylebone Cricket Club (MCC) has announced its new code of laws, to be effective from October 1. One of the key changes has been a complete ban on applying saliva to the ball irrespective of the Covid situation. The MCC, the custodians of the Laws of Cricket, also accepted Mankading (or Browning, as Sunil Gavaskar calls it) as a normal mode of running out the non-striker, removing it from Law 41 (Unfair play) and clubbing it with Law 38 (Run out).

### **Mankading, fair and square**

In 1948, when the legendary Indian all-rounder Vinoo Mankad had run-out Australia’s Bill Brown at the non-striker’s end after duly warning the latter for backing up too far, he was heavily criticised and the Mankading phrase was coined. This was despite the fact that then Australia captain Don Bradman had defended Mankad, who ran Brown out for stealing a few yards.

The so-called Gentleman’s game, however, has always frowned upon this mode of dismissal and as recently as in 2019, Ravichandran Ashwin found himself at the receiving end of flak, ‘for acting in contrary to the spirit of cricket’, after running Jos Buttler out that way during an Indian Premier League game between Kings XI Punjab and Rajasthan Royals. The Indian off-spinner always maintained that he used no unfair means, given that the non-striker was trying to steal a few yards. Now, the MCC has vindicated Ashwin’s stand.

“Law 41.16 – running out the non-striker – has been moved from Law 41 (Unfair play) to Law 38 (Run out),” it said. Simply put, that this is now just another mode of run-out, although it needs to be seen if the governing body of cricket still allows the use of the word Mankading, for it is disrespectful to a legend of the game.

### **Why has the use of saliva been banned?**

The MCC statement said: “When cricket resumed following the onset of Covid-19, playing conditions were written in most forms of the game stating that applying saliva to the ball was no longer permitted. MCC’s research found that this had little or no impact on the amount of swing the bowlers were getting. Players were using sweat to polish the ball, and this was equally effective.”

### **Why did bowlers apply saliva to the ball?**

Bowlers had been applying saliva since sort of time immemorial to polish the ball. Until the mid-1970s, it was to aid conventional swing. Towards the latter half of that decade, former Pakistan fast bowler Sarfraz Nawaz discovered reverse swing that allowed seamers to move the old ball the other way.

The new ball moves on either side because of the shine, based on the grip and seam position. The introduction of reverse swing saw players keeping one side of the ball shiny and the other side rough and applying saliva and/or sweat to the rough side. Gradually a lot of work has been done on this, making it fast bowlers’ go-to

weapon with the old ball, especially in abrasive conditions. In case of reverse swing, instead of the ball drifting towards its rougher side, it veers towards the smooth. So it becomes important to keep one side of the ball rough and heavy, and applying saliva contributed to that.

### **Without saliva use, does a bowler lose anything?**

“Absolutely nothing,” former South Africa pacer Fanie de Villiers told The Indian Express a couple years ago, after the International Cricket Council had introduced the saliva ban. Sweat can be as effective to shine the ball and also make the rough side heavier. “In sweat, you have a natural replacement,” de Villiers had said, pointing out that very few players used saliva, while a vast majority applied sweat.

The MCC has said: “The new Laws will not permit the use of saliva on the ball, which also removes any grey areas of fielders eating sugary sweets to alter their saliva to apply to the ball.” So henceforth, applying saliva will be construed as an offence, an effort to change the condition of the ball.

### **What are the other changes?**

Among the other changes, ‘Judging a Wide’ looks interesting. Until now, batters had the leeway to shuffle around the crease and a wide was called as per his/her position when the bowler entered his/her delivery stride. “It was felt unfair that a delivery might be called ‘Wide’ if it passes where the batter had stood as the bowler entered his/her delivery stride,” said the MCC.

An amendment to Law 22.1 would see a wide is called on the basis of where the striker is standing, as the ball passes him/her.

For example, suppose a batter takes a leg stump guard and shuffles across the crease to play a wide yorker. Earlier, if he/she had stayed at the conventional ‘one leg’ until the bowler entered his/her delivery stride and then moved around, and missed the ball, it would have been called a wide. Now, the batter no longer has that leeway. While shuffling, if the batter is close enough to the ball despite missing it, the umpire won’t call it a wide.

### **Cross-over binned**

This can have an effect in the death overs in limited-overs cricket and also in farming the strike, chiefly in the longer format. There will no longer be any cross over to a catch out and the new batter will take the strike unless it is the end of an over. As per the old Law, if the batters had crossed over, running between the wickets, while a catch was taken, the non-striker faced the next ball. Following the change the MCC said: “First trialled by the ECB in The Hundred at the suggestion of MCC, Law 18.11 has now been changed so that, when a batter is out Caught, the new batter shall come in at the end the striker was at, i.e. to face the next ball (unless it is the end of an over).”

**Source: The Indian Express**

## **3. Who was Zahoor Mistry, the Indian Airlines IC 814 hijacker killed in Karachi recently?**

### **Relevant for GS Prelims**

One of the hijackers of Indian Airlines flight IC 814, Zahoor Mistry, has been killed in Pakistan, according to media reports in that country. Mistry is reported to have been killed on March 1 by two bike-borne assailants in Karachi’s Akhtar colony. The killing was confirmed by Pakistan’s Geo TV, reporting it as the death of a “businessman” in Karachi.

Reports also quoted Pakistan intelligence sources as saying that top leaders of terror organisation Jaish-e-Mohammed, led by Masood Azhar, attended Mistry’s funeral. Masood Azhar was among the three terrorists released by the Indian government when IC 814 was hijacked in 1999.

### Who is Zahoor Mistry?

Mistry was an operative of the Harkat-ul-Mujahideen (HuM), an anti-India terror group operating out of Pakistan and Bangladesh then. He was among the five hijackers of IC 814, which was taken to Kandahar in Afghanistan on December 24, 1999. The hijackers included Azhar's brothers Rauf Asghar and Ibrahim Azhar. Both continue to live in Pakistan.

It was Mistry who was responsible for the only death in the entire episode, that of 25-year-old Rupin Katyal. In order to put pressure on the Indian government to agree to their terms, the terrorists had decided to kill one of the passengers. Mistry had stabbed Katyal in the chest inside the flight, killing him. Katyal and his wife were returning from their honeymoon in Kathmandu.

Mistry is said to have been living in Karachi under an assumed name, Zahid Akhund, and running a furniture business in the coastal city by the name of Crescent Furniture.

### How was he killed?

According to Pakistan media reports, Mistry was killed by two bike-borne assailants in Karachi's Akhtar colony, where he ran his business. Pakistan's Geo TV has put out a footage of the assailants roaming around on the bike in the area around the time of the murder. The local police is said to have recovered five empty bullet shells from the spot of the murder.

While the murder was reported as that of a "businessman" in Karachi, the media claimed that his funeral was attended by leaders of JeM, including Rauf Asghar. In fact, the media appeared to have got a wind of the killing only after the funeral.

It is not yet known why Mistry was killed and who is behind the murder.

### The 1999 hijacking of Indian Airlines IC 814

On December 24, 1999, Indian Airlines flight IC 814 was hijacked by Mistry and his associates after it took off from Tribhuvan International Airport in Kathmandu, Nepal, enroute to Indira Gandhi International Airport in Delhi.

The flight, with 180 passengers including the crew, was hijacked while it was flying over Lucknow, and taken to Lahore. However, Pakistan authorities did not allow the plane to land. As it was already running low on fuel, the plane was diverted to Amritsar, where it stopped for refuelling. Many claim that the Indian establishment failed to act in time to stop the flight from leaving India.

From Amritsar, the flight was again taken to Lahore, where Pakistan authorities first tried to prevent landing, but eventually allowed it. It was then taken to Dubai, where 27 passengers were released. The body of Katyal was also offloaded here. From there, the flight eventually reached Kandahar in Afghanistan, where the-then Taliban government joined the negotiations for the release of passengers.

The episode ended with India agreeing to release Masood Azhar along with Omar Saeed Sheikh and Mushtaq Ahmed Zargar, all then affiliated with terror group Harkat-ul-Mujahideen. Present-day NSA Ajit Doval, who was then the Intelligence Bureau chief, oversaw the handover and release of passengers.

### What has been the aftermath?

After being released, the three terrorists were given a safe passage by the Taliban to Pakistan. Under the protection of Pakistan spy agency the ISI, Azhar then laid the foundation of one of the most dreaded and effective terror organisations, the Jaish-e-Mohammed.

The outfit has since been responsible for multiple terror attacks in Jammu and Kashmir and the rest of India, killing hundreds. These include the 2016 attack on Pathankot Air Base and the 2019 Pulwama attack, that claimed the lives of 40 CRPF soldiers.



**Source: The Indian Express**

#### **4. What's inside the newly opened Museum of the Future in Dubai? Is it really a museum?**

**Relevant for GS Prelims**

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The Museum of the Future in Dubai was recently thrown open to the public. It was inaugurated by Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE, on February 23. The museum reportedly takes the visitors on an experiential journey, transporting them to the year 2071, to coincide with the centenary of the founding of the UAE. But the bigger objective is, its makers say, to act as an incubator for scientists, thinkers and researchers to bring their bold ideas and visions of the future to life.

##### **Unique Architecture**

The seven-storey, pillar-less structure, spanning an area of 30,000 sq m is arguably an engineering marvel. Architecturally, it is among the most streamlined buildings in the world with no sharp corners on its external structure, rising to a height of 77 metres. Notably, its stainless-steel facade is decorated with inspirational quotes in Arabic calligraphy, designed by Emirati artist Mattar bin Lahej. It is fed with 4,000 megawatts of electricity that is produced through solar energy using solar panels. While architect Shaun Killa designed the museum, the creation of the museum has been undertaken by the Dubai Future Foundation.

##### **Gateway to the future**

It employs the latest technologies in virtual and augmented reality, big data analysis, artificial intelligence and human machine interaction to answer many questions related to the future of humanity, cities, societies and life on Earth, all the way to outer space. It also includes innovation laboratories for health, education, smart cities, energy and transportation, a permanent museum of future innovations, and laboratories to generate and test new ideas, especially in developmental areas related to critical social challenges. A big component of the museum is the trip to space and how we can leverage space travel. There is also focus on DNA sampling and genetics on one of the floors of the museum.

##### **So, is it really a museum?**

A museum is traditionally a place or building where objects of historical, artistic or cultural interest are exhibited, preserved or studied. Rather than being a museum in the limited traditional sense, the Museum of the Future is more of a laboratory designed to foster innovation among leading scientists in the region and beyond. It is a living museum where content and exhibits will constantly be renewed, enhanced and enriched in keeping with the latest technological advancements.

**Source: The Indian Express**

#### **5. Who is Diébédo Francis Kéré, the first African to win architecture's highest honour?**

**Relevant for GS Prelims & Mains Paper III; Miscellaneous**





*The National Park of Mali built by Diébédo Francis Kéré. (Photo: Twitter)*

From being born in the village of Gando in West Africa's Burkina Faso and then getting into Technische Universität Berlin, one of Europe's renowned educational institutions, to winning the 2022 Laureate of the Pritzker Architecture Prize, the profession's highest honour — architect Diébédo Francis Kéré has travelled far and long.

The 57-year-old is the first architect from Africa to win the prestigious award, in its over four-decade history. We take a look as to what makes his style of building so unique and how does his world view empower people around him?

### **His initial days**

Very mindful of the challenges in Burkina Faso, Kéré, who won a scholarship to study in Germany in 1995, knew he had to return to Gando to build a school for his community. He urged his friends to contribute, and saved enough to return home with \$50,000.



*Diébédo Francis Kéré was born in the village of Gando in West Africa's Burkina Faso. (Photo: Twitter/@LarsBorges)*

As the Polish journalist-author Ryszard Kapuscinski says in 'The Shadow of the Sun (Penguin, 1998)' that an "individual cannot survive alone in Africa", it means that decisions belong to the community. So, when Kéré told them that he wanted to build a school, they were elated. But when he mentioned he wanted to build with mud, they thought that he was crazy.

How does one protect a school building when the rains and floods come? Kéré had to convince them and after many rounds of talks and showing them drawings, they finally agreed. The work then began with bringing rocks that would be crushed and powdered to be used as bricks and flooring.

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Kéré was sure that Burkina Faso, primarily built with clay, couldn't have a school made out of concrete. The community came together, beating the rock and slaying the gravel, hammering with primitive tools, till the coarse texture gave way to clay. By 2001, the school was ready, and Kéré ensured that there was ample air and ventilation.

In 2004, the project won the Aga Khan Award. Soon, there were school extensions and libraries to be built. In each of them, Kéré turned to the community, working with clay, making bricks and sourcing everyday materials like earthen pots to introduce innovations into his buildings. Gathering his friends from college, he founded the Kéré Foundation, an NGO dedicated to building projects in Gando. By 2005, he opened his office called Kéré Architecture, with studios in Germany and Burkina Faso.

### **His projects**

Kéré sees himself as a bridge between the cultures of the West and Africa, and his buildings as tools.

"Before I begin work on site, I train my staff on what my vision is and what to do, so that they can take it forward and train other people," says Kéré, in an interview with ArchDaily, an international weblog that covers architectural news and projects.

Working among people who see concrete as a symbol of modernism, the road has been anything but easy for Kéré. For The National Park in Bamako, during the 50th anniversary of Mali's independence in 2010, Kéré Architecture was commissioned to design new buildings in a contemporary bioclimatic vocabulary. Kéré had to coax and persuade officials to move away from concrete and use local stone. He created a "factory" on the building site and brought in young women for the masonry. Through creative engineering, he gave the buildings large canopies with ample ventilation to ease the hot, humid climes of the region, making the park a much-visited public place. In his project document, Kéré writes: "The intention of the project was to give an open feel to people from all walks of life, whether they were after a tea for 20 cents or more inclined towards exclusivity. We hoped to merge a quiet respite from the city, and a green escape from the dust, with architecture that is mindful of local material and is open to a multitude of uses."



*An extension of the primary school he built in Gando. (Photo: Twitter/@Erik-JanOwerkerk)*

While in the Benga Riverside School in Tete, Mozambique (2018), he created flexible spaces within an elliptical building using eucalyptus wood for the façade, and features walls with voids to give a feel of transparency, at the Centre for Health and Social Welfare in Loango, Burkina Faso (2014), he offered the users windows of varying heights to give a dynamic view of the landscape.

Kéré acknowledges the influence of German-American architect Mies van der Rohe for his “less is more” philosophy and Estonian-born American architect Louis Kahn for the belief that architecture improved people’s lives.

It’s in the revisiting of his cultural codes and his deep sense of giving back to his country and its people that makes Kéré’s work unique. Many of his projects are spread across Africa, including countries such as Togo, Kenya, Togo, and Sudan. He’s done pavilions and installations in Denmark, Germany, Italy, Switzerland, the UK and the US. Currently, Kéré is working on the Benin National Assembly, and the Burkina Faso National Assembly, work on which has been temporarily stalled due to the volatile political situation in the country.

#### **What the Pritzker jury said about his work**

The Pritzker citation notes: “Francis Kéré’s pioneering architecture – sustainable to the earth and its inhabitants – in lands of extreme scarcity. He is equally architect and servant, improving upon the lives and experiences of countless citizens in a region of the world that is at times forgotten... Through buildings that demonstrate beauty, modesty, boldness and invention, and by the integrity of his architecture, Kéré gracefully upholds the mission of this Prize.”

It added, “Kéré has found brilliant, inspiring and game-changing ways to answer these questions over the last decades. His cultural sensitivity not only delivers social and environmental justice, but guides his entire process, in the awareness that it is the path towards the legitimacy of a building in a community. He knows, from within, that architecture is not about the object but the objective; not the product, but the process.”

**Source: The Indian Express**