ABOUT CURRENT CONNECT

It gives us immense pleasure to present an innovative approach to master current affairs. Current is a passing wind and diverse issues happen at the same time. It is to an extent chaotic. Newspapers, magazines and various other sources report the chaos per se. With our experience of current affairs we have tried to give "the current" a medium to travel. It is the syllabus of the UPSC with their components that are the medium through which the "Current is Passed" to the readers. Ever since the new syllabus of the UPSC came into existence, current has been gaining significance both at prelims as well as mains examination. This book is meant to cover current affairs and related questions arising from those events. We have not only covered the current events for their factual contents but also presented it in such a way that any question asked from that topic gets covered. Moreover, topics are also "peppered" with the relevant facts/key concepts that are related to the theme. We have also given questions for practice both, subjective and objective, so that candidates are oriented to the examination mode. It is a collection covering myriad source yet in a manageable size. To use this book we recommend you to master the components of general studies (GS) syllabus as broken into rows and columns (provided in the beginning after preface). Each cell comprising of the portion of GS becomes the connect for the current and every news subsequently covered guides the reader to the address of the syllabus. It is logical to expect that same issue may be connected to more than one topic of the syllabus. Further, the news also has some additional vistas opened for the readers by adding a box with a title "PEPPER IT WITH" where we expect the students to build further around the theme.

We are also trying to reach the remotest part of the country with our spirit and zeal of "Mains Answer Writing", which has been admired by students, CSE rankholders and other scholars. Continuing in line with the effort, we have started with programs like 7 Question (7Q) Challenge, Shell Points, Stock Points, Content Enrichment Booklet etc.

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Team KSG

Contents

Polity

SOCIAL ISSUES, GOVERNMENT SCHEMES, REPORTS & INDICES

ECONOMY

INTERNATIONAL RELATIONS

S. No.	1	2	3	4	5	6	7	8	9	10	11
GS – I	Culture-Art Forms, Literature and Architecture from ancient to modern times.	Indian history significant events, issues, National person alities, issues and the Freedom	Post independence issues, National boundary and disputes	Indian society features, issues and developments	Women - issues and remedies	Urbanization – problems and remedies	Distribution of industries and resources – India and world	Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc			
GS – II	Indian constitution- Amendments, acts and bills.	Legislative, executive and judicial processes.	Constitutional, non-constitutional, judicial, quasi-judicial, administrative and other types of bodies.	Federal structure and local bodies. Their powers and functions.	Government policies and various governance issues like transparency, accountability and – governance	Committees and schemes.	Non-government issues, self-help groups and role of civil society	Vulnerable sections of our society and social sector issues and initiatives.	International Relation-India and other countries, various Indian and international agreements, effects of other countries on India and international institutions.		
GS – III	Various measures to boost Indian economy- planning, policies, management.	Government budgeting and issues related to budget.	Agriculture, animal husbandry and transport	Food security- measures to boost food security and food processing. Issues related to land- land reforms	Industries and infrastructure- their growth and investment model	Space and technology, IT space, robotics and computer	Disease, biotechnol-ogy and human welfare	Innovations, intellectual property, Awards, POI and other import ant aspects of S&T	Environment; government initiatives, various judgment, pollution, degradation and conservation efforts	Disaste r & Disaste r Manag ement	Challenges to internal security, Various Security forces and agencies and their mandate. Cybersecurity; moneylaunde ri-ng and its preventio
GS – IV	Ethical issues related to family society, education, Corruption etc.	Ethics in public and private administration	Issues	Related laws and rules	Governance/e-Govern ance	Ethics in interna-tional issues	Person alities and their teachings	Other import ant topics			
Mis.											

POLITY

Sealed cover Jurisprudence

News Excerpt

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

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II	■	■									
III	■										
IV		■									
M	■										

Pre-Connect

- Some Members of Parliament and 30 other prominent figures including advocates, journalists and social activists recently issued a statement expressing discontent over the Kerala High Court's verdict upholding the transmission ban on Malayalam news channel MediaOne, imposed by the Ministry of Information and Broadcasting, after the Ministry of Home Affairs denied the channel security clearance.

- The channel went off air on January 31-2022, as the Centre suspended its telecast over "security reasons". One of the reasons for disappointment conveyed over the verdict is that the High Court's decision was based entirely on assessment of documents presented by the MHA in a sealed cover, "the contents of which were not shared" with the news channel.

- Many are of the view that verdict on sealed or secret documents went against "the basic principles of natural justice". It pointed out that the said principles mandate that in any process of adjudication, especially one that involves fundamental rights, evidence "must be shared with both parties to the dispute."

About sealed cover jurisprudence

- It is a practice used by the Supreme Court and sometimes lower courts, of asking for or accepting information from government agencies in sealed envelopes that can only be accessed by judges.

- While a specific law does not define the doctrine of sealed cover, the Supreme Court derives its power to use it from **Rule 7 of order XIII of the Supreme Court Rules and Section 123 of the Indian Evidence Act of 1872**.

- It is stated under the said rule that if the Chief Justice or court directs certain information to be kept under sealed cover or considers it of confidential nature, no party would be allowed access to the contents of such information, except if the Chief Justice himself orders that the opposite party be allowed to access it. It also mentions that information can be kept confidential if its publication is not considered to be in the interest of the public.

- As for the Evidence Act, official unpublished documents relating to state affairs are protected and a public officer cannot be compelled to disclose such documents.

- Other instances where information may be sought in secrecy or confidence is when its publication impedes an ongoing investigation, such as details which are part of the police's case diary; or breaches the privacy of an individual.

When has it been done in the past?

- Documents were examined in sealed cover in multiple prominent cases earlier also. In the case pertaining to the controversial Rafale fighter jet deal, a Bench had asked the Centre to submit details related to deal's decision making and pricing in a sealed cover. This was done as the Centre had contended that such details were subject to the Official Secrets Act and Secrecy clauses in the deal.

- In the matters related to the National Register of Citizens (NRC) in Assam, the supreme court mandated coordinator of the NRC, was asked by the apex court to submit period reports in sealed cover, which could neither be accessed by the government nor the petitioners.

- In the case where CBI's former director Alok Verma and the national agency's former special director Rakesh Asthana had made counter allegations of corruption against one another, the

Supreme Court had asked the Central Vigilance Commission (CVC) to submit its preliminary report in a sealed cover.

✓ In the 2014 BCCI reforms case, the probe committee of the cricket body had submitted its report to the Supreme Court in a sealed envelope, asking it not to make public the names of nine cricketers who were suspected of a match and spot fixing scam.

✓ In the Bhima Koregaon case, the Supreme Court had relied on information submitted by the Maharashtra police in a sealed cover.

What is the criticism and what do the courts say?

▪ Critics of this practice contend that it is not favorable to the **principles of transparency and accountability of the Indian justice system**, standing in contrast to the idea of an open court, where decisions can be subjected to public scrutiny. It is said to enlarge the scope for arbitrariness in court decisions, as judges are supposed to lay down reasoning for their decisions, but this cannot be done when they are based upon information submitted confidentially. What is further contested is whether the state should be granted such a privilege to submit information in secrecy, when existing provisions like in-camera hearings already provide sufficient protection to sensitive information.

▪ It is argued that not providing access to such documents to the accused parties obstructs their passage to a fair trial and adjudication. In the 2019 judgment in the case of *P Gopalakrishnan V. The State of Kerala*, the Supreme Court had said that disclosure of documents to the accused is constitutionally mandated, even if the investigation is ongoing and said documents may lead to breakthrough in the investigation.

▪ In the INX Media case in 2019, while granting bail to a former union minister, a Bench of the Supreme Court had criticised the Delhi High Court to deny bail on documents submitted by the Enforcement Directorate (ED) in a sealed cover.

▪ The three-judge Bench of justices R Banumathi, A S Bopanna, and Hrishikesh Roy had said: "Though it is held that it would be open for the Court to peruse the documents, it would be against the concept of fair trial if in every case the prosecution presents documents in sealed cover and the findings on the same are recorded as if the offence is committed and the same is treated as having a bearing for denial or grant of bail".

> **PEPPER IT WITH**
> Natural Rights, Moral Rights, Civil Rights, Political Rights, Economic Rights

▪ Lack of information will also lead to have restriction on freedom.

Conclusion

Sealed cover jurisprudence is a practise utilised by the Supreme Court and, in some cases, subordinate courts. Judiciary should come up with proper guidelines with reference to sealed cover jurisprudence. The Supreme Court should lead by example by limiting the use of sealed cover jurisprudence. Government should come with some alternative measures which can be used to protect information. It should also aim for narrowing the domain under which sealed cover jurisprudence is required.

Notification and Determination of Minorities

News Excerpt

Centre has recently told the Supreme Court that the governments in nine places, where followers of Hinduism, Baha'ism and Judaism are a 'minority', can consider laying down guidelines to identify them as minority communities at State–level and allow them to establish and administer educational institutions of their choice.

Pre-Connect

- "Minorities" (or "minority") appears at four places in the Constitution, in the headnotes of Articles 29 and 30, and clauses (1) and (2) of Article 30. **The Constitution does not define "minority"**.

- The most obvious definition of minorities (and majorities) is in terms of numbers, a minority is a group that is numerically smaller than the majority in a society. But the preponderance or the lack of numbers alone is not a guide to any authoritative definition. In **apartheid South Africa**, minorities exercised power and domination over the rest of the society.

- In some countries, the numerical line dividing minority and majority is so thin that it may be impossible to delineate a minority group. Alternatively, a society may be composed of different groups, none of which forms a minority, numerically speaking. The criterion of numbers may be important, but it is not a sufficient condition for any definition of a minority.

- A second component of the definition of minority is that the group must be non-dominant in society and the polity. A group can be conceptualised as a minority when its values and worldviews are either not reflected at all, or are insufficiently reflected in the public sphere and in the constitution of societal norms. These factors reinforce each other, marginalisation and exclusion are extremely important.

- But numerical size and non-dominance may not necessarily result in a minority/majority problem. A group may be numerically smaller than the others, and its values may be incompletely reflected in dominant political or social norms, but this may not lead to despondency or a feeling of exclusion. Parsis are a good example.

- The Constitution talks of only religious and linguistic minorities. It does not recognise sexual minorities such as LGBTQ+. Also, the Supreme Court has accepted only the numerical inferiority test, i.e., less than 50% in a state's population, for a group to be recognised as minority under Article 30(1).

Constitutional Position of 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".

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.

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

Court Rulings

TMA Pai Case

- 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 Case

- In 2005, the SC in its judgment in 'Bal Patil' referred to the TMA Pai ruling.
- The SC 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."

Conclusion

All religions and religious groups have to be treated equally and with equal respect without interfering with their individual rights of faith and worship. Integrity and unity of India is the constitutional goal. Atmosphere of mutual fear and distrust can create threat to the integrity of the country and sow seeds of multi nationalism.

> **PEPPER IT WITH**
> National Commission for Minorities, National Commission for Scheduled Castes

State Legislature and Lotteries

News Excerpt

Supreme Court held that a State legislature has the right to impose tax on lotteries conducted by other states within its jurisdiction.

GS CONNECT										
GS	1	2	3	4	5	6	7	8	9	10	11

Pre-Connect

- Betting is the act of placing a wager. Whether that's laying chips on the table, putting a certain amount on a certain outcome with a bookmaker, or buying stock in a company that one think will become more valuable, the act of committing money to be held pending an outcome (where if it happens, one gets paid, and if it doesn't, one loses bet) is betting. If one is putting up money to possibly earn more with it based on the outcome of a future event, one is betting.
- Gambling is the act of betting, but on an uncertain outcome. Good examples include buying a lottery ticket (one doesn't know what numbers will come up), choosing red/black on roulette (one doesn't know where the ball will land), or selecting a winning horse (one doesn't know who is going to cross the finish line first).
- Betting and Gambling is part of the State List in the Seventh Schedule of the Constitution. In other words, this simply means that the state government can exercise full control over betting and gambling practices in their state. They can also formulate their state-specific laws. A good example of this is the choice given to most states for the adoption of the Public Gambling Act, 1976.

Highlights of the Supreme Court Judgement

- ➤ Lotteries' is a species of gambling activity.
- ➤ The power to tax is on all activities which are in the nature of betting and gambling including lotteries.
- ➤ There is no dispute that lotteries, irrespective of whether it is conducted or organised by the Government of India or the Government of State or is authorised by the State or conducted by an agency or instrumentality of State government or Central government or any private player is betting and gambling.
- ➤ State legislatures have the power to tax lotteries under **Entry 62 of the State List**.
- ➤ Betting and gambling are a genus. It includes several types or species of activities such as horse racing, wheeling and other local variations/forms of 'betting and gambling' activity.
- ➤ It is clear that 'lotteries' is a species of gambling activity. Hence, lotteries are within the ambit of 'betting and gambling' as appearing in Entry 34, List II.
- ➤ States are fully competent to enact the Acts and levy taxes on the activity of 'betting and gambling."

Is gambling considered a game of chance or a game of skill in India?

India mainly puts the games into two broad categories to differentiate them. The two categories are that the game is either a Game of Chance or a Game of Skill. Also, if a gambling game requires a certain amount of skills, then it might not be considered illegal at all. However, a lot of bias revolves around such gambling games.

- o **Game of chance:** Game of chance are all those games that are played randomly. These games are based on luck. A person can play these games without prior knowledge or understanding. For instance, dice games, picking a number, etc. Such games are considered illegal in India.
- o **Game of skill:** Game of skill are all those games that are played based on a person's prior knowledge or experience of the game. A person will require skills such as analytical decision-making, logical thinking, capability, etc. Some games might also require some initial training to win. Such games are considered legal by most of the Indian states.

What is the legal position of gambling in India?

- ✓ Horse racing and lotteries are legal in India. Horse racing involves some prior skills so it isn't all about gambling.
- ✓ Several Indian states have legalized lotteries. These are Goa, Kerala, Arunachal Pradesh, Assam, Maharashtra, Madhya Pradesh, Mizoram, Manipur, Meghalaya, Punjab, Nagaland, West Bengal, and Sikkim.

✓ Online gambling and land-based casinos are legalized in Goa, Sikkim, Nagaland, and Daman under the Public Gambling Act, 1976.

✓ Maharashtra has prohibited gambling and considers gambling as illegal under the Bombay Prevention of Gambling Act, 1887.

✓ E-gaming (games of chance) has been legalized in Sikkim and Nagaland.

✓ Telangana and Arunachal Pradesh consider the game of skill as illegal as per the Telangana State Gaming Act, 1974.

✓ All India Gaming Federation, The Rummy Federation, and Federation of Indian Fantasy Sports have adopted a self-regulation code for all their advertisements.

> **PEPPER IT WITH**
> Seventh Schedule of the Indian Constitution, Federal Structure of the Indian Polity

Conclusion

Many Indians have become dependent on gambling games due to the country's escalating pandemic conditions. They have started looking forward to gambling prize money to fulfill their social as well as financial needs. Such practices have led to an increase in money laundering and black money sources in India. The legal status of gambling in India requires revamping various gambling laws that are more uniform. The government needs to step up its game by installing a proper legal framework on the subject.

The Anti-Defection Law

News Excerpt

A political party's Goa state unit chief asked the Supreme Court to interpret the Tenth Schedule of the Constitution, which deals with defection of lawmakers, in consonance with the spirit and objective of enactment.

Pre-Connect

- The anti-defection law is contained in the 10th Schedule of the Constitution. It was enacted by Parliament in 1985.

- The anti-defection law, as it is popularly known, aims at checking toppling of governments by party-hopping MLAs in the 60's and 70's.

- The law punishes individual MPs and MLAs from changing party after being elected. They could be disqualified from their membership of the House by the presiding officer.

- A member is deemed to have defected if he or she gives of primary membership of his party or does not obey party during voting in the House. However, if atleast two-third members of the legislative group of a political party decide to merge with any other political party, they could not be punished under the Anti-Defection law.

Background

➢ For a long time, the Indian political scene was besmirched by political defections by members of the legislature. This situation brought about greater instability in the political system. The infamous "**Aaya Ram, Gaya Ram**" slogan was coined against the background of continuous defections by the legislators. Legislators used to change parties frequently, bringing about chaos in the legislatures as governments fell. In sum, they often brought about political instability. This caused serious concerns to the right-thinking political leaders of the country.

➢ Several efforts were made to make some law to curb defections. Starting from private members' efforts, Bills were brought in by the government at different times. No Bill could be passed because of one reason or the other. However, the most important reason was that there was no consensus on the basic provisions of an anti-defection law. Members of Parliament were concerned about the freedom of speech in Parliament and other legislatures as they had a fear that too stringent a law on defection would likely curb the freedom of speech (which is a constitutional right) of the legislators. A lot of time was taken before a consensus could be reached on this issue.

➢ Finally, in 1985, the Rajiv Gandhi government brought a Bill to amend the Constitution and curb defection. The 10th Schedule of the Constitution, was added to the Constitution through 52nd amendment.

The grounds of disqualification

✓ If the member voluntarily gives up the membership of the party, he shall be disqualified. Voluntarily giving up the membership is not the same as resigning from a party. Even without resigning, a legislator can be disqualified if by his conduct the Speaker/Chairman of the concerned House draws a reasonable inference that the member has voluntarily given up the membership of his party.

✓ If a legislator votes in the House against the direction of his party and his action is not condoned by his party, he can be disqualified.

✓ However, there is an exception that was provided in the law to protect the legislators from disqualification. The 10th Schedule says that if there is a merger between two political parties and two-thirds of the members of a legislature party agree to the merger, they will not be disqualified.

Amendments in the Anti-Defection Law till date

▪ The law was amended in the year 2003. When it was enacted first, there was a provision under which if there occurs a split in the original political party and as a result of which one-third of the legislators of that party forms a separate group, they shall not be disqualified.

▪ This provision resulted in large scale defections and the lawmakers were convinced that the provision of a split in the party was being misused. Therefore, they decided to delete this provision. Now, the only provision which can be invoked for protection from disqualification is the provision relating to the merger, which is provided in Paragraph 4 of the 10th Schedule.

Interpretation of the Law

The first ground for disqualifying a legislator for defecting from a party is his voluntarily giving up the membership of his party. This term "voluntarily giving up the membership of his party" is susceptible to interpretation. As has been explained earlier, voluntarily giving up the membership is not the same as resigning from a party. The Supreme Court has clarified this point by saying that the presiding officer, who acts as a tribunal, has to draw a reasonable inference from the conduct of the legislator.

Conclusion

✚ The law certainly has been able to curb the evil of defection to a great extent. But, of late, a very alarming trend of legislators defecting in groups to another party in search of greener pastures is visible. The recent examples of defection in state Assemblies and even in Rajya Sabha bear this out. This only shows that the law needs a relook in order to plug the loopholes if any. But it must be said that this law has served the interest of the society. Political instability caused by frequent and unholy change of allegiance on the part of the legislators of our country has been contained to some extent. That is a story of success of one of the most important legislations that the Indian Parliament has enacted.

✚ India is full of sharp legal luminaries and together they could advise the government with various suggestions, but in the end, defection is more a political matter than legal. Will the politicians who collect votes on an anti-corruption rhetoric come together and show the

> **PEPPER IT WITH**
> The office of the Speaker of the Lok Sabha, The Chairman of the Rajya Sabha

political will to end the rampant misuse of this law which promotes ugly and menacing corruption in open sight? Will our elected leaders leave a better polity for our future generations? Let's hope they do.

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Page 11

Article 80 of the Constitution

News Excerpt

Chandigarh Municipal Corporation has approved a proposal to amend Article 80 of the Constitution so that its councillors could send a representative to the Rajya Sabha.

Pre-Connect

- Chandigarh is a Union Territory (UT) without any legislative assembly. Chandigarh has a seat of Member of Parliament (MP) in the lower house (Lok Sabha) or House of the People and they elect an MP every five years through direct voting.
- 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. Between 1966 and 1990, MPs for Rajya Sabha in Delhi were selected by the members of the Metropolitan Council of Delhi.
- 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. 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.
- The Bill 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). The bill has sought amendment of the Fourth Schedule of the Constitution with 'Entry 32, Chandigarh.

The UTs, which have the right to send MPs to the Upper House, and UTs which don't

- The Union Territories of Puducherry, Jammu and Kashmir and Delhi have representation in the Rajya Sabha, while Ladakh, Chandigarh, Dadra & Nagar Haveli, Daman and Diu, Andaman and Nicobar Islands and Lakshadweep are unrepresented.
- Puducherry has one representative in Rajya Sabha, Jammu and Kashmir has four representatives and Delhi is being represented by 3 MPs in the Upper House.
- In these three UTs, elected members of the Legislative Assembly form the electoral college for electing the MP for Rajya Sabha from their places.

Analytica

> **PEPPER IT WITH**
> Composition of the Lok Sabha, State Legislative Assembly

- There is a difference between the Metropolitan Council and Municipal Corporation. 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.
- The demand for a representative from Chandigarh in Rajya Sabha is not new, with political ambition stated to be one of the main reasons behind the move. Every political party wants its representative from Chandigarh to be in the Upper House of Parliament. Therefore, not a single councillor from any of the traditional parties, opposed the amendment when it was introduced in the municipal corporation.
- In case, the Parliament accepts the amendment, 35 elected MC councillors will have a right to elect a person among them to the Rajya Sabha.

Conclusion

The amendment, if approved, will enhance the powers of elected councillors. Many councillors believe that they were elected by the people of Chandigarh divided in at least 35 wards. Because there is no legislative assembly, they represent the people of Chandigarh in the true sense. Hence, they say that the locals of Chandigarh should be allowed to choose the right person for the upper house. Surely, the chances of the candidate of the party, which will have larger councillors in the civic body, will be boosted. If approved, the move will not affect the powers of the MP from Chandigarh in the Lok Sabha.

Eighth Schedule of the Constitution

News Excerpt

Padma Shri awardee Dr Badaplin War, a professor in the Khasi Department at NEHU, who spent her entire life dedicating to Khasi language and literature said that inclusion of the indigenous language in the 8th schedule of Constitution will be her priority.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II	■		■								
III											
IV											
M											

Pre-Connect

- Part XVII of the Constitution deals with the official language in Articles 343 to 351. Its provisions are divided into four heads–Language of the Union, Regional languages, Language of the judiciary and texts of laws and Special directives.
- The Eighth Schedule to the constitution of India lists the official languages of India.
- Although there are hundreds of languages spoken across the country, the eighth schedule recognises a total of 22 languages as the official languages.
- While 14 of these languages were included in the constitution at first, the rest of the languages were added to the constitution through subsequent amendments.
- In terms of the Constitution provisions, there are two objectives behind the specification of languages in the Eighth Schedule:
  - o the members of these languages are to be given representation in the Official Language Commission; and
  - o the forms, style and expression of these languages are to be used for the enrichment of the Hindi language.

Official languages of India: -

1. **Assamese:** The language is mostly spoken in the north-eastern state of Assam and also serves as the region's lingua franca.
2. **Bengali:** Also known as 'Bangla', this official language is spoken by almost 300 million people. Additionally, it is also the official and national language of Bangladesh.
3. **Gujarati:** This language is the official language in Gujarat, as well in the Union Territories of Dadra & Nagar Haveli and Daman and Diu.
4. **Hindi:** This language is spoken across northern, central, eastern and western India. It is one of the two official languages of the Government of India.
5. **Kannada:** Kannada is a Dravidian language spoken mostly by Karnataka residents in India's southern area. It is spoken by approximately 43 million people as of 2011.
6. **Kashmiri:** It became an official language of the UT of Jammu & Kashmir in 2020 and is mostly spoken by the people of the region.
7. **Konkani:** It is mostly spoken in the Konkan region, which includes Goa and coastal areas of some other states.
8. **Malayalam:** Spoken by the Malayali people, this language is spoken in Kerala, Lakshadweep, Puducherry.

9. **Manipuri:**
Also known as Meitei, or Meetei, this language is spoken in the northeastern state of Manipur and has almost 1.8 million speakers worldwide and is currently classified as a "vulnerable language" by UNESCO.

1-অসমীয়া (Assamese)	2-বেঙালি (Bengali)	3-ગુજરાતી (Gujarathi)	12-ଓଡ଼ିଆ (Oriya)	13-ਪੰਜਾਬੀ (Punjabi)	14-संस्कृतम् (Sanskrit)
4-हिंदी (Hindi)	5-ಕನ್ನಡ (Kannada)	6-कॉशुर, کٲشُر (Kashmiri)	15-سنڌي (Sindhi)	16-தமிழ் (Tamil)	17-తెలుగు (Telugu)
7-कोंकणी (Konkani)	8-മലയാളം (Malayalam)		18-اردو (Urdu)	19-बड़ो (Bodo)	20-ᱥᱟᱱᱛᱟᱲᱤ (Santali)
9-মৈতৈলোন্ (Manipuri)	10-मराठी (Marathi)	11-नेपाली (Nepali)	21-मैथिली, মৈথিলী (Maithili)	22-डोगरी, ڈوگری (dogri)	

10. **Marathi:** Spoken in the state of Maharashtra, it has 83 million speakers.

11. **Nepali:** Native to Nepal, Nepali has been one of the 22 scheduled languages of India because of the presence of the Nepalese community in the North-east region.

12. **Oriya:** It is spoken in Odisha, in parts of West Bengal, Jharkhand and Chhattisgarh by about 35 million people worldwide.

13. **Punjabi:** Spoken by people of Punjab in India and Pakistan. It also has a significant number of speakers abroad due to the widespread Punjabi diaspora.

14. **Sanskrit:** This ancient language served as the sacred language of Hinduism and Hindu philosophy.

15. **Sindhi:** Sindhi is an Indo-Aryan language spoken by the Sindhi people in the ancient Sindh area on the western Indian subcontinent.

16. **Tamil:** Tamil is a Classical Dravidian language spoken by the Tamil people of South Asia as their first language. Tamil has 75 million speakers and is among the longest-surviving classical languages in the world.

17. **Telugu:** Telugu is a Dravidian language spoken mostly by Telugu people in Andhra Pradesh and Telangana, India, where it is also the official language.

> **PEPPER IT WITH**
> Special Officer for Linguistic Minorities, Comptroller and Auditor General of India

18. **Urdu:** Spoken throughout South Asia, Urdu has approximately 230 million speakers.

19. **Bodo:** Bodo (also known as Boro) is a Sino-Tibetan language spoken by the Boro people of Northeast India, Nepal, and Bengal.

20. **Santhali:** Predominantly spoken in Assam, Bihar, Jharkhand, Mizoram, Odisha, Tripura, and West Bengal, Santhali is spoken by approximately 2.6 million people.

21. **Maithili:** Maithili is an Indo-Aryan language spoken in Nepal and portions of India as it is spoken in Bihar and northeastern Jharkhand in India.

22. **Dogri:** Spoken mostly in Jammu of Jammu and Kashmir, it is also spoken in western Himachal Pradesh, and the northern Punjab region.

Conclusion

Language needs to be used and culture needs to be seen in the behaviour and the day-to-day activities. These things keep the language and the culture alive. Indigenous people should have the right to study native language at school, and also non-indigenous students living in the region should have classes about the languages and cultures in the region. Otherwise, indigenous peoples get mystified, and then the majority of the citizens won't get any valid information about them. Indigenous languages should be official languages, if not in the whole country, at least regionally.

'Voter Islands'

News Excerpt

With the Delimitation Commission published maps of the proposed new constituencies for the Jammu and Kashmir Assembly, a look at the Census 2011 administrative boundaries along with the draft list of tehsils in some seats points to islands, where a part of the constituency is completely cut off from the rest and surrounded by another constituency.

Pre-Connect

- Delimitation is the act of redrawing boundaries of an Assembly or Lok Sabha seat to represent changes in population over time. The exercise is carried out by a commission, whose orders have the force of law and cannot be questioned before any court. The objective is to redraw boundaries based on census data so the population of all seats, as far as practicable, be the same throughout the state.

- Delimitation is a key step in the move to hold elections in the union territory, which could then be followed by restoration of statehood. After Kashmir's special status was scrapped in 2019, delimitation will be as per the provisions of the Indian constitution.

- The delimitation commission was constituted in March 2020. The panel was given a 12-month extension last year. It was given two months of extension - till May 6 - to complete the exercise of redrawing Assembly constituencies in Jammu and Kashmir.

- The Commission is headed by retired Supreme Court judge Justice Ranjana Prakash Desai, it has chief election commissioner Sushil Chandra and the state election commissioner of Jammu and Kashmir, KK Sharma, as its ex-officio members.

How often has delimitation been carried out in J&K?

- Delimitation exercises in J&K in the past have been slightly different from those in the rest of the country because of the region's special status, which it had.

- Delimitation of Lok Sabha seats in J&K was governed by the Constitution of India, but the delimitation of the state's Assembly seats was governed by the J&K Constitution and J&K Representation of the People Act, 1957.

- Assembly seats in J&K were delimited in 1963, 1973 and 1995. The last exercise was conducted by the Justice (retired) K K Gupta Commission when the state was under the President's Rule and was based on the 1981 census, which formed the basis of the state elections in 1996.

Issue of the Voter Islands

- After the abrogation of J&K's special status in 2019, delimitation of Lok Sabha and Assembly seats in the newly-created Union Territory would be as per the provisions of the Indian Constitution. Political leaders participating in the delimitation process as well as independent observers have raised fears of "islands" being formed.

- With the Delimitation Commission published maps of the proposed new constituencies for the Jammu and Kashmir Assembly, a look at the Census 2011 administrative boundaries along with the draft list of tehsils in some seats points to islands, where a part of the constituency is completely cut off from the rest and surrounded by another constituency.

- Some parties didn't join the delimitation process while some political factions have strongly objected to the final draft of delimitation, stating 'it is dissection not delimitation, totally ignoring ground realities'.

- ✓ For example, in Kishtwar district, where the number of constituencies has been proposed to be increased from two to three (Mughalmaidan, Kishtwar and Padder), Bounjwah tehsil was proposed to be in the Mughalmaidan constituency. However, one village in the tehsil, Kewah, would be completely surrounded by villages in the Kishtwar constituency.

- ✓ The draft proposals had used the boundaries of the patwar halqa, an administrative unit of multiple villages, which in some cases included villages that were not located next to each other. Political factions claiming that this has happened because the basic principles have not been followed. The Delimitation Act, 2002 says that apart from population, the constituencies have to be geographically compact areas and contiguous.

- ✓ One of the leading political factions of the valley have also raised concerns that the Commission has carved out geographical islands and joined with the other Assembly segments without any proximity or connectivity. E.g., Rajouri, where Sohna, Doongi and Bagla patwar circles had been added to Thana Mandi seat. The inhabitants of these areas have to cross entire Rajouri to reach Thana Mandi. All the fundamental legal parameters have been grossly violated with least consideration of the hardship the people may have to suffer.

> **PEPPER IT WITH**
>
> Salient features of the Representation of the People Act, 1950 and the Representation of the People Act, 1951

Conclusion

The proposal, published in the Gazette of India and the Gazette of Jammu and Kashmir, outlines six new constituencies in Jammu and one in the Kashmir Valley. It also proposes the carving out of seven scheduled caste and nine scheduled tribe constituencies in the region. If the proposal is cleared, the total number of Assembly constituencies will rise from 83 to 90, with 43 in the Jammu region and 47 in Kashmir; 24 seats will be kept aside (and vacant) for Pakistan-occupied Kashmir. Currently, Jammu has 37 members and Kashmir has 46.The number of Lok Sabha seats have been kept five and no seat has been reserved for scheduled castes or tribes.

The National Commission for Protection of Child Rights (NCPCR)

News Excerpt

The National Commission for Protection of Child Rights (NCPCR) is planning to develop new guidelines to regulate the participation of children working in web series and films on OTT platforms. The guidelines will also cover children working in reality shows, TV programmes and social media.

Pre-Connect

- National Commission for Protection of Child Rights (NCPCR) is a statutory body under the Commissions for Protection of Child Rights (CPCR) Act, 2005 under the administrative control of the Ministry of Women & Child Development, Government of India.

- The Commission's mandate is to ensure that all Laws, Policies, Programmes, and Administrative Mechanisms are in consonance with the Child Rights perspective as enshrined in the Constitution of India and also the UN Convention on the Rights of the Child. The Child is defined as a person in the 0 to 18 years age group.

- It was set up in March 2007 under the Commissions for Protection of Child Rights (CPCR) Act, 2005. It works for the legal constitutional and the social rights protection of the children.

- The Commission visualizes a rights-based perspective flowing into National Policies and Programmes, along with nuanced responses at the State, District and Block levels, taking care of specificity and strengths of each region.

- In order to touch every child, it seeks a deeper penetration to communities and households and expects that the ground experiences gathered at the field are taken into consideration by all the authorities at the higher level. Thus, the Commission sees an indispensable role for the State,

sound institution-building processes, respect for decentralization at the local bodies and community level and larger societal concern for children and their well-being.

- The commission consist of the following members namely: -
  - ○ A chairperson who, is a person of eminence and has done an outstanding work for promoting the welfare of children; and
  - ○ Six members, out of which at least two are woman, from the following fields, is appointed by the Central Government from amongst person of eminence, ability, integrity, standing and experience in, -
    - ▪ Education;
    - ▪ Child health, care, welfare or child development;
    - ▪ Juvenile justice or care of neglected or marginalized children or children with disabilities;
    - ▪ Elimination of child labour or children in distress;
    - ▪ Child psychology or sociology; and
    - ▪ Laws relating to children.

Highlights: The Concern of the Future Gen

➢ A meeting is slated soon, in which NCPCR plans to invite all the stakeholders, including officials from various OTT platforms, television channels and social media. According to NCPCR head Priyank Kanoongo, fresh guidelines are needed as earlier ones are "outdated".

➢ In 2011, the child rights body had come out with guidelines to regulate children's participation and their working conditions in television series, reality shows and advertisements.

➢ But now, it is being felt that there is a need to come out with fresh guidelines as there have been amendments and changes in the Juvenile Justice Act, 2015, POSCO Act, 2012, IT guidelines and child labour rules. NCPCR need to incorporate in the new guidelines all the changes that have taken place since 2011.

➢ As OTT or Over the Top streaming channels found more viewership during the lockdowns, it was felt that there was a need to come out with fresh guidelines that safeguards the rights of the children appearing in these web series, which are still unregulated.

➢ NCPCR also emphasized on the need for formulating fresh guidelines was felt after a consensus emerged at a workshop attended by representatives of state child rights bodies in Bhopal.

Analytica

✓ If we look at the legal framework related to this issue, the amendments to the Child Labour (Prohibition and Regulation) Act 1986 puts a blanket ban on all children in all occupations with exceptions of her/him helping the family (other than hazardous occupations and processes) after school hours and vacations and child artists in the audio-visual entertainment industry. This means that legally, it is allowed for children to work in television and the audio-visual entertainment industry.

✓ The Amended Act defines child artists as children who perform or practice any work as a hobby or profession directly involving him as an actor, singer, sportsperson or in such other actively related to the area of entertainment or sports. While the law recognises the work by child artists and also the need to regulate it, the Child Labour (Prohibition and Regulation) Amendments define certain minimal safeguards only.

> **PEPPER IT WITH**
> Finance Commission, National Commission for Schedule Castes, National Human Rights Commission

✓ Besides the legal framework, India also have National Commission for Protection of Child Rights guidelines released in 2010-11 (Guidelines to regulate Child Participation in TV Serials, Reality Shows and Advertisements) that attempt to safeguard children.

Conclusion

The law is clear on the rights of children working in the entertainment industry, but proper and strict implementation is what is needed. When concerned individuals come together as champions of child rights, it paves way for finding solutions that can be suggested to authorities and ensure that existing rules are adhered to till better provisions are made. The other worrying question is that how much of these regulations can actually be brought to implementation, especially since there is no mechanism to track the number of different places a child artist could be working at simultaneously. While parents are in charge of their children's welfare, both parents as well as production houses need to be very careful that their guardianship does not treat children as commodities to be profited from. Moreover, even though the state has put together certain norms, there is scope enough to sharpen them and ensure a more robust monitoring mechanism in place working in the best interest of the child.

Issues with Central Armed Police Force

News Excerpt

More Central Armed Police Force (CAPF) personnel died by suicide in the Covid-19 pandemic years of 2020 and 2021 than in any year in the past one decade, and more than 1,200 personnel died by suicide in the last 10 years, according to data provided to Parliament.

Pre-Connect

- The Central Armed Police Forces (CAPF) comprises seven central security forces in India under the authority of Ministry of Home Affairs.
    - Central Industrial Security Force (CISF)
    - Central Reserve Police Force (CRPF)
    - Assam Rifles (AR)
    - National Security Guard (NSG)
    - Sashastra Seema Bal (SSB)
    - Border Security Force (BSF)
    - Indo Tibetan Border Police (ITBP)
- Each of the seven has its own cadre of officers, but they are headed by officers of the Indian Police Service.
- The CAPF together comprises 9 lakh personnel.

Issues

- The data comes at a time when the issue of stress among forces personnel has been a topic of discussion in the backdrop of recent incidents of fratricide in BSF. There have been more than 25 incidents of fratricide reported in the forces since 2019.

> - BSF guards Indian borders along Pakistan and Bangladesh.
> - The Indo-Tibetan Border Police Force (ITBP) is the Border Guarding Force at the Indo-China Border.
> - SSB guards Indo-Nepal and Indo-Bhutan borders
> - Assam Rifles is tasked with guarding Indo-Myanmar border

- The government told the Lok Sabha that 156 CAPF personnel died by suicide in 2021, and 143 in 2020. In 2019, 129 such deaths were recorded.
- According to data available with the National Crime Records Bureau (NCRB), 1.53 lakh cases of death by suicide was recorded in 2020, up from 1.39 lakh in 2019.
- Home Ministry said that in the last 10 years 1,205 CAPF personnel have died by suicide.

> These incidents have occurred largely due to harsh working conditions, coupled with family issues and unavailability of leave when required.

> In 2019, Home Ministry said that leaves available to CAPF personnel would be increased to 100 days from the existing 75 days. This is yet to be implemented.

> A proposal by CAPFs to increase casual leave of CAPF personnel from 15 days to 30 days on the lines of defence personnel has also not been accepted by Home Ministry.

> A task force was set up in October 2021 to identify relevant risk factors as well as relevant risk groups and suggest remedial measures for prevention of suicides in CAPFs and Assam Rifles (AR) personnel. The composition of the 'task force' was modified in December 2021.

> Domestic problems, illness and financial problems are some of the contributory factors among others behind the incidents of suicide. Improvement in working conditions of (personnel from) CAPFs, Assam Rifles and National Security Guard (NSG) is a constant endeavour.

When Stress becomes a Threat

Stress within limits is desirable. However, once the threshold gets crossed, warning signals must be taken note of and preventive mechanism activated. As prevention is always better than cure, it is best to identify stressors and initiate advance action to minimise their intensity. Additionally, troops and commanders should be trained and prepared to manage them.

Resolution of the Problems faced by Soldiers

✓ Government is taking many steps to take care of mental health of CAPF personnel.

✓ To reduce the stress level of CAPFs various steps have been taken by the MHA, CAPFs, Assam Rifles and NSG. As part of the process, meditation courses are being conducted for CAPFs personnel which have positive impacts on the soldiers.

> **PEPPER IT WITH**
> Mandate of the CISF, CRPF, Assam Rifles, National Security Guard, SSB, BSF, ITBP

✓ The government had ushered in transparent policies pertaining to transfer and leave of CAPFs, and choice posting is considered to the extent possible after the personnel served in hard area.

✓ Hospitalisation period due to injuries while on duty is treated as on-duty even as regular interaction of officers with troops to find out and redress their grievances is organised.

✓ The government is ensuring adequate rest and relief by regulating their duty hours, improving living conditions for troops, providing adequate recreational/entertainment, sports, communication facilities, etc.

Conclusion

The million-strong force, is under tremendous stress. In fact, it is true that central armed forces is losing more soldiers in suicides and fratricides than in action against the enemy. Most experts attribute the growing stress to deteriorating morale, poor service conditions, denial of leave at the required time, unattractive pay and promotions, early retirement ages, communication gap with superiors etc.

Reforms in the Criminal Law

News Excerpt

The Ministry of Law & Justice has informed the Rajya Sabha that it has initiated the process for comprehensive amendments to criminal laws: Indian Penal Code, 1860, the Code of Criminal Procedure, 1973, and the Indian Evidence Act, 1872 in consultation with all the stakeholders.

Pre-Connect

• Under the colonial rule of the British everything changed, after 1833 the British government appointed the 'Indian Law Commission' that would study the existing laws in India, jurisdictions of the courts present at the time & the basis and principles of the current laws.

- This commission was to give a report and suggest necessary changes and reforms that would be required to codify laws in India. One of the most important contributions of the Indian Law commission was the formation of the Indian Penal Code; this was submitted by Lord Macaulay in 1837 which became law in the year 1860 after almost thirty years of heavy deliberations. At the same time, they also wrote the Code of Criminal Procedure, 1861. Most procedural laws came after this code.

- These legislations were criticized at the time, but when we study history and look back these laws became the basis on which our justice system functions, the principles of justice, equity and good conscience form the basis of the laws that are detailed in these Acts.

- There was a deliberate need to understand the people that this law was being written for, right from punishments for Sati, bride burning, abolishing untouchables or infringing on human rights, these laws thus uplifted the underprivileged and provided a chance of justice for those who were trampled upon. Owing to the Indian Penal Code, other legislations punishing crimes mentioned above were also brought into force.

- The Indian Penal Code and the Code of Criminal Procedures have been through regular changes through the ages to make them relevant to the current time and culture. Jurists and philosophers have developed various theories of criminal law.

Highlights of the recent Criminal Law Reform process

- With a view to make comprehensive changes in the criminal laws of the country to provide affordable and speedy justice to all, create a people centric legal structure, the government has initiated the process for comprehensive amendments to criminal laws such as Indian Penal Code, 1860, the Code of Criminal Procedure, 1973 and the Indian Evidence Act, 1872 in consultation with all stakeholders.

- Government has informed the Rajya Sabha that the Ministry of Home Affairs has sought suggestions from Governors, Chief Ministers, Lieutenant Governors and Administrators of Union Territories, Chief Justice of India, Chief Justices of various High Courts, Bar Council of India, Bar Council of various States, various universities, law institutes and all MPs regarding comprehensive amendments in criminal laws.

- The department-related Parliamentary Standing Committee on Home Affairs in its 146th report had recommended that there is a need for a comprehensive review of the criminal justice system of the country.

- Earlier the Parliamentary Standing Committee in its 111th and 128th reports had also stressed upon the need to reform and rationalise the criminal law of the country by introducing a comprehensive legislation in Parliament rather than bringing about piecemeal amendments in respective acts.

- A committee had been constituted under the chairpersonship of the Vice chancellor of National Law University, Delhi to suggest reforms in the criminal laws. The government is committed to bring out a comprehensive legislation taking into account the recommendations of the committee and the suggestions received from all the stakeholders.

Analytica

- ✓ A hallmark of any civilised society lay in the maturity and the erudition of its Criminal Justice System. Criminal Law like every other law has to meet the pace at which society is evolving. The deviant minds, whom Criminal Law seeks to apprehend and bring to justice have also become sophisticated and nuanced in their modus operandi's, the 21st Century 'criminal mind' is far more multi-dimensional than what perhaps Macaulay's Code could envision and account for. It is this fundamental reality which brings to the forefront the challenging responsibilities in front of the government.

- ✓ Any State that seeks to ensure to its citizenry the sacrosanct right to life and personal liberty is duty bound to develop and nurture a framework of efficient penal and procedural laws. It is a positive obligation of the state to protect the society against breaches peace and violation of public order.

- ✓ In the Indian context, the call for reforms in criminal laws has echoed repeatedly across temporal, geographical and political boundaries. The unconstitutionalities, inconsistencies, bottlenecks, and inefficiencies in our criminal laws have been pointed out and lamented for too long. It is now imperative to re-examine these laws and to suggest potential and practicable solutions to cure the deficiencies that threaten to derail the effective operation of our criminal justice system.

- ✓ The Committee for Reforms in Criminal Laws set up by the Ministry of Home Affairs, Government of India, at National Law University Delhi is working towards resolving these issues in a principled manner that balances the positive obligations of the State with the rights of the individual and the community. In line with the constitutional principles, the government is engaged in a thorough examination and revision of criminal laws with a humanitarian and rights-based approach.

- ✓ In proposing the Indian Penal Code, Macaulay intended to bring about some semblance of certainty to the criminal justice system. "The principle is simply this", Macaulay remarked, "uniformity when you can have it; diversity when you must have it; but, in all cases certainty." After over a century and a half of its operation, the certainty that the code brought along with it is has given way to ambiguity.

- ✓ Even though India supplanted the colonial criminal procedure with their own in 1973, there are multiple problems still exists, including but not limited to – pendency of cases; inconsistencies and inefficiencies in procedure pertaining to arrest, bail, investigation and trial; arbitrariness in police and prosecutorial actions; equation of victims to witnesses, etc. Indian Laws of Evidence too require an urgent remodeling to suit the needs of modernisation.

Conclusion

- The Indian Penal Code in all its glory is a document that was made suited for India, by the British. Today we still follow the same rules and laws; with different amendments as time and culture changes, but this text has been the backbone for delivering justice to those violated.

- Criminal law in India aims to punish the guilty and build a society that is free from the clutches of evil, getting rid of them one by one. Even though today's society does not practice retributive justice, justice today is not only for the victim but for society at large.

- In 18th century the uniform pattern of judiciary emerged, Government focus to have a systematic judiciary system after Independence. In one sense justice means a grant of expeditious and inexpensive relief to the person who approached to the court, it is not important that justice work effectively but it is also important that it should work on time so that all the person approaches to court get relief.

- Nowadays administration of criminal justice is facing serious problem. The criminal trial justice does not mean only for the accused but also for the victim and also to maintain law and order. The court should always maintain the public faith of the people in administration of the justice.

> **PEPPER IT WITH**
> Issue of the violation of the rights of the prisoners, Alternative Disputes Redressal

- Changes are constant in the judiciary but criminal justice system of India is needed to improve it system. These all are the reason of ineffective enforcement of the law, accountability, and delay in disposal of the cases, poor prison condition, and lack of trained police. These are the problem causes in the criminal justice system.

Reasonable Accommodation and Fundamental Rights

News Excerpt

The All-India Muslim Personal Law Board (AIMPLB) along with two other petitioners has moved the Supreme Court against the Karnataka High Court judgement that upheld the ban on wearing hijab in educational institutions of the state.

Pre-Connect

- 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 court rejected an argument in support of wearing hijab that was based on the principle of 'reasonable accommodation'.
- On March 15, the Karnataka High Court's full bench held that the wearing of hijab is not part of the essential religious practice of the Islamic faith under Article 25 of the Constitution. The bench also held that the prescription of school uniform is constitutionally permissible, and therefore, not violative of Article 19(1)(a) of the Constitution.
- The bench also held that such prescription is not violative of the right to privacy, guaranteed under Article 21 of the Constitution. It also concluded that the Government Order issued by the state government prescribing school uniform does not suffer from lack of application of mind, as alleged by the petitioners in this case. No case is made out that the order is manifestly arbitrary, and therefore, violative of Articles 14 and 15 of the Constitution, the bench unanimously held.

The principle of "Reasonable Accommodation"

- ➢ '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 of "Reasonable Accommodation" 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," according to 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.

The legal position of the principle of "Reasonable Accommodation" 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.

Conclusion

> **PEPPER IT WITH**
> Fundamental Rights to Equality, Rights to Freedom, Rights to Constitutional Remedies

In the 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 provided an opportunity to see if the concept can be used in the realm of belief and conscience too. The high court bench had also maintained that the government has power to issue the impugned order dated February 5, 2022 and no case is made out for its invalidation. By the said order, the Karnataka government had banned wearing clothes which disturb equality, integrity and public order in schools and colleges, which the dissatisfied citizenry had challenged in the High Court. The bench also rejected the plea to initiate a disciplinary inquiry against the college, its principal and a teacher.

Legal Services Clinic

News Excerpt

Aiming to make legitimate assistance more accessible to women, the National Commission for Women (NCW) in collaboration with Delhi State Legal Services Authority (DSLSA) launched a legal aid clinic which will act as a single-window facility for resolving the grievances of women.

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Pre-Connect

- "Legal services clinic" means the facility established by the National Legal Services Authority, State Legal Services Authority and the District Legal Services Authority to provide basic legal services to the People with the assistance of para-legal-volunteers or lawyers, as the point of first contact for help and advice.
- A legal clinic (also law clinic or law school clinic) is a Legal Services Authority/law school program providing hands –on- legal experience to law school students and services to various clients. Clinics are usually directed by clinical professors. Legal Clinics typically do pro bono work in a particular area, providing free legal services to clients.
- Lawyers/Law graduates/Law Students typically provide assistance with research, drafting legal arguments and meeting with clients. Clinical legal studies exist in diverse areas such as immigration law, environmental law, Intellectual property, housing, Criminal defence, Criminal

prosecution and the Civil and Revenue Indian law. Clinical education presents an interesting intersection between the academic and professional environments.

What is the New NCW Legal Services Clinic all about?

➢ Under the new legal aid clinic, proper counselling will be given for walk-in complainants, information and advice on numerous schemes of the National Legal Services Authority (NALSA)/ DSLSA, women in distress will be given legal assistance, assistance in Mahila Jansunwai, free legal aid, hearings in matrimonial cases and any other complaints which have been registered with the Commission will be provided among other services.

➢ NCW is also preparing to set up similar legal services clinics in other State Commissions for Women as well.

Free Legal Services to the Vulnerable Sections of the Society

✓ Legal Aid Clinics on the lines of primary health centres where a doctor and other auxiliary medical staff provide basic health care to the people situated in village areas affected with poverty and social squalor. Like the doctors rendering health services to the people of the locality in the primary health centre, a lawyer manning the legal aid clinic provides legal services to the people. The basic objective of the Scheme is to provide legal services to the poor, marginalized and weaker sections of the society as categorized in Section 12 of the Legal Services Authorities Act 1987, especially to the people living in faraway places including the places with geographical barriers, away from the seats of justice and the offices of the legal services institutions.

✓ The aim of the Scheme is to provide an inexpensive local machinery for rendering legal services of basic nature like legal advice, drafting of petitions, notices, replies, applications and other documents of legal importance and also for resolving the disputes of the local people by making the parties to see reason and thereby preventing the disputes reaching courts. In cases where legal services of a higher level are required, the matter can be referred to the legal services institutions established under the Legal Services Authorities Act, 1987.

> **PEPPER IT WITH**
> Family Courts, Gram Nyayalayas, National Legal Services Authority

✓ Legal Aid Clinics are manned by paralegal volunteers (selected and trained by the Legal Services Authorities) and lawyers with a sense of commitment, sensibility and sensitiveness to the problems of common people. The paralegal volunteer is available during the working hours of the Legal Aid Clinics.

Conclusion

In accordance with the mandate of the Commission, as per Section 10 of the National Commission for Women Act, 1990, that is to review the existing provisions of the constitution and other laws affecting women and recommend amendments thereto so as to suggest remedial legislative measures to meet any lacunae, inadequacies or short comings in such legislations, the commission reviewed various laws and made recommendations thereto. The National Commission for Women is concerned about spreading awareness about the rights and laws related to women and in this regard a number of awareness programmes were organized with the help of Law colleges, universities. The National Commission for Women is also concerned about the capacity building of police officers and in furtherance of the same the commission jointly organized with Bureau and Police Research Development Training courses for Women Police Officers in Investigation of cases involving Crime against Women.

Article 355

News Excerpt

Amid a full-blown political battle between the parties over the violence in West Bengal's Birbhum district, an MP from the Lok Sabha wrote to the President Sh. Ram Nath Kovind, urging him to invoke Article 355 of the Constitution to ensure that the state government functions in accordance with the provisions of the Constitution.

Pre-Connect

- *Article 355 of the Indian Constitution:* It shall be the duty of the Union to protect every State against external aggression and internal disturbance and to ensure that the government of every State is carried on in accordance with the provisions of this Constitution.
- Article 355 imposes two duties on the Centre: (a) to protect every state against external aggression and internal disturbance; and (b) to ensure that the government of every state is carried on in accordance with the provisions of the Constitution.
- Article 355 is part of emergency provisions contained in Part XVIII of the Constitution of India, from Article 352 to 360.

Connection between the Article 355 and Article 356

- Article 355 imposes a duty on the Centre to ensure that the government of every state is carried on in accordance with the provisions of the Constitution. It is this duty in the performance of which the Centre takes over the government of a state under Article 356 in case of failure of constitutional machinery in state. This is popularly known as 'President's Rule'. It is also known as 'State Emergency' or 'Constitutional Emergency'.
- The President's Rule can be proclaimed under Article 356 on two grounds–one mentioned in Article 356 itself and another in Article 365:
  - Article 356 empowers the President to issue a proclamation, if he is satisfied that a situation has arisen in which the government of a state cannot be carried on in accordance with the provisions of the Constitution. Notably, the president can act either on a report of the governor of the state or otherwise too (i.e., even without the governor's report).
  - Article 365 says that whenever a state fails to comply with or to give effect to any direction from the Centre, it will be lawful for the president to hold that a situation has arisen in which the government of the state cannot be carried on in accordance with the provisions of the Constitution.

Conclusion

When an external aggression or internal disturbance paralyses the state administration creating a situation of a potential break down of the Constitutional machinery of the state, all alternative courses available to the Union for discharging its paramount responsibility under Article 355 should be exhausted to contain the situation and the exercise of the power under Article 356 should be limited strictly to rectifying a "failure of the Constitutional machinery in the state".

> **PEPPER IT WITH**
> Emergency provisions in the Constitution, National Emergency, Financial Emergency

SOCIAL ISSUES, GOVERNMENT SCHEMES, REPORTS & INDICES

The World Happiness Report

News Excerpt

Recently, Finland has been named the World's happiest country for the fifth year running, in the World Happiness Report.

Pre-connect

- This year marks the 10th anniversary of the World Happiness Report, which uses global survey data to report how people evaluate their own lives in more than 150 countries worldwide.

- The World Happiness Report 2022 reveals a bright light in dark times. The pandemic brought not only pain and suffering but also an increase in social support and benevolence. As we battle the ills of disease and war, it is essential to remember the universal desire for happiness and the capacity of individuals to rally to each other's support in times of great need.

Key Finding of the report

- Bulgaria, Romania and Serbia recorded the biggest boosts in wellbeing.

- Denmark, Iceland, Switzerland, the Netherlands, Luxembourg, Sweden, Norway, Israel and New Zealand figure among the top ten in the list of 146 nations.

- The largest falls in the World Happiness table, came in Lebanon, Venezuela and Afghanistan.

- Lebanon, which is facing economic meltdown, fell to second from last on the index of 146 countries, just below Zimbabwe.

- Northern Europeans once again dominated the top spots — with the Danes second to the Finns, followed by the Icelandic, the Swiss and the Dutch.

- The United States rose three places to 16th, one ahead of Britain. France climbed to 20th, its highest ranking yet.

- This year the authors also used data from social media to compare people's emotions before and after the COVID-19 pandemic.

- They found "strong increases in anxiety and sadness" in 18 countries but a fall in feelings of anger.

> The World Happiness Report, a publication of the United Nation's Sustainable Development Solutions Network (SDSN), uses survey data to determine how people evaluate their lives in more than 150 countries. In simpler terms, the report presents a framework gauging people's qualitative assessment of their lives, progress and well-being through quantitative indicators.
>
> United Nations (U.N.) adopted Resolution 65/309 titled "Happiness: Towards a holistic approach to development" in July 2011. They called on governments to impart greater importance to happiness and well-being whilst pursuing social and economic development.

WORLD HAPPINESS REPORT (2022)

Rank	Country
1.	Finland
2.	Denmark
3.	Iceland
4.	Switzerland
5.	Netherlands
6.	Luxembourg*
7.	Sweden
8.	Norway
9.	Israel
10.	New Zealand
⋮	
136.	India
⋮	
146.	Afghanistan

Note: Those with a * do not have survey information in 2020 or 2021. Their averages are based on the 2019 survey.

Position of India and other Asian Countries

- ✓ India continued to fare poorly in the world happiness index, with its position marginally improving to 136 as against last year's 139.
- ✓ Among the South Asian nations, only Taliban-ruled Afghanistan fared worse than India. Afghanistan was named the most unhappy country in the world, ranking last on the index of 146 countries.
- ✓ Nepal (84), Bangladesh (94), Pakistan (121) and Sri Lanka (127) managed to get better ranks in the list.

Analytica

Why Indians are unhappy and what to do about it?

- ▪ The WHR report is based on 'life evaluations' done by the World Gallup Poll, which asks its respondents to assign themselves particular positions on an imaginary ladder, with the highest position equaling a 10 and the lowest equaling a 0.
- ▪ Respondents that score seven or more are categorized as 'thriving', while those scoring between 4 and 7 are categorized as 'struggling' and those scoring below four are outright categorized as 'suffering'. India scored a dismal 3.819 in 2021, which means that Indians are suffering in terms of happiness.
- ▪ The report highlighted that majority of Indians in the organized workforce believed that their companies would prioritise health and safety and also give importance to mental health considerations.

Where are we really going wrong in terms of happiness?

- ✦ Many companies do not have a positive work culture.
- ✦ Expecting results without enforcing a positive work culture where feedback is valued and every voice is heard will not work out for any workplace in the long run and its employees cannot be called 'happy' even if they are earning well.
- ✦ Companies should increasingly give more attention to the overall health and wellness of employees, which will be a positive step forward towards achieving collective happiness.
- ✦ The same can be applied to our homes. Very often, it can be found that there is a lack of open communication at homes due to the parochial idea that 'one person decides and the others merely follow'. There is no scope for discussion or feedback. This need to completely change.
- ✦ A 'positive home culture' coupled with a 'positive work culture' is the only way in which India can truly win in the pursuit of happiness. Materialism along with an emphasis on the non-material will take us forward and help us perform better in the next World Happiness Report.

Maternal Mortality in India

News Excerpt

According to the latest Sample Registration System (SRS) special bulletin on maternal mortality in India (2017-19), brought out by the office of the Registrar General of India, Kerala's MMR has dropped by 12 points.
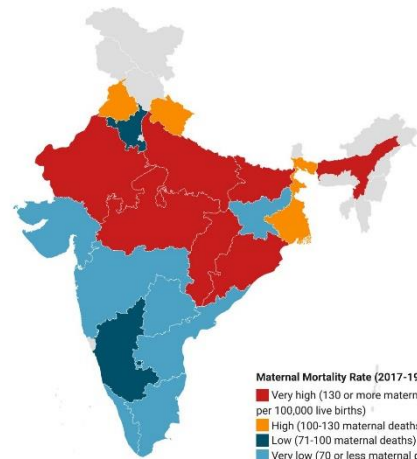
Pre-connect

- • The maternal mortality ratio (MMR) is defined as the number of maternal deaths during a given time period per 100,000 live births during the same time period. It depicts the risk of maternal death relative to the number of live births and essentially captures the risk of death in a single pregnancy or a single live birth.

- **Maternal deaths:** The annual number of female deaths from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy and childbirth or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, expressed per 100,000 live births, for a specified time period.

- **Live birth:** The complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached.

Seven states have very high maternal mortality

India's maternal mortality ratio (MMR) has improved from **113 in 2016-18** to **103 in 2017-19**. The ratio has worsened in **West Bengal, Haryana, Uttarakhand and Chhattisgarh.**

Maternal Mortality Rate (2017-19)
- ■ Very high (130 or more maternal deaths per 100,000 live births)
- ■ High (100-130 maternal deaths)
- ■ Low (71-100 maternal deaths)
- ■ Very low (70 or less maternal deaths)

Key Points

➢ Kerala has yet again emerged on top when it comes to maternal and child health, with the State recording the lowest Maternal Mortality Ratio (MMR) of 30 (per one lakh live births) in the country. This puts Kerala way ahead of the national MMR of 103.

➢ Kerala has already achieved the target it had set for itself, based on the U.N. Sustainable Development Goals, of an MMR of 30 by 2020, that too, one year ahead.

➢ The acknowledgement goes the private health sector too, where 65% of the deliveries take place, even though all complicated deliveries finally end up at public sector tertiary care maternity hospitals.

COVID 19 Impact

✓ COVID-19 has claimed over 90 mothers in Kerala in the past two years. This will reflect badly in our figures next year.

✓ But the State has made substantial investments in setting up high dependency units in every district and in improving 39 delivery points under the Union Health Ministry's LaQshya (a quality improvement initiative in labour room & maternity operation theatres) and hence everything looks bright for us to achieve the next SDG target of an MMR of 20 by 2030.

How Kerala Achieved this landmark?

▪ Kerala's achievement is a result of a decade of sustained efforts at properly assessing the cause of maternal mortality in the State and taking up targeted initiatives to tackle each of these.

▪ It developed the Quality Standards in Obstetric Care, in partnership with the NICE International and leading specialists in 2012-13 and focused on the management of some of the common causes of maternal deaths - postpartum hemorrhage (PPH), pregnancy-induced hypertension (PIH), sepsis, and amniotic fluid embolism.

▪ The implementation of these quality standards changed obstetric practice in many delivery points. There has been a substantial reduction in deaths due to sepsis, PIH and PPH, even though postpartum hemorrhage continues to be a serious concern.

- Confidential Review of Maternal Deaths, an initiative diligently done by KFOG since 2004-05 and which laid the foundation for all maternal health improvement initiatives later, was strengthened by maternal near-miss audits in all districts, to analyse the critical events which resulted in near maternal deaths.

- Kerala is perhaps the only State to have acted upon the operational guidelines released by the Union Health Ministry for Maternal Near Miss Review (MNMR) in 2014.

Conclusion

Improvement of the health system's emergency or rapid response during obstetric emergencies, especially in secondary care hospitals, including provision of emergency transport system, could go a long way in reducing maternal deaths further.

Institutional Delivery in India

❖ It has been a decade-and-a-half since India started incentivizing institutional deliveries to ensure safe childbirths. But health indicators for mothers and infants have not improved as much as the number of such deliveries.

❖ The share of India's institutional deliveries increased to 88.6 per cent in 2019-2021 (National Family Health Survey 5) from 40.8 per cent in 2005-06 (NHFS 3).

❖ The nine targeted states — Bihar, Uttar Pradesh, Uttarakhand, Madhya Pradesh, Rajasthan, Jharkhand, Odisha, Chhattisgarh and Assam — recorded a similar uptick during the period, ranging from 50-64 percentage points.

❖ Madhya Pradesh led the way with a 64.5 percentage point growth. These states account for nearly half of India's population, over 60 per cent of maternal deaths, 70 per cent of infant deaths and 12 per cent of global maternal deaths.

Background

Institutional deliveries were first incentivized by the central government in 2005 with JSY, under which a direct cash transfer is promised if a woman delivered a baby at a medical facility, rather than at home. Annual JSY beneficiaries have shot up to over 10 million from 739,000 in 2005-06, according to the 2020-2021 annual report of the Union health ministry.

Indicators haven't kept pace

Maternal mortality ratio (MMR), infant mortality rate and neonatal mortality rate (NMR), however, have not improved at the same pace as institutional births.

The nine focus states continue to have the highest MMR, a majority of which are well beyond India's national average of 103.

The Lesson

World Population Report 2022

News Excerpt

In its annual State of World Population Report 2022 released recently, the UN Population fund said over 60% of unintended pregnancies end in abortion and an estimated 45% of abortions are unsafe, causing 5% to 13% of maternal deaths.

Pre-connect

In 2015, every United Nations Member State agreed to the 2030 Agenda for Sustainable Development, which sought as one of the key goals, the achievement of gender equality. One of the targets under that goal is to increase "the proportion of women aged 15 to 49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care".

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Page 29

Key Finding of the report

- The UN Population Fund says new research shows that nearly half of all pregnancies worldwide — 121 million annually — are unintended, which it calls "a neglected crisis."

- The staggering number of unintended pregnancies represents a global failure to uphold women and girls' basic human rights. For the women affected, the most life-altering reproductive choice whether or not to become pregnant is no choice at all.

- The rate of unintended pregnancy did decline between 1990 and 2019, from 79 to 64 for every 1,000 women aged 15 to 49, and that offers "some comfort.

- But it noted the total number of women experiencing unintended pregnancies increased about 13% over the 30-year period because of population growth.

- According to the fund's research, an estimated 257 million women globally who want to avoid pregnancy are not using safe and modern methods of contraception, and in 47 countries about 40% of sexually active women were not using any contraceptive methods.

- UN data this year looking at women of reproductive age in 64 countries showed that 23% were unable to say no to sex, 24% were unable to make decisions about their own health care, and 8% were unable to make decisions about contraception.

- Together, this means that only 57% of women are able to make their own decisions over their sexual and reproductive rights.

- According to data published in the British medical journal The Lancet in 2020, the report said that "in 2015-2019 there were roughly 121 million unintended pregnancies each year, with some 48% of all pregnancies being unintended.

The UN Population Fund (UNFPA)

UNFPA is the United Nations sexual and reproductive health agency. Our mission is to deliver a world where every pregnancy is wanted, every childbirth is safe and every young person's potential is fulfilled.

UNFPA Supports:

- Reproductive health care for women and youth in more than 150 countries – which are home to more than 80 per cent of the world's population
- The health of pregnant women, especially the 1 million who face life-threatening complications each month
- Reliable access to modern contraceptives sufficient to benefit 20 million women a year
- Training of thousands of health workers to help ensure at least 90 per cent of all childbirths are supervised by skilled attendants
- Prevention of gender-based violence, which affects 1 in 3 women
- Abandonment of female genital mutilation, which harms 3 million girls annually
- Prevention of teen pregnancies, complications of which are the leading cause of death for girls 15-19 years old
- Efforts to end child marriage, which could affect an estimated 70 million girls over the next 5 years
- Delivery of safe birth supplies, dignity kits and other life-saving materials to survivors of conflict and natural disaster
- Censuses, data collection and analyses, which are essential for development planning.

Way forward

➢ We are fast approaching 2030, the deadline for the Sustainable Development Goals and for UNFPA's own transformative goals — to end the unmet need for family planning, end preventable maternal deaths and end gender-based violence and harmful practices, including female genital mutilation and child marriage.

➢ Now is the time to accelerate, not retreat, to transform the lives of women and girls and reach those furthest behind. Preventing unintended pregnancies is a non-negotiable first step. When individuals are able to exercise real informed choice over their health, bodies and futures, they can contribute to more prosperous societies and a more sustainable, equitable and just world.

Pradhan Mantri Awas Yojna (PMAY)-Gramin

News Excerpt

Recently, Prime Minister inaugurated 5.21 lakh houses of Pradhan Mantri Awas Yojna (PMAY)-Gramin beneficiaries.

Pre-connect

- The Pradhan Mantri Awaas Yojana – Gramin (PMAY-G) was introduced with the view to boost the "Housing for All" scheme. The central government came up with the vision to fulfil the 'Housing for All' scheme by the year 2022.
- The main aim of the PMAY-G scheme is to provide pucca house with some of the basic amenities.
- This scheme is meant for people who do not own a house and people who live in kutcha houses or houses which are severely damaged.
- At present, the minimum size of the houses to be built under the PMAY-G scheme has been increased to 25 sq. mt. from 20 sq. mt.

PMAYG Subsidy Scheme

➢ Under the scheme, beneficiaries can avail a loan of up to Rs.70,000 from financial institutions.
➢ Interest subsidy is 3%
➢ The maximum principal amount for the subsidy is Rs.2 lakh

Features of PMAYG Scheme

✓ The cost of the unit will be shared in a 60:40 ratio between the Central and State governments in plain areas, i.e., Rs.1.20 lakh of assistance for each unit.
✓ In the Himalayan states, northeastern states, and the Union Territory (UT) of Jammu & Kashmir, the ratio is 90:10 with up to Rs.1.30 lakh of assistance for each unit.
✓ 100% financing from the Centre for Union Territories including the UT of Ladakh.
✓ Beneficiaries are provided Rs.90.95 per day of unskilled labor from MGNREGS.
✓ Beneficiaries are identified using parameters from Socio-Economic and Caste Census (SECC) and verified by Gram Sabhas.
✓ Assistance for construction of toilets of up to Rs.12,000 to be provided under Swachh Bharat Mission-Gramin (SBM-G) in collaboration with MGNREGS or other schemes.
✓ Payments are made electronically directly to bank accounts or post office accounts that are linked to Aadhaar.

PMAYG Eligibility Requirements

The following are the eligibility criteria, which include specific deprivation scores and different priority lists:

- o Houseless families
- o Families with houses having zero, one, or two rooms with a kutcha wall and kutcha roof.
- o Households without a literate adult above 25 years of age.
- o Households without an adult male member aged between 16 and 59 years of age.
- o Households without any adult member between 16 and 59 years of age.

o Households without any able-bodied members and with a disabled member.
o Landless households who derive income from casual labour.
o Scheduled Caste, Scheduled Tribe, Others, and Minorities.

Who are excluded from PMAY Gramin Scheme?

- Candidates that have a motorized two-wheeler, three-wheeler, four-wheeler and agriculture equipment or fishing boat.
- Candidates that have a Kisan Credit Card (KCC) with a limit greater or equal to Rs.50,000
- Any household that has at least one member that is employed with the government or earning more than Rs. 10,000 per month.
- Any person that pays income tax, professional tax or owns a refrigerator or landline phone connection.

More about the news

- Ownership of homes by women has empowered them and strengthened their say in financial matters of the household.
- The government has provided pucca houses to 2.5 crore families across the country — of these, 2 crore houses are in rural areas.
- PM took a pledge with the beneficiaries to build 75 Amrit Sarovars in every district of the country by next year. These ponds, should be new and big. "The benefit of MGNREGA can be taken in their construction. It will play an important role in protection and promotion of the environment.
- A provision of Rs 10,000 crore has been made in next year's state Budget to ensure construction of 10 lakh houses under PM Awas in the next three years. Besides houses, toilets, cooking gas, electricity connection and drinking water will also be provided to the beneficiaries.

Conclusion

PM Awas Yojana is the first step towards alleviation of poverty, which were earlier limited to mere slogans. "When the poor sleep under a pucca roof, they will be able to concentrate on their children's education and other works with confidence."

The Kanya Shiksha Pravesh Utsav

News Excerpt

The Union government recently launched Kanya Shiksha Pravesh Utsav to bring out-of-school girls back to the education system.

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Pre-connect

Under Right to Education Act (RTE), the government provides Kasturba Gandhi Balika Vidayalyas (KGBV) which are residential schools in educationally backward blocks at upper primary level for girls belonging predominantly to the Scheduled Castes, Scheduled Tribes, Other Backward Class and minority communities.

Need for such scheme

- Bringing out-of-school girls back to the education system has been the target since the Right to Education Act was promulgated.
- The need has arisen because the Scheme for Adolescent Girls (SAG), which initially took care of out-of-school girls, was getting less traction.
- In 2018-19 there were 11.88 lakh girls which were beneficiaries under the SAG scheme and the number drastically came down to 5.03 lakh in 2021.

More about The Kanya Shiksha Pravesh Utsav

➢ The focus is all boys and girls get quality education. This scheme is making constant efforts to ensure no child, especially girls, are deprived of their right to education.

➢ The Scheme drawing a programme for out-of-school adolescent girls which will be driven by the Anganwadi system in close partnerships with education officers at district and block levels.

➢ Under the new scheme Poshan 2 and Saksham Anganwadi will be only taking up girls in the age group of 14-18 years. Girls aged 11-14 years will not be coming in the Anganwadi system in new schooling that will also take care only of the northeastern states and all our aspirational districts.

> The Right to Education Act 2009, also known as the RTE Act 2009, was enacted by the Parliament of India on 4 August 2009. It describes modalities of the importance of free and compulsory education for children aged between 6-14 years in India under Article 21 (A) of the Constitution of India.
>
> It is obligatory for the Government to provide free and compulsory elementary education to each and every child, in a neighbourhood school within 1 km, up to class 8 in India. No child is liable to pay fees or any other charges that may prevent him or her from pursuing and completing elementary education. Free education also includes the provisions of textbooks, uniforms, stationery items and special educational material for children with disabilities in order to reduce the burden of school expenses.

Analytica

Challenges to Girl Child Education

✓ **Gender Discrimination in India:** Girls in India face discrimination both inside their homes and outside in their communities. Inequality in India means unequal opportunities for girls. Girls are encouraged and also engaged more in household work and drop out of school at an early age. Most of the time their movements are restricted to get an education and engage in social exchanges.

✓ **Poverty:** Poverty and gender-based preference are two of the main challenges which impact girl child education. Girls are forced to stay at home or engage in daily wage labor to contribute to the income of the house. According to a UN report, every year more than 1.5 million girls in India are married before they turn 18. They are not allowed to go to school after marriage. Eventually, these young girls become mothers at an early age which has adverse effects on the health of both mother and child.

✓ **Distance from Home:** Even though 80 percent of schools in India are in the country's villages, most of them are non-functional. There is a severe lack of teachers, proper teaching-learning facilities, and infrastructure. Children in rural areas often have to walk a long distance to reach school in a different village or city. Due to fear of harassment and violence against girls, most parents prefer to not send their girls to school.

✓ **Lack of infrastructure in Schools:** In developing countries like India, a lack of separate toilets for girls and boys is one of the top barriers to education. Adolescent girls frequently miss school due to hygiene-related problems and eventually drop out. Schools do not provide sanitary napkins due to extreme taboo which often lead to girls of menstruating age dropping out of school.

Government schemes for girl child education

▪ **Schemes for Elementary Education**

With the formulation of National Policy on Education, India initiated a wide range of programmes for achieving the goal of UEE through several schematic and Programme interventions, such as

- o **Sarva Shiksha Abhiyan (SSA)** is implemented as India's main Programme for universalizing elementary education. Its overall goals include universal access and retention, bridging of gender and social category gaps in education and enhancement of learning levels of children.
  - o **Mid-Day Meal**
  - o **Mahila Samakhya**
  - o **Strengthening for providing quality Education in Madrassas (SPQEM)**
- ▪ **Schemes for Secondary Education**

  Secondary Education is the most significant stage in the educational hierarchy as it prepares the students for higher education and the world of work. The policy at present is to make secondary education of good quality available, accessible and affordable to all young persons in the age group of 14-18.

  At present, the following schemes targeted at secondary education (i.e., class IX to XII) are being implemented in the form of Centrally Sponsored Schemes:
  - o Rashtriya Madhyamik Shiksha Abhiyan
  - o Girls Hostel Scheme
  - o National Scheme of Incentives to Girls for Secondary Education
  - o Inclusive Education for Disabled at Secondary Stage
  - o Scheme of Vocational Education
  - o National Merit-cum-Means Scholarship Scheme
  - o Scheme for construction and running of Girls' Hostel for students of secondary and higher secondary schools
  - o Scholarship schemes for Minority students
  - o National Scholarships

Issue with Pradhan Mantri Fasal Bima Yojna

News Excerpt

Recently, Maharashtra became the latest state to threaten to withdraw from the Pradhan Mantri Fasal Bima Yogna (PMFBY) if changes to it are not carried out.

Pre-connect

- Gujarat, Bihar, West Bengal, Andhra Pradesh, Telangana and Jharkhand have opted out of the scheme.
- The Lok Sabha's Standing Committee on Agriculture had noted in its report of August 2021 that these states decided to opt out because of low claim ratio and financial constraints. "Financial constraints of the state government and low claim ratio during normal season are the major reasons for non-implementation of the scheme by these states. However, they have implemented the schemes with lower benefits than PMFBY from their own resources and without contribution from central government.

All About Pradhan Mantri Fasal Bima Yojna

- ➢ The new Crop Insurance Scheme is in line with One Nation – One Scheme theme. It incorporates the best features of all previous schemes and at the same time, all previous shortcomings / weaknesses have been removed. The PMFBY will replace the existing two schemes National Agricultural Insurance Scheme as well as the Modified NAIS.

Objectives

- ✓ To provide insurance coverage and financial support to the farmers in the event of failure of any of the notified crop as a result of natural calamities, pests & diseases.
- ✓ To stabilise the income of farmers to ensure their continuance in farming.

Page 34

✓ To encourage farmers to adopt innovative and modern agricultural practices.
✓ To ensure flow of credit to the agriculture sector.

Highlights of the scheme

▪ There will be a uniform premium of only 2% to be paid by farmers for all Kharif crops and 1.5% for all Rabi crops. In case of annual commercial and horticultural crops, the premium to be paid by farmers will be only 5%. The premium rates to be paid by farmers are very low and balance premium will be paid by the Government to provide full insured amount to the farmers against crop loss on account of natural calamities.

▪ There is no upper limit on Government subsidy. Even if balance premium is 90%, it will be borne by the Government.

▪ Earlier, there was a provision of capping the premium rate which resulted in low claims being paid to farmers. This capping was done to limit Government outgo on the premium subsidy. This capping has now been removed and farmers will get claim against full sum insured without any reduction.

PMFBY IN MAHARASHTRA		
Year	Premium collected	Claims paid
2016-17	₹3,995.02 cr	₹1,924.72 cr
2017-18	₹3,544.33 cr	₹2,707.81 cr
2018-19	₹4,914.16 cr	₹4,655.46 cr
2019-20	₹4,925.57 cr	₹5,511.68 cr
2020-21	₹5,801.73 cr	₹823.19 cr*

*Rabi claims for 2020-21 yet to be finalised

▪ The use of technology will be encouraged to a great extent. Smart phones will be used to capture and upload data of crop cutting to reduce the delays in claim payment to farmers. Remote sensing will be used to reduce the number of crops cutting experiments.

▪ There will be exemption from Service Tax liability of all the services involved in the implementation of the scheme. It is estimated that the new scheme will ensure about 75-80 per cent of subsidy for the farmers in insurance premium.

Analytica

Why PMFBY is criticized?

✦ Since the beginning, farm leaders across the state have criticised the scheme for various reasons. One of the main arguments against it is that it helps insurance companies more than the farmers. Farm leaders claim insurance companies have made windfall gains at the behest of the public exchequer and farmers.

✦ Delayed payouts and denial of claims are other common complaints against insurance companies.

✦ On their part, the companies point out the nature of the insurance allows for payment only when there is a loss. Also, over the last few years, they have said their payouts have been more than the premium collected, making the scheme non-viable for them.

What changes has the Maharashtra government proposed?

✦ One of the major changes the state government has proposed, is a share in premium collected from insurance companies during a non-payout or normal year. Called the Beed model, after the district where it was first experimented during kharif 2020, under this model, insurance companies provide cover to an extent of 110 per cent of the premium collected.

✦ In case the compensation amount exceeds this, the state government will bridge the amount. In case the compensation amount is less than the premium collected, the company will refund 80 per cent of the funds to the state government and keep 20 per cent for its administrative expenses.

✦ The model was implemented by the government-run Agricultural Insurance Company.

Page 35

⬥ The state has also sought more accountability from insurance companies. Farm leaders have asked for necessary infrastructure to be set up while implementing the scheme, and the usage of technology to help eradicate human interference.

Deep Ocean Mission

News Excerpt

Recently, The Ministry of Earth Sciences has launched the Deep Ocean Mission (DOM). Indian Space Research Organisation (ISRO) is one of the collaborators of the Ministry of Earth Sciences for implementation of Deep Ocean Mission.

Pre-connect

Ministry of Earth Sciences (MoES) launched the "Deep Ocean Mission", with a view to explore deep ocean for resources and develop deep sea technologies for sustainable use of ocean resources.

More About the Mission

- Deep Ocean Mission will help strengthen the observational network in the Indian Ocean as the country has over the years benefited from these for statistical and dynamical monsoon forecast modelling.
- It aims to improve the understanding of oceans, their biodiversity, climate change along with the development and demonstration of technology to undertake future ocean explorations.
- This five-year inter-ministerial and inter-departmental mission will see collaboration between the Ministry of Earth Sciences, Indian Space Research Organisation (ISRO), Defence Development and Research Organisation (DRDO), Department of Atomic Energy (DAE), Council of Scientific and Industrial Research (CSIR), Department of Biotechnology (DBT) and the Indian Navy.
- The mission will facilitate a dedicated observational system to capture long term changes in ocean climatic conditions while sustaining and augmenting the existing network of moored buoys, argo floats and drifters.
- As part of the mission, eight deep ocean gliders, 48 argo floats and 150 wave drifters will be added to the existing observational network in addition to regular scientific cruises planned in the coming years.

What will be mined?

➢ One of the main aims of the mission is to explore and extract polymetallic nodules. These are small potato-like rounded accretions composed of minerals such as manganese, nickel, cobalt, copper and iron hydroxide.

➢ They lie scattered on the Indian Ocean floor at depths of about 6,000 m and the size can vary from a few millimetres to centimetres. These metals can be extracted and used in electronic devices, smartphones, batteries and even for solar panels.

➢ India has been allotted a site of 75,000 square kilometers in the Central Indian Ocean Basin (CIOB) by the UN International Sea Bed Authority for exploitation of polymetallic nodules (PMN). These are rocks scattered on the seabed containing iron, manganese, nickel and cobalt.
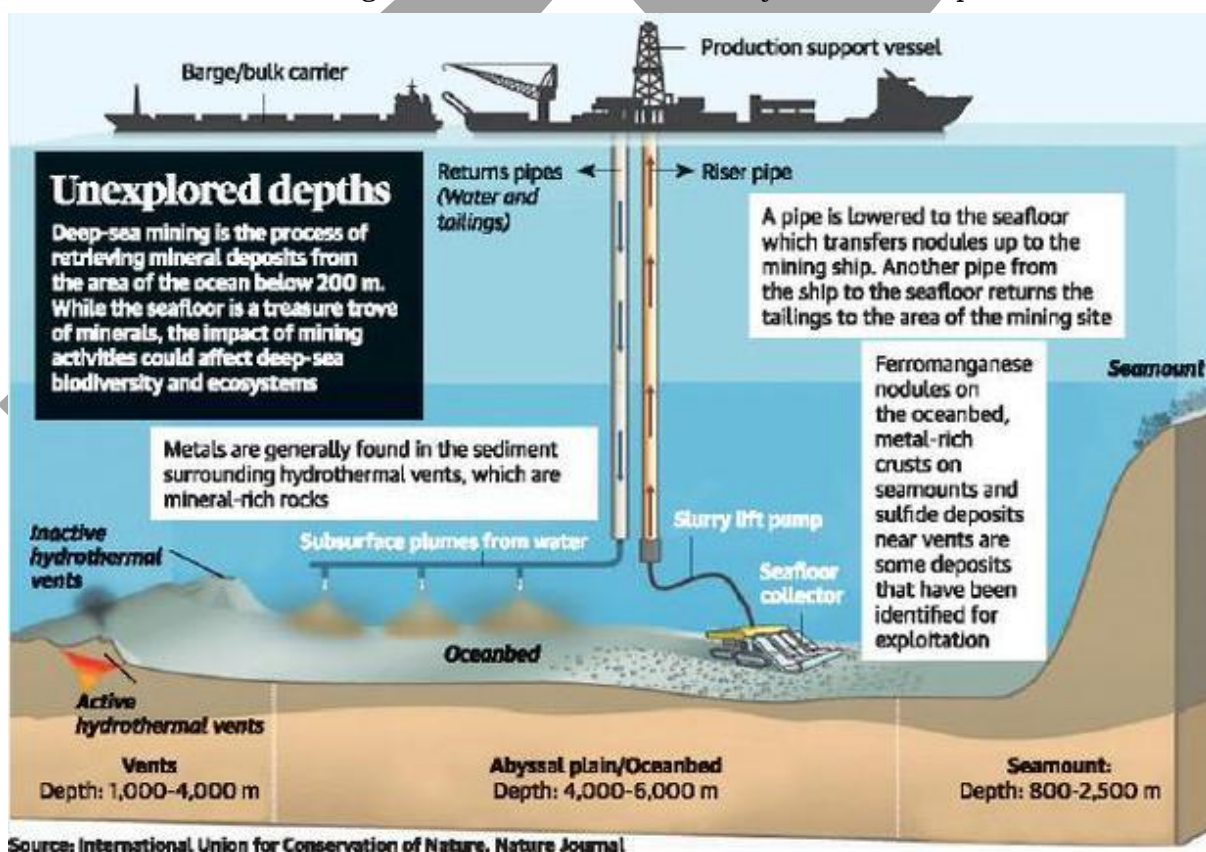
Where will the team mine?

✓ The International Seabed Authority (ISA), an autonomous international organisation established under the 1982 United Nations Convention on the Law of the Sea, allots the 'area' for deep-sea mining.

✓ India was the first country to receive the status of a 'Pioneer Investor ' in 1987 and was given an area of about 1.5 lakh sq km in the Central Indian Ocean Basin (CIOB) for nodule exploration. In 2002, India signed a contract with the ISA and after complete resource

analysis of the seabed 50% was surrendered and the country retained an area of 75,000 sq km.

✓ According to a release from the Ministry of Earth Sciences, the estimated polymetallic nodule resource potential in this area is 380 million tonnes (MT), containing 4.7 MT of nickel, 4.29 MT of copper, 0.55 MT of cobalt and 92.59 MT of manganese. Further studies have helped narrow the mining area to 18,000 sq km which will be the 'First Generation Mine-site'.

Which are the other countries that are in the race to mine the deep sea?

▪ Apart from the CIOB, polymetallic nodules have been identified from the central Pacific Ocean. It is known as the Clarion-Clipperton Zone.

▪ According to the ISA's website, it has entered into 15-year contracts for exploration for polymetallic nodules, polymetallic sulphides and cobalt-rich ferromanganese crusts in the deep seabed with 29 contractors. Later it was extended for five more years till 2022.

▪ China, France, Germany, Japan, South Korea, Russia and also some small islands such as the Cook Islands, Kiribati have joined the race for deep sea mining. Most of the countries have tested their technologies in shallow waters and are yet to start deep-sea extraction.

Unexplored depths

Deep-sea mining is the process of retrieving mineral deposits from the area of the ocean below 200 m. While the seafloor is a treasure trove of minerals, the impact of mining activities could affect deep-sea biodiversity and ecosystems

Production support vessel

Barge/bulk carrier

Returns pipes (Water and tailings)   Riser pipe

A pipe is lowered to the seafloor which transfers nodules up to the mining ship. Another pipe from the ship to the seafloor returns the tailings to the area of the mining site

Ferromanganese nodules on the oceanbed, metal-rich crusts on seamounts and sulfide deposits near vents are some deposits that have been identified for exploitation

Seamount

Metals are generally found in the sediment surrounding hydrothermal vents, which are mineral-rich rocks

Inactive hydrothermal vents

Subsurface plumes from water

Slurry lift pump

Seafloor collector

Active hydrothermal vents

Oceanbed

Vents Depth: 1,000-4,000 m

Abyssal plain/Oceanbed Depth: 4,000-6,000 m

Seamount: Depth: 800-2,500 m

Source: International Union for Conservation of Nature. Nature Journal

What will be the environmental impact?

♦ According to the International Union for Conservation of Nature (IUCN), these deep remote locations can be home to unique species that have adapted themselves to conditions such as poor oxygen and sunlight, high pressure and extremely low temperatures.

♦ Such mining expeditions can make them go extinct even before they are known to science. The deep sea's biodiversity and ecology remain poorly understood, making it difficult to assess the environmental impact and frame adequate guidelines.

♦ A new set of exploitation guidelines are being worked out and discussions are on with the ISA. Environmentalists are also worried about the sediment plumes that will be generated

as the suspended particles can rise to the surface harming the filter feeders in the upper ocean layers.

➕ Additional concerns have been raised about the noise and light pollution from the mining vehicles and oil spills from the operating vessels.

Is deep sea mining economically viable?

The latest estimate from the ISA says it will be commercially viable only if about three million tonnes are mined per year. More studies are being carried out to understand how the technology can be scaled up and used efficiently.

TEJAS

News Excerpt

Union Information and Broadcasting Minister recently launched an international project — Training for Emirates Jobs and Skills (TEJAS).

About the project

- The project is aimed at skilling, certification and overseas employment of Indians.
- The project aimed at creating pathways to enable the Indian workforce to get equipped for skill and market requirements in the UAE.
- Tejas is aimed at creating pathways to enable the Indian workforce to get equipped for skill and market requirements in the UAE,
- The project is expected to create a 10,000-strong Indian workforce in the United Arab Emirates (UAE) during its initial phase.

ECONOMY

De-Dollarization

News Excerpt

Within two weeks of Russia's invasion of Ukraine, the United States and its allies have collectively imposed a series of sanctions to isolate Russia's financial system. This has started Russia's de-dollarization initiatives and an emerging non-dollar financial system.
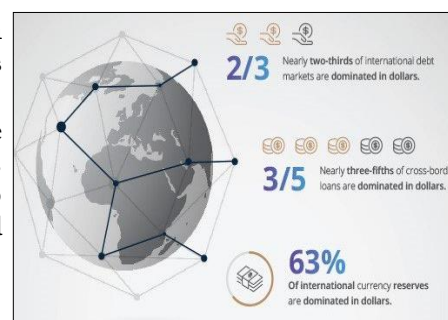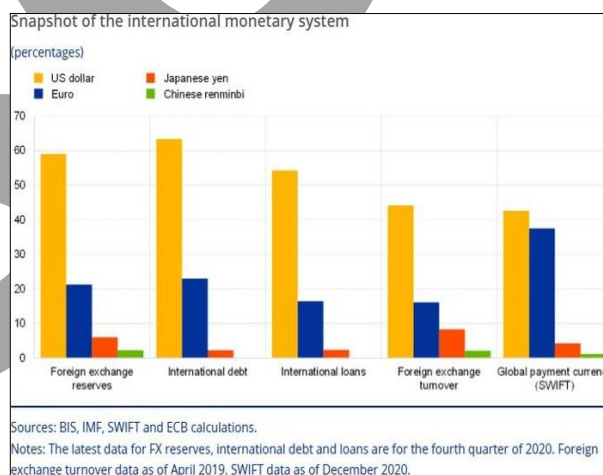
Pre-Connect

De-dollarization describes a move away from this world order to one where nations sell their US Treasuries **to hold reserves in other currencies or gold.** Simultaneously they seek to use their own currencies for transactions between their most important trade partners. While the US dollar is likely to play a central role for some time to come structural trends are starting to decrease its importance.

Significance of Dollar in World geo-economics:

- Following the end of World War II and establishment of the Bretton Woods Agreement in 1944, the US dollar has dominated global trade and financial markets since World War II. The relatively recently (1999) established Euro comes second.

- Dollar has also been the **most sought reserve currency** for decades, which means it is held by central banks across the globe in significant quantities.

- Dollar is also **primarily used in cross-border transactions** by nations and businesses.

- Without a doubt, US dollar's dominance is a major reason for the US' influence over public and private entities operating around the world.

- This unique position not only makes US the leader in the financial and monetary system, but also provides incomparable leverage when it comes to coercive ability to shape decisions taken by governments, businesses, and institutions.

Snapshot of the international monetary system (percentages)

Sources: BIS, IMF, SWIFT and ECB calculations.
Notes: The latest data for FX reserves, international debt and loans are for the fourth quarter of 2020. Foreign exchange turnover data as of April 2019. SWIFT data as of December 2020.

2/3 Nearly two-thirds of international debt markets are dominated in dollars.

3/5 Nearly three-fifths of cross-border loans are dominated in dollars.

63% Of international currency reserves are dominated in dollars.

Why de-dollarization?

➢ The dominant role of dollar in the global economy provides US disproportionate amount of influence over other economies. As international trade needs a payment and financial system to take place, any nation in position to dictate the terms and policies over these systems can create disturbances in trade between other players in the system.

➢ The US has for long used imposition of sanctions as a tool to achieve foreign policy and goals, which entails restricting access to US-led services in payment and financial transaction processing domains.

➢ Recent examples of US sanctions: - On Iran, Russia, and North Korea etc.

De-Dollarization is not a new phenomenon:

✓ This dynamic role of dollar is undergoing gradual and visible changes with the emergence of China, slowdown in the US economy, European Union's independent policy assertion, Russia-US detachment, and increasing voices from across the world to create a polycentric world and financial system in which hegemonic capacities can be muted.

✓ The world is witnessing de-dollarization attempts and ambitions, as well as the rise of digital or crypto-currencies at an increasing pace today.

> **Dollar-rupee swap**
>
> ❖ RBI conducted a $ 5 billion dollar-rupee swap auction as part of its liquidity management initiative.
>
> ❖ It leads 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.

Steps taken by various countries in this regard:

- **Russia:** Russia had started its three-pronged efforts towards de-dollarization in 2014 when sanctions were imposed on it for the annexation of Crimea.
  - o First, Russia reduced its share of dollar-denominated assets to about 16 per cent in 2021.
  - o Second, it reduced its share of trade conducted in USD by prioritizing national currencies in bilateral trade.
  - o Third, Russia also developed a national **electronic payments system called "Mir"** in 2015 after several payment processing firms denied services to Russian banks.
- **China:** China, on the other hand, aims to use trading platforms and its digital currency to promote de-dollarization.
  - o China has established RMB trading centers in Hong Kong, Singapore and Europe.
  - o In 2021, the People's Bank of China submitted a "Global Sovereign Digital Currency Governance" proposal at the Bank for International Settlements to influence global financial rules via its digital currency, the e-Yuan.
  - o The IMF has already **added Yuan to its SDR** (Special Drawing Rights) basket in 2016.
- **European Union (EU):**
  - o Despite the close US-EU relations, EU has started its own de-dollarization push. This became more explicit when earlier this year, EU announced plans to prioritize the euro as an international and reserved currency, in direct competition with dollar.
  - o EU members had switched to INSTEX (Instrument in Support of Trade Exchanges) which acts as a special-purpose vehicle to facilitate non-USD trade with Iran to avoid US sanctions.
  - o Russia-China payment system is bypassing SWIFT and combining the **Russian SPFS (System for Transfer of Financial Messages)** with the **Chinese CIPS (Cross-Border Interbank Payment System).**

> **PEPPER IT WITH**
> SDR and IMF, Convertibility of Currency, Difference-FDI & FPI

India's Stand:

🔸 Indian economy's **dynamic with dollar is different than other major economies** in the world today. Unlike China or Russia (or EU and Japan), which hold dollars in significant amounts, India's reserve is not resulted by an export surplus.

🔸 In India's case, the dollar reserves **come through:**
  - o Infusion of Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI), which reflects the confidence of foreign investors in India's growth prospects.

- However, accumulation of dollar reserves through this route **India remains vulnerable** to policy changes by other nations' monetary policies which are beyond India's own control. For instance, it has been often highlighted that a tightening of the US monetary policy leads to capital outflows from India, thus impacting India adversely.

- Further, just like Chinese renminbi, **Indian rupee is also not yet fully convertible** at the exchange markets. While this means that India can control its burden of foreign debt, and inflow of capital for investment purposes in its economy, it also means an uneasy access to capital, less liquidity in financial market, and less business opportunities.

- It can be argued that just like the case of China and Russia, India can also look towards having a digital currency in the near future, and some signs for this are already visible. India can also look towards having an increased share of euros and gold in its foreign exchange reserves, a method currently being used by both China and Russia.

Conclusion:

> An increasing number of voices are today pointing towards the arrival of the Asian age (or century). Central banks are left with very few choices to diversify. Having said that, a drop in the dollar's stature is inevitable as major economic powers like China and India rise.

> In order for global systems to remain in sync with the transforming economic order, structural changes like control over leading economic organisations (like IMF and World Bank) will become increasingly desirable.

> India has several options for initiating its de-dollarization process. Starting from Russia-India transactions, trade with Iran, EAEU, BRICS and SCO members in national or digital currencies can also become a reality in near future.

Sovereign green bond and Digital Currency

News Excerpt:

The Government in its Budget 2022-2023 announced two major announcements pertain to the issuance of sovereign green bonds and a central bank digital currency. These two launches will be a joint effort between the government and the RBI.

Pre-Connect:

Green Bonds:

- These are fixed-income financial instruments which are used to fund projects that have positive environmental and or climate benefits.

- They are just like any regular bond with a key difference that the money raised from investors is used exclusively to finance projects that have a positive environmental impact such as renewable energy and green buildings.

- **Budget Announcement:** - **Sovereign green bond** is a novel idea. It will be a part of the government's borrowing programme. The gross borrowing programme of the government is pegged at Rs 14.95 lakh crore. This money is raised by the government to finance the deficit which involves excess expenditure on both the capital and revenue accounts.

- The SGB (sovereign green bond) raised will be part of the aggregate borrowing programme and has to be used for projects which are ESG (environment, social and governance) compliant. Hence, if the bond is being used to finance a power project or road, or in case it is used to finance revenue expenditure, it has to be ESG compliant.

- As these bonds are different from G-secs (government securities), they may have to provide a better return as all ESG compliant companies have to make special investments that will push up costs.

Page 41

Benefits of investing in green bonds:

➢ Green bonds provide a way to help environmental causes through investing.

➢ Buying a green bond might be too costly for retail investors. Still there are green bonds that make it easy to invest in baskets of green bonds.

➢ Green bonds provide you with a way to earn income that is exempt from taxes.

➢ The money that is being invested is being used in a way that is not harmful.

➢ The green angle attracts a growing number of people who are more aware of and want to act to help fight climate change.

➢ Higher demand for green bonds equals lower cost of money which means reduced spending for business. These savings are passed on to the investor in the form of a dividend or used to lower the cost of funds thus increasing profitability.

➢ Some issuers also use the money to help restore water habitats and biomes and to take steps to reduce carbon output. These bonds tend to carry the same credit rating as other debts issued by the same firm.

Green bonds in India:

✓ India issued $6.11 billion of green bonds in 11 months of 2021. It was the strongest issue since the first issue in 2015. Indian Companies have become increasingly conscious of their carbon footprint. Banks will step up issuance of green debt to fund their growing lending programme to accelerate India's energy transition.

✓ However, it is a long way to go as the gap is $3.546 trillion between the total investment required to achieve net-zero and the amount that can be reasonably contributed by domestic banks, NBFCs and capital markets.

✓ India will need $10.103 trillion by 2070 to be carbon-neutral. The cumulative investments needed for net-zero societies may be bigger than India's current size of the economy. Investment from a developed economy will be the need of the hour.

✓ In addition, more financial incentives from the Indian government will also be crucial to accelerating the growth of the nation's green bond market.

The central bank digital currency/CBDC:

▪ CBDC is **a legal tender** issued **by a central bank in a digital form.** It is similar to **a fiat currency** issued in paper and is interchangeable with any other fiat currency.

▪ Traditionally, fiat money came in the form of banknotes and coins, but technology has allowed governments and financial institutions to supplement physical fiat money with a credit-based model in which balances and transactions are recorded digitally.

▪ It is an outcome of the proliferation of crypto-currencies. This has pushed several central banks into developing their version of digital currencies.

▪ CBDCs promote financial inclusion and simplify the implementation of monetary and fiscal policy.

Advantages and Issues of CBDCs:

Advantages:

- Payments using CBDCs are final and thus reduce settlement risk in the financial system i.e. eliminates the third-party risk of events like bank failures or runs.
- CBDCs would also potentially enable a more real-time and cost-effective globalization of payment systems. It is conceivable for an Indian importer to pay its American exporter on a real time basis in digital Dollars, without the need of an intermediary.
- Time zone difference would no longer matter in currency settlements-there would be no 'Herstatt' risk.
- The CBDCs will eliminated the concerns related to private crypto-currencies like Bitcoin, Ether, etc. and its associated problems like money laundering, terror financing, tax evasion, etc.

Issues Involved:

→ CBDC ecosystems may be at similar risk for cyber-attacks as the current payment systems are exposed to.

→ In countries like India-with lower financial literacy levels, the increase in digital payment related frauds may also spread to CBDCs.

→ Absorption of CBDCs in the economy is also subject to technology preparedness and infrastructure creation.

Conclusion:

o Given its investment-grade status, India's sovereign green bond could attract the much-needed new pool of capital that is required to finance the country's green transition.

o Furthermore, issuance of a sovereign green bond would position India as a leader among the major emerging markets, and especially among BRICS nations as none have issued such a green bond yet.

o If they succeed at the central level, green bonds can be replicated by states.

o To attract serious green investors, the Indian government should put forward dark green projects as part of its sovereign green bond framework; in particular, climate-resilient public infrastructure that is crucial to decarbonising the economy but is difficult to fund with private capital.

o Sovereign green bonds can support the proliferation of electric buses and allied charging infrastructure in India by providing cost-effective financing options. New technologies such as energy storage—to support India's grid integration of 500 gigawatts of non-fossil energy capacity by 2030—and green hydrogen projects also require the government's support in order for these investments to be financially viable to private investors.

o The arguments for CBDC are compelling on the grounds of keeping up with the central banks of other countries, and the possibilities of taking advantage of new technologies like block-chain. But before embarking on these measures, it might be useful to keep in mind the issues flagged above.

Crypto-currencies and the demand of its legalization

News Excerpt:

Ukraine's President has signed a law to legalize crypto-currencies. Many have also argued that digital currencies are better suited for a more multipolar world as they are free from the control of any individual nation.

Pre-Connect:

Crypto-currency: A crypto-currency is defined by three key elements:

- **1st:** it is a digital representation of value,
- **2nd:** it can be transferred electronically and
- **3rd:** it is recorded in a digital ledger that is widely accessible.

Hence, Crypto-currency is a digital payment system that doesn't rely on banks to verify transactions. It's a peer-to-peer system that can enable anyone anywhere to send and receive payments.

Working of Crypto-Currencies:

- Crypto-currency received its name because it uses encryption to verify transactions. The aim of encryption is to provide security and safety.

- Crypto-currencies **run on a distributed public ledger called blockchain**, a record of all transactions updated and held by currency holders.

- Units of crypto-currency are created through a process called **mining**, which involves using computer power to solve complicated mathematical problems that generate coins.

- If you own crypto-currency, you don't own anything tangible. What you own is a key that allows you to move a record or a unit of measure from one person to another without a trusted third party.

> **There are two primary types of digital currency:**
>
> ❖ One issued by the state: - Also known as Central Bank Digital Currencies (CBDCs) or Sovereign digital currencies, like China's Digital Yuan.
>
>   Earlier El Salvador made Bitcoin a legal tender.
>
> ❖ The other, private-sector digital currencies: - They rely on decentralised blockchain technology to settle accounts between users. Examples: Bitcoin and Ether.

> **PEPPER IT WITH**
> Blockchain Technology, E-rupi

The advantages of adopting crypto-currencies:

➢ Transferring money/transaction cost becomes a lot cheaper and in certain instances, safer as well.

➢ Transaction values cannot be replicated. For example, if you were to buy a concert ticket the issued pdf can be sell off to multiple people. But with crypto-currencies, I couldn't do that.

➢ For governments, CBDCs could be useful if they can exploit first-mover advantage. Similarly, countries can take advantage of crypto-currencies by introducing favourable regulations (like Portugal) that would incentivise capital lending.

➢ Crypto-currencies also have the potential to transform the entire financial system.

➢ In practice, if everyone adopted digital currencies, we would create a decentralised finance matrix where every asset competes against every other asset.

Advantages of Cryptocurrency
CryptoCurrencies solve a lot of the problems which are connected to centralized nature of assets/currencies.

No Fraud | No Identity Theft | Immediate Settlement | Access to Everyone | Lower Fees

Where does India stand on crypto-currencies?

✓ In the Union Budget for 2022-23 presented, the Centre proposed a **30 per cent tax on virtual assets**, including crypto-currencies, effectively legitimising trading of private crypto-currencies and non-fungible tokens.

✓ This was broadly in line with the **Centre's plans (Budget: 2022-2023) 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 crypto-currencies, while the Reserve Bank of India is planning to launch the pilot of its CBDC-the Digital Rupee-this year.

How Crypto-currencies could impact geopolitics?

PEPPER IT WITH
Fiat Money, Legal tender

- The US Dollar is the dominant reserve currency and is the benchmark through which global trade is conducted. As a result of this dominance, the US can manipulate its currency at will, often resulting in ramifications for the whole world.

- The USA often imposes sanctions on different countries like recently on Russia (banning from SWIFT banking system) and on Iran in the past. This led to the problems in the international financial system and transaction for the countries sanctioned.

- Many have argued that digital currencies are better suited for a more multipolar world as they are free from the control of any individual nation.

- It is conceivable to imagine a world in which countries were no longer dependent on US aid or IMF loans, but instead directly borrowed money from the rest of the world, without having to jump through hoops for the same.

- A network that cannot be shut down by any state is a network that developing countries can rely on in times of conflict.

Issues involved with legalizing crypto-currencies:

- While embracing crypto-currency might have its benefits, if structures are poorly designed, it could also result in the adverse destabilisation of financial systems.

- It could weaken governments' ability to set monetary policy and bring changes accordingly.

- A crypto-currency like Bitcoin could conceivably become a common enough medium of exchange" that coin holders, rather than central bankers, could end up deciding to increase or decrease the amount of digital currency in circulation.

- It could also allow foreign powers to accrue influence in country's money supply by buying large quantities of stable coins.

- Additionally, crypto-currencies pose significant security risks. The lack of regulation surrounding crypto-currency exchanges, could benefit terrorist finance methods by allowing radicalised individuals to send money to groups like the Al Qaeda or ISIS.

- On a smaller scale, drug traffickers, ransomware attackers and money launderers can all make use of blockchain technology to operate outside of the legal framework.

Conclusion:

Like all technology, crypto-currency exchanges are neither inherently good nor bad. Whether they are used to transform the current economic order for the better or worse will depend on how systems are designed, regulated, and adopted. However, one thing is certain. Individuals, companies and governments who move quickly will be the ones to benefit most and will perhaps have the biggest role in shaping this new digital reality.

India sets $400 billion export record

News Excerpt:

Export of Indian goods crossed the $400 bn mark for the first time, nine days before the current fiscal come to the close, which was the target time to achieve.

Pre-Connect:

- 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.

- **In FY 2021-22:** India achieved an all-time high annual merchandise exports of USD 417.81 billion, an increase of 43.18% over USD 291.81 billion in FY2020-21 and an increase of 33.33% over USD 313.36 billion in FY 2019-20.

- 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.
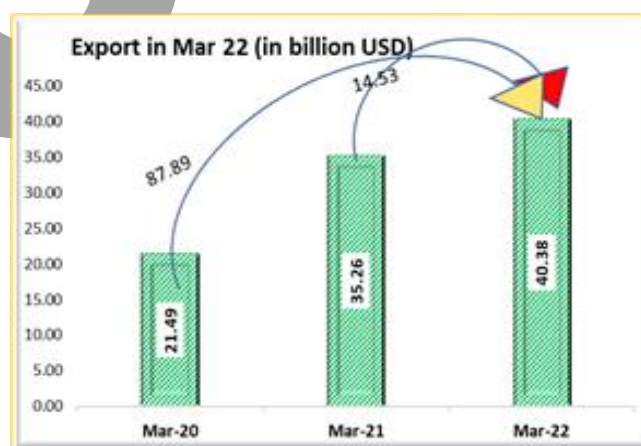
- Top 10 major commodity groups covering 81% of total exports in March 2022, are :

Exports of Top 5 Major Commodity Groups in March 2022		
	Share (%)	**Growth (%)**
Major Commodity Group	**Mar-22**	**Mar-22 over Mar-21**
Engineering goods	25.93	12.61
Petroleum products	18.27	104.39
Gems and Jewellery	8.98	0.31

Organic and Inorganic chemicals	6.56	15.76
Drugs and Pharmaceuticals	5.60	-1.46

Role of exports in Indian economy:

➢ International trade implies that domestic producers must sell their products in world markets and this forces them to become more competitive, **adopt new technologies and innovate rapidly and match the international quality** standards.

➢ This, in turn, **stimulates domestic competition** among exporters and non-exporters. All domestic producers are likely to be more competitive and adopt newer technologies or innovate more rapidly. This leads to faster productivity gains in the economy and fosters economic growth.

➢ Trade liberalization or export promotion policies **allow better allocation and distribution of scarce resources** in the economy.

➢ International trade spurs large-scale production, allowing exporters to **benefit from economies of scale** given their access to large world markets.

➢ Large-scale production and access to larger world markets allow exporters to **increase output and generate employment.**

➢ Increase in exports facilitates improved access to international capital and intermediate goods for domestic firms, leading to **productivity gains and expansion of the production frontier.**

> **Steps taken to increase exports from India:**
> ❖ Foreign Trade Policy (FTP) 2015-20, now extended to 2021-2026.
> ❖ New Logistics Division was created in the Department of Commerce for integrated development of the logistics sector.
> ❖ Interest Equalization Scheme.
> ❖ Niryat Bandhu Scheme.
> ❖ Trade Infrastructure for Export Scheme (TIES) and Market Access Initiatives (MAI) Scheme.
> ❖ Remission of Duties and Taxes on Exported Products (RoDTEP) scheme.
> ❖ Agriculture Export Policy. Etc.

> **India's export**
> ❖ India's GDP growth rate before 1991 was 3.5%.
> ❖ This was associated with export contribution of ~4.5%. Trade liberalization reforms increased GDP growth rate (to >6%), after 1991, with exports contributing >11% to the GDP.
> ❖ Thus, international trade emerged as a viable engine for economic growth in India.

Way Forward:

India's export performance can achieve greater heights and contribute further to the country's GDP growth in the following ways:

✓ **Global Value Chain**: India's participation in the global value chain has been lower than other exporting countries in East and Southeast Asia. India needs to strive to embed itself invaluably in the global value chain by capitalizing on sectors where it holds comparative advantage.

> **PEPPER IT WITH**
> BOP, Current vs. Capital account

✓ **Focus on High-income Countries:** India's relatively low participation in the global value chain has directed the country's exports to low-income economies in Africa. India needs to focus on targeting high-income economies in the West and devising quality assurance measures to tap this segment.

DELHI: VIJAY NAGAR 9717380832 & **OLDRAJENDER NAGAR** 9811293743 | **JAIPUR**: 8290800441
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PATNA: 7463950774 | **INDORE:** 7314977441 | **RANCHI:** 9939982007 | **www.ksgindia.com**

Page 47

- ✓ **Trade Policy Stability:** India needs to make a commitment towards ensuring stability in its trade policies. This aspect is critical in the post-covid era, as multinational companies are diverting focus from China to hedge supply chain disruptions.

- ✓ **Specialization over Diversification:** Indian exports are characterized by high diversification, combined with low specialization in exports. This implies that India is spreading its exports thinly over many products and partners, leading to its lackluster performance compared with countries such as China. To overcome this, India is focusing on building capabilities in specific sectors (such as textiles) to build more competitive advantage and boost export growth.

- ✓ **Trade Liberalization:** As of 2020, India's share in world trade stood at 2%. India needs to raise this share by outlining more trade liberalization policies and signing more free trade agreements.

- ✓ **Ease of Doing Business Policies:** India's success in exports also relies on its current policies on ease of doing business and gaining finance for costs of running a business. The focus of policy reforms should be centered on boosting competitiveness, building infrastructure, ensuring access to cheap power, reforming land and labour markets and creating market conditions for domestic companies to compete in global markets.
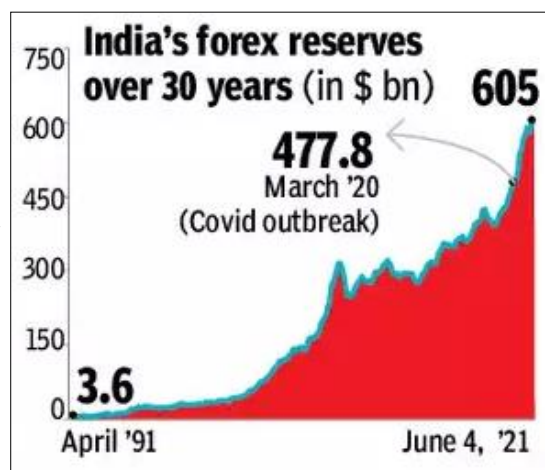
India's forex reserves

News Excerpt:
India's foreign exchange reserves fell by $9.64 billion to $622.275 billion during the week ending March 11, 2022, the highest in 2 years.

Pre-Connect:
- **As per the International Monetary Fund (IMF)** - reserves are defined as external assets that are readily available to and controlled by monetary authorities for direct financing of external payments imbalances, for indirectly regulating the magnitudes of such imbalances through intervention in exchange markets to affect the currency exchange rate, and/or for other purposes.

- In India, the Reserve Bank of India Act 1934 contains the enabling provisions for the Reserve Bank to act as the custodian of foreign reserves, and manage reserves with defined objectives.

- As per the **Economic Survey 2021-2022**, as of end-November 2021, India was the **fourth largest foreign exchange reserves holder** in the world after China, Japan, and Switzerland.

- The foreign exchange reserves **include four items**; gold, SDRs and foreign currency assets (FCA) and Reserve Tranche Position.

- The level of foreign exchange reserves has steadily increased over the period of time.

Why reserves declined?
The fall in the forex reserves has been attributed to:

- ➢ Pressure on the Indian rupee as a result of the conflict in Ukraine and depreciation of rupee against the dollar.

- ➢ The rupee depreciated against the US dollar because of the rise in crude oil prices and capital outflows due to sustained selling by foreign portfolio investors (FPIs).

- ➢ As the crude oil prices flared up, and rupee started depreciating, the Reserve Bank of India (RBI) sold dollars to prevent a further slide in value.

o [**Note:-**When the central bank sells dollars, it takes out an equivalent amount in rupees, thus reducing the rupee liquidity in the system. Dollar inflow into the market strengthens the rupee.]

➢ The continuing impact of the Covid pandemic, and

➢ Other geopolitical developments.

PEPPER IT WITH
IMF-SDR & Reserve Tranche

Decrease in foreign currency assets (FCA):

➢ The RBI sold dollars from its FCA kitty-kept in global central banks, foreign banks and foreign securities-to strengthen the rupee.

o [**Note: -** The foreign currency assets include the effect of appreciation or depreciation of the dollar and non-US units like the euro, pound and yen held in the international exchange reserves.]

Why are the reserves so important?

✓ It helps in managing India's external and internal financial issues at a time when the economic growth is set to contract.

✓ It's a big cushion in the event of any crisis on the economic front and enough to cover the import bill of the country for a year.

✓ The rising reserves have also helped the rupee to strengthen against the dollar.

✓ Reserves will provide a level of confidence to markets that a country can meet its external obligations, demonstrate the backing of domestic currency by external assets, assist the government in meeting its foreign exchange needs and external debt obligations and maintain a reserve for national disasters or emergencies.

✓ More importantly, they are needed to support, maintain confidence for central bank action, whether monetary policy action or any exchange rate intervention to support the domestic currency.

✓ The surplus gives adequate space for increased investment expenditure. Etc.

Conclusion:

▪ The level of adequate reserves holding should be measured first. This could be performed using the rule of thumb of holding international reserves equal to three months' import coverage plus short term external debt in addition to 30 per cent of foreign stock market holding.

▪ Furthermore, the issue of 'internal drain' should also be included; this is mainly because of the fact that the quality of the financial system is an important consideration in capital flight from the country.

Cost involved in maintaining forex reserves

❖ The return on India's forex reserves kept in foreign central banks and commercial banks is negligible.

❖ Another issue is the high ratio of volatile flows (portfolio flows and short-term debt) to reserves which is around 80 per cent. This money can exit at a fast pace.

❖ In the case of a developing country like India, where the demand for financial resources to support developmental projects is always greater than the available supply, it is not completely justified to keep these precious funds unemployed for a longer period.

▪ Another important factor that can be included in the analysis is the country's risk.

▪ **In case of excess:** RBI needs to act and consider alternative uses of the excess reserves such as investment in infrastructure, re-capitalisation of public sector banks, investment in overseas financial markets or repayment of costly external debt.

Predatory Pricing

News Excerpt:

The Competition Commission of India has dismissed allegations of predatory pricing against e-commerce platform Shopee.

Pre-Connect:

Predatory pricing

- It is the illegal act of setting prices low to attempt to eliminate the competition and create a monopoly.
- **Predatory Pricing and the Public Interest: -** Consumers may benefit from lower prices in the short term, but they suffer if the scheme succeeds in eliminating competition, as this would trigger a rise in prices and a decline in choice.
- Dumping: exporting goods at a lower price than at home or lower than the cost of production, is a type of predatory pricing.

Indian Position with respect to predatory pricing:

➢ **The Monopolies and Restrictive Trade Practices Act (MRTP Act**), was the law regulating competition in India, under which predatory pricing is a restrictive trade practice.

➢ Under MRTP Act, dominance is not a pre-condition for predatory pricing rather the conduct and intent of the predator is material and needs to be proved with clear and cogent evidence

➢ The Monopolies and Restrictive Trade Practices Act, 1969 (MRTP Act) was **repealed and replaced** by the Competition Act, 2002, on the recommendations of **the Raghavan committee.**

➢ **Competition Act 2002** says that "predatory price" means the sale of goods or provision of services, at a price which is below the cost, as may be determined by regulations, of production of the goods or provision of services, with a view to reduce competition or eliminate the competitors.

Prominent predatory pricing cases

Product	Case year	Finding

National Stock Exchange (NSE)	Crisil	Reliance Jio	Ola & Uber	MakeMyTrip & Oyo
Transaction fee	Credit rating services	Voice calls	Radio taxi services	Hotel booking services
2011	2015	2017	2018	2019
Predatory	Not predatory	Not predatory	Not predatory	Investigation ordered

The predatory pricing playbook

MARKET leader lowers prices below costs to gain unfair advantage	PREDATOR takes short-term hit, but other players go out of business	WITH fewer players, predator raises its prices to recoup losses	HIGH barriers in industry deter new firms from making an entry

➢ The act declares predatory pricing as a means of **abuse of dominance.** Thus **dominance is a precondition** to sustain a predatory pricing claim under our law.

➢ **Abuse of dominant position includes:**
  o Imposing unfair conditions or price,
  o Predatory pricing,
  o Limiting production/market or technical development,
  o Creating barriers to entry,
  o Applying dissimilar conditions to similar transactions,
  o Denying market access, and
  o Using dominant position in one market to gain advantages in another market.

Competition Commission of India

It is a statutory body within the **Ministry of Corporate Affairs** and is responsible for enforcing the Competition Act, 2002.

❖ **Objective:** To eliminate practices having adverse effect on competition, promote and sustain competition, protect the interests of consumers and ensure freedom of trade in the markets of India.

❖ **Composition:** CCI consists of a Chairperson and 6 Members appointed by the Central Government.

❖ It is a **quasi-judicial body.**

❖ **Appeal:** The Central Government has notified a Competition Appellate Tribunal (COMPAT) to hear and dispose of appeals against any direction issued or decision made or order passed by the Commission.

   o An appeal has to be filed within 60 days of receipt of the order / direction / decision of the Commission.

   o A person aggrieved with the direction, decision or order of the COMPAT can appeal to the Supreme Court of India within 60 days

Way Forward:

The economic development of a nation is dependent upon the freedom of business activities and the protection of the rights of the consumers. The Competition Act of 2002 was established with a view of promoting the economic development of the country by regulating practices that have an adverse effect on competition, protection of consumer interests, and ensuring freedom of trade.

✓ In matters of predatory pricing **the CCI has been quite efficient in regulating it**, **however,** upon a detailed analysis of the competition law provisions of India, it can be understood that the main emphasis lies upon the 'dominant position' of the company which is alleged of predatory pricing.

✓ **Determination of dominance of a company is a complex and unwieldy process** as there is no straight jacket formula by which it can be determined.

✓ This creates a possibility of erroneous determination which will have a negative impact on the competitiveness of the companies. The CCI **should focus more on the abuse rather than the position of dominance** since it is quite possible that a non-dominant company can eliminate market competition by indulging in the practice of predatory pricing.

✓ There should be a **clear definition** of what constitute Unfair Trade Practice and practical legal remedy to tackle such practices.

Co-location Scam

News Excerpt:

Multiple agencies are probing the NSE co-location scam, in which many former top officials including former CEO of NSE was under the cloud.

Pre-Connect:

Co-location

• It 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.

How does a co-location facility work?

- Co-location is a popular system that exchanges across the world offer to sophisticated trading members.

- While the main stock exchange servers in India are in Mumbai, the brokerages using them are spread across the country.

- Using normal internet connection to access these systems sometimes leads to data latency, or delay in transmission of data.

- While the extent of the delay is just a few microseconds, it makes a difference to big traders such as hedge funds and proprietary desks, which trade in huge quantities.

- Co-location facilitates high frequency trades, or HFTs, which in turn helps execution of complex computerised trading programmes through algorithms, popularly known as algo-trading.

- Brokers and traders can avail the co-location facility by paying a fee to stock exchanges. This means stock exchanges allow these market participants to set up a server on exchange premises.

What is NSE co-location case?

- ➢ The case dates back to 2015 when a whistleblower filed a complaint with the Securities and Exchange Board of India (SEBI) alleging irregularities concerning NSE's co-location facilities.

- ➢ At that time, the NSE was using **the tick-by-tick (TBT) server protocol** to disseminate data to its members. This market architecture was prone to market violations, according to investigation findings by the Technical Advisory Committee (TAC) of SEBI and Deloitte India.

- ➢ It also said that the NSE had allowed non-empanelled Internet Service Providers (ISP) to lay fibre cables on its premises for a select set of traders who were reaping huge amounts of profits.

➢ The NSE co-location case is under investigation by the SEBI, Central Bureau of Investigation (CBI) and Income-tax Department (I-T department). The authorities concerned are probing the involvement of NSE's former and current brokerages and executives.

➢ SEBI, 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.

Implications for investors and traders:

✓ Retail investors and traders do not participate on co-location facilities and hence are not impacted in any way by the scam.

✓ But the entire episode raises questions about the governance and system lapses at the country's premiere exchange.

✓ This can reduce the confidence of the retail investors in the market. Further, this may reduce investment and further effects of a strong economy. A rising stock market is usually aligned with a growing economy and leads to greater investor confidence.

Conclusion:

▪ 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.

▪ They contend that market efficiency is more important than speed.

▪ SEBI should control the exchanges and regulate the pace of transmission of order data in such a way that all market participants receive the data at the same time.

❖ The National Stock Exchange (NSE) launched the co-location facilities **in 2009** to permit traders and brokers to establish their IT servers within the premises of NSE's co-location data centers with low latency connectivity to the exchange in return for a fee.

❖ NSE has changed its order execution protocol in the co-location facility to **Multicast TBT** from **April 2014**, thus plugging the loophole that allowed some to game the system.

❖ **Securities and Exchange Board of India (SEBI):** It is the regulatory body for securities and commodity market in India under the ownership of Ministry of Finance, Government of India.

   o It was established on 12 April **1988** and given Statutory Powers on 30 January 1992 through the SEBI Act, 1992.

❖ **Bombay Stock Exchange (BSE),** is an Indian stock exchange located on Dalal Street in Mumbai and was established in **1875.**

   o It is the **oldest stock exchange in Asia**, and also the tenth oldest in the world.

❖ **National Stock Exchange of India Limited (NSE)** is the leading stock exchange of India, located in Mumbai, Maharashtra.

   o It was established in **1992** as the first dematerialized electronic exchange in the country.

## India's plan to develop semiconductor ecosystem

News Excerpt:

The Ministry of Electronics and Information Technology (MeitY) is in talks with select government funded higher education institutions to develop training and education programmes for around 2.5 lakh junior engineers for plant and shop floor management and around 5,000-6,000 research scholars who have at least a PhD.

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Pre-Connect:

- Semiconductors and displays are the foundation of modern electronics driving the next phase of digital transformation under Industry 4.0.

- Semiconductors and display manufacturing is very complex and technology-intensive sector involving huge capital investments, high risk, long gestation and payback periods, and rapid changes in technology, which require significant and sustained investments.

- The Government of India attaches high priority to electronics hardware manufacturing and it is one of the important pillars of both "Make in India" and "Digital India" programmes.

- The **National Policy on Electronics 2019 (NPE 2019**) envisages to position India as a global hub for ESDM with thrust on exports by encouraging and driving capabilities in the country for developing core components, including chipsets, and creating an enabling environment for the industry to compete globally.
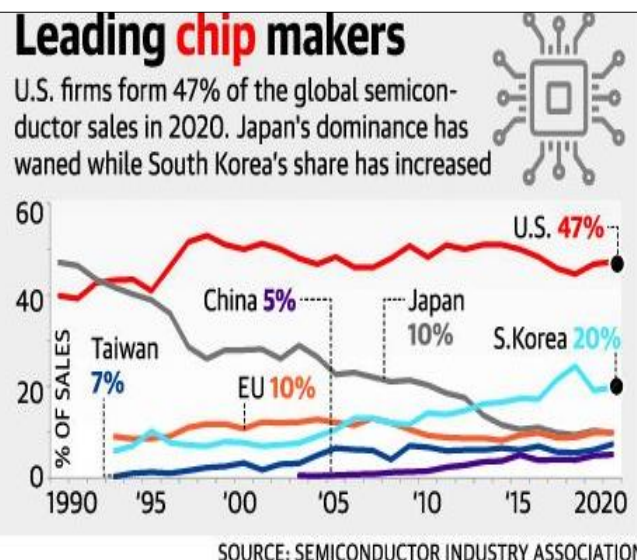
About:

A **three-layer plan** for creating talent for the semiconductor companies:

➢ The first one is **scholarly capabilities**, which will be useful in process and design element of manufacturing and fabrication. The educational hubs, which will be created around the manufacturing units or such design and innovation clusters, will have a mix of high school, medium skill training centres such as industrial training institute (ITI) and high-end technology schools such as engineering colleges.

➢ Then we have **VLSI plant manufacturing capacity**, which is the 85,000 engineers we will train. For training 85,000 engineers who will work on core semiconductor technologies, the MeitY will seek inputs on the specific course and technology requirements of the semiconductor companies willing to set up units in India.

➢ Then we have plans for **plant and shop floor, manufacturing and testing types of skilled people.** For people on the plant and shop floor, the ministry plans to check for specific areas and industries from which workers can be picked and either be re-skilled or up-skilled through certain short-duration training courses.

What are India's strengths and capabilities in semiconductors?

✓ India is very strong when it comes to semiconductor design or any software development related to semiconductors. We are leaders in that. The only challenge is that the talent in India is working in captive design centers of leading global companies.

✓ We hardly have fabless product design companies from India, for India and global. We don't have IP creations for India; all the IP created is for someone else, and patents are filed outside, which gets recognised outside.

✓ **(Note**: Fabless companies design and test chips. Fab, of fabrication companies, handle the manufacturing.)

Plan to optimize the opportunity:

▪ The electronics market in India is currently $160 billion. It is estimated that by 2026, this will be $400 billion. Of this, there is a value addition of only 15 percent to the Indian economy. The remaining 85 percent is either imported or completely knocked down units or semi-knocked down units (CKD/SKD) and are absorbed by the Indian economy without any value creation.

▪ Forty percent of (an item's) value is in components and another 40 percent is in IP and technology. So your **design should come from India and that IP value should get recognised in India. Patents should be filed in India.**

▪ In all this, only EMS (electronics manufacturing services) picked up in India, which creates only 15-17 percent value recognition. There are so many mobile phone manufacturing companies in India, but the entire kit comes from outside. We are just doing the soldering and assembly. In a $100 phone, India makes only $10. This is definitely creating blue-collared jobs and manufacturing, but what about value creation?

▪ The opportunity, therefore, is **to increase value addition to the Indian economy** from 15 percent to a larger share, thereby growing the Indian economy. That is the potential of the market: to increase this percentage of value addition in the economy by creating more manufacturing jobs in India.

Steps taken by the Indian Government:

❖ National Policy on Electronics 2019 (NPE 2019)

❖ Semiconductor Fabs and Display Fabs

❖ Semi-conductor Laboratory (SCL)

❖ The Design Linked Incentive (DLI) Scheme to Semiconductor Design Companies

❖ India Semiconductor Mission

❖ Production Linked Incentive Scheme (PLI) for Large Scale Electronics Manufacturing

❖ Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS)

❖ Modified Electronics Manufacturing Clusters (EMC 2.0) Scheme

❖ Production Linked Incentive Scheme (PLI) for IT Hardware

❖ Modified Special Incentive Package Scheme (M-SIPS)

PEPPER IT WITH
PLI scheme, M-SIPS, SPECS, Make in India, Start-up India, Digital India

Conclusion:

✦ Developing domestic semiconductor manufacturing capabilities **will have a multiplier effect** across different sectors of the economy and will contribute significantly to achieving a USD 1 trillion digital economy and a USD 5 trillion GDP by 2025.

✦ The initiative will not only boost semiconductor manufacturing but will also help India achieve self-sufficiency, improve data security, and gain digital independence.

✦ The bottom line is that it is evident that India has the ability to design & manufacture its own semiconductors and establish an end-to-end supply chain within the country itself.

✦ India already has the right atmosphere, which is followed by strategic implementation of resources and government support, might be a game changer for the country.

INTERNATIONAL RELATIONS

India-Maldives Bilateral Ties

News Excerpt

India-Maldives' time-tested relationship is poised for a quantum jump and New Delhi is strongly committed to further progress of this relationship, said External Affairs Minister Dr S Jaishankar as he held a joint press conference with the Minister of Foreign Affairs of Maldives.

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Pre-Connect

- India and Maldives share ethnic, linguistic, cultural, religious and commercial links steeped in antiquity and enjoy close, cordial and multi-dimensional relations. India was among the first to recognise Maldives after its independence in 1965 and to establish diplomatic relations with the country.
- India established its mission at the level of CDA in 1972 and resident High Commissioner in 1980. Maldives opened a full-fledged High Commission in New Delhi in November 2004, at that time one of its only four diplomatic missions worldwide.
- Bilateral relations have been nurtured and strengthened by regular contacts at the highest levels. Since establishment of diplomatic relations, almost all the Prime Ministers of India visited the Maldives. Former President Gayoom made a number of visits to India.
- Former President Mohamed Nasheed's first visit to abroad after assuming office was to India in December 2008. In October 2009, Nasheed attended the Delhi High Level Conference on Climate Change and Technology Transfer.
- On international issues Maldives had consistently supported India in multilateral fora, such as the UN, the Commonwealth, the NAM and the SAARC.
- Maldives also co-sponsored the G-4 draft resolutions on UN reforms. India has extended support to Maldives candidature for a non-permanent seat in the UN Security Council for the term 2019-20.

Key points

➢ In addition to the inauguration of National College of Policing and Law Enforcement, an MoU was signed between the Sardar Vallabhbhai Patel National Police Academy in Hyderabad and the Maldives Police Service.

➢ External Affairs minister S Jaishankar signed pacts on health and education besides discussing regional security and maritime safety issues.

➢ Maldives welcomed India's "Neighbourhood First Policy" under which the island nation has gained immense socio-economic benefits and that they, too, remain committed to their "India First Policy". India-Maldives relationship has stood the test of time, and is one that will continue to flourish.

➢ Maldives thanked India for the assistance it has provided throughout the Covid-19 pandemic. Maldives remains grateful that they can always rely on India during times of need. India-Maldives have experienced the hardships and tragedies of the pandemic, but both are emerging stronger together.

➢ Addu is a stronghold of the Maldivian National Party and former President Mohamed Nasheed, who is Speaker of the Majlis — the country's Parliament. He is also a vocal supporter of closer ties with India.

➢ The two countries also signed a pact connecting the Higher Education Network of Maldives and the National Knowledge Network of India, enabling access to digital libraries and networking sources for students and professionals of Maldivian educational institutes.

➤ An agreement for reciprocal recognition of Covid vaccination certificates that will help facilitate easier travel between the Maldives and India was also signed.

What was the need for the National College of Policing and Law Enforcement?

✓ The establishment of the National College of Policing and Law Enforcement had been in the works for a long time, with the first announcement having been made in 2015 during the presidency of Abdulla Yameen Abdul Gayoom. But as with almost all projects that involved India, this too faced delays till the government changed in 2018 and President Solih took office. On the domestic level in the Maldives, the training academy would help strengthen law enforcement abilities and counter drug trafficking.

✓ Defence security cooperation between India and the Maldives has been happening for some time now and a large number of their personnel travel overseas for training, including India. The establishment of this institution needs to be understood from the larger perspective of bilateral defence cooperation between India and the Maldives.

Conclusion

India is supporting projects in different sectors — infrastructure, tourism, fish processing and health. India has already commenced on the Addu Roads projects, setting up of 4,000 housing units and drinking water and sanitation schemes. Indian-Maldives bilateral partnership is a mutual tie that delivers for its stakeholders — the citizens of both the countries —in both good and bad times. This is a partnership that tackles common challenges of regional development, and addresses disruptions and disasters. It is a partnership that is a force for stability in the region.

Bucharest Nine Countries

News Excerpt

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.

About

- 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.

- 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 of the Bucharest Nine:**
> ❖ 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).
> ❖ All members of the B9 are part of the European Union (EU) and North Atlantic Treaty Organisation (NATO).

- The Budapest Memorandum on Security Assurances of 1994, which paved the way for Ukraine to surrender its formidable nuclear arsenal, included the oral assurance from the US secretary

Page 57

of state that no other country (meaning principally Ukraine, which shares a long land and sea border with Russia) would be invited or encouraged to join the North Atlantic Treaty Organization.

Opposition to the Russian

➢ 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 that as allies on the Eastern flank, B9 need to continue consolidating deterrence and defence. B9 recently witnessed the worrying military build-up by Russia in their close neighbourhood, in the Black Sea, in and around Ukraine. This is why President Iohannis have argued, including in discussions with President Biden, for an increase of allied military presence in Romania and the south of the Eastern flank.

➢ President Joe 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 the 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.
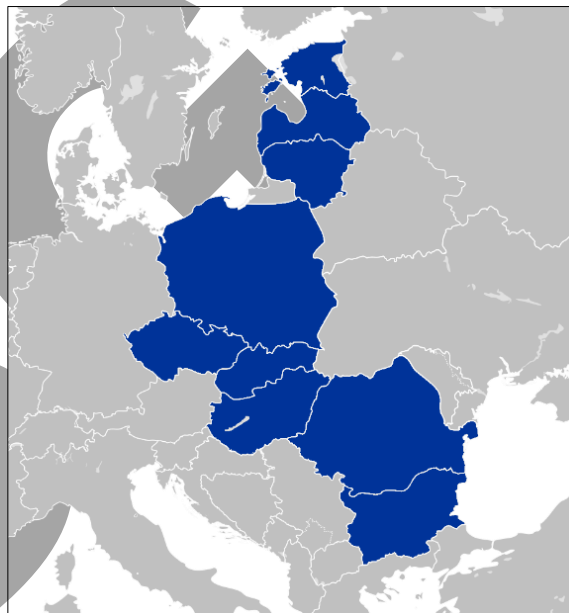
Conclusion

The meaningful negotiations should have been initiated to find a joint answer to Moscow's security woes and one-half of Ukraine's sovereignty worries. Instead, the US-led NATO blatantly rubbished the assurances sought and given in Budapest, and their military presence stretched to literally at Russia's widest and broadest doorstep, Ukraine.

India And Oman: Scientific and Technological Cooperation

News Excerpt

India and Oman will work together in sustainability scientific harnessing of resources under a Programme of Cooperation (POC) in the fields of Science and Technology.

Pre-Connect

- Oman is India's closest defence partner in the Gulf region and an important anchor for India's defence and strategic interests. Defence cooperation has emerged as a key pillar for the robust India-Oman strategic partnership. Defence exchanges are guided by a Framework MOU which was renewed in 2021.

- Oman is the only country in the Gulf region with which all three services of the Indian Armed Forces conduct regular bilateral exercises and staff talks, enabling close cooperation and trust at the professional level. Oman also provides critical operational support to Indian Naval Deployments in the Arabian sea for anti-piracy missions.

- Bilateral training cooperation between the two sides is also robust with Omani forces regularly subscribing to training courses in India both at professional as well as higher command level.

Indian armed forces also subscribe to the Staff and Command courses conducted at NDC, Oman. Oman also actively participates in the Indian Ocean Naval Symposium (IONS).

Indian Diaspora in the Oman

➢ There are about 6.2 lakh Indians in Oman, of which about 4.8 lakh are workers and professionals. There are Indian families living in Oman for more than 150-200 years. Thousands of Indians are working as doctors, engineers, chartered accountants, teachers, lecturers, nurses, managers among other professionals.

The Strategic Imperative

✓ In a strategic move to expand its footprint in the Indian Ocean region, India has secured access to the key Port of Duqm in Oman for military use and logistical support. This is part of India's maritime strategy to counter Chinese influence and activities in the region. The services of Duqm port and dry dock will be available for maintenance of Indian military vessels.

✓ The Port of Duqm is situated on the southeastern seaboard of Oman, overlooking the Arabian Sea and the Indian Ocean. It is strategically located, in close proximity to the Chabahar port in Iran. With the Assumption Island being developed in Seychelles and Agalega in Mauritius, Duqm fits into India's proactive maritime security roadmap.

✓ Duqm has seen a rise in Indian activities. In recent years, India had deployed an attack submarine to this port in the western Arabian Sea.

✓ A Shishumar-class submarine entered Duqm along with naval ship INS Mumbai and two P-8I long-range maritime patrol aircraft. India gets access to strategic Oman port for military use, reconnaissance aircraft. The naval units were on a month-long deployment with the aim of enhancing surveillance and cooperation.

✓ In August 2017, Oman signed an MoU with the United Kingdom that allowed the Royal Navy to use the Port of Duqm. The agreement allows UK access to facilities at Duqm, and among the vessels that will be allowed to dock at the port is the HMS Queen Elizabeth aircraft carrier, the largest ship in the British Navy.

Scientific and Technological Cooperation: Programme of Cooperation (POC)

▪ The areas of cooperation identified based on the Programme of Cooperation (POC) for the period 2022 – 2025 are Medicinal Plants and processing, Real-time Air Quality Monitoring, Development of an electronic platform for knowledge sharing in the field of Genetic Resources, Technical expertise for SMEs in the field of sustainability (Eco-Innovate) Accelerator, Plastic Bio-fuel, and Bio-diesel Research (Example: Low-temperature Bio-diesel production, Extraction of high-value products from produced water with oil), Software development for Graduate Programs – Linking Industry with Academia, Blockchain and FinTech solutions, Training programmes – Big-data, coding & testing, STEM teaching and other areas of S&T cooperation added by mutual consent.

▪ The POC document was signed by Secretary, Department of Science and Technology (DST), and Omani Foreign Secretary, on behalf of the Government of the Sultanate of Oman during the bilateral meeting between Dr. S Jaishankar, Union Minister of External Affairs of the Government of India and Sayyid Badr Albusaidi, Foreign Minister of Oman on 23rd March 2022.

▪ The Department of Science & Technology, Ministry of Science & Technology, on behalf of Government of the Republic of India and the Office of Science, Knowledge & Technology Transfer, Foreign Ministry, on behalf of the Government of the Sultanate of Oman, will supervise, coordinate and implement the POC for India and Oman.

Conclusion

♦ Under the agreement, both countries will support joint scientific projects based on mutual interest, developed jointly by the Indian and Omani institutions. They will encourage exchange of scientists, researchers, experts, and specialists for the implementation of selected joint projects aimed at developing applicable technology.

↓ This will lead to the dissemination of research results and establishing contacts with industry for the follow-up of research and development work. The countries will also hold at least one workshop each year – alternatively in India and in Oman during 2022 – 2025 period in mutually acceptable areas. The POC for Cooperation in the fields of Science and Technology for the period 2022 – 2025 was signed in pursuance of the Agreement for Cooperation in Science and Technology concluded on 5 October, 1996 between the Government of Oman and the Government of India.

India's Arctic Policy

News Excerpt

Centre has released India's Arctic Policy, with the aim of enhancing the country's cooperation with the resource-rich and rapidly transforming region.

Pre-Connect

- The Arctic region, or the Arctic, is a geographic region spreading around the North Pole. There is no single correct definition of the region as the southern boundary varies.
- The Arctic Circle (66 ° 33'N) delimits the Arctic in terms of solar radiation. In theory, areas north of the Arctic Circle have at least one day without daylight in the winter and at least one nightless night in the summer. In practice, this does not happen everywhere because the surface of the earth is uneven, and the light refracts in the atmosphere.
- Based on temperature, the monthly average temperature in the Arctic is below + 10 ° C throughout the year, even in summer.
- The forest line follows a temperature-defined area. The forest line is not a narrow line but a zone ten of kilometers wide between the northern coniferous forest and the tundra. In this demarcation, the Arctic is predominantly wooded tundra and glaciers.
- Permafrost increases the area of Russian Arctic compared to the other delimitations. Permafrost is soil that stays frozen for at least two consecutive years.
- The ice cover determines the Arctic nature of marine areas. Sea ice is highest in February-March and lowest in September. The surface of the Arctic ice is monitored almost in real time by satellites.
- Culturally defined, the Arctic covers the homelands of northern indigenous peoples. Political delimitations vary according to how they serve, e.g., the interests of states or international cooperation.
- As the climate warms, the Arctic shrinks if defined by temperature, forest line, permafrost, or ice cover. Cultural and political boundaries also vary.
- The Arctic Circle is the most permanent of the delimitations, although also the polar circle moves very slowly due to the variation of the Earth's axial tilt.

Highlights

➢ The policy, titled 'India and the Arctic: building a partnership for sustainable development', the policy is built on six central pillars — science and research, climate and environmental protection, economic and human development, transportation and connectivity, governance and international cooperation, and finally, national capacity building.

➢ The policy seeks to combat climate change and protect the environment in the region, which is warming three times faster than the rest of the world.

➢ The policy documents the history of India's relationship with the region, which can be traced back to February 1920, when it signed the Svalbard treaty in Paris.

➢ In 2007, India launched its first scientific expedition to the Arctic. Since then, India has been able to set up an observatory in Kongsfjorden as well as an atmospheric laboratory at Gruvebadet.

> Since 2013, India has been an Observer nation in the Arctic Council, where it has consistently participated in meetings of Senior Arctic Officials and contributed to its six Working Groups, the policy states.
> Under the banner of science and research, the Indian government hopes to build its research capabilities in the region by strengthening existing facilities, such as the Himadri Arctic station in Svalbard.
> The policy hopes to align Indian research with international Arctic priorities. The policy further lays down plans to deploy space technology to better study the Arctic region.
> India also plans to study the impact of climate change in the Arctic, to improve response mechanisms across the world.
> It aims to offer a better analysis of the implications of ice melting in the Arctic on global shipping routes, energy security and exploitation of mineral wealth.
> The policy seeks to study the linkages between polar regions and the Himalayas and deepen the cooperation between India and the countries of the Arctic region under various Arctic forums, drawing expertise from scientific and traditional knowledge.

Need for an Arctic Policy

The relevance of Arctic for India can be broadly explained under three categories: (a) Scientific Research, Climate Change and Environment; (b) Economic and Human Resources; and (c) Geopolitical and Strategic.

(A) Scientific Research, Climate Change and Environment

Monsoons: The changes occurring in the Arctic are yet to be understood fully, but it is clear that they have been impacting global weather, climate and ecosystems including the monsoons in India. During the monsoons, India receives over 70% of its annual precipitation. India's agriculture, which is the primary source of livelihood for about 58% of India's population and contributes around 20% to the GDP, is directly dependent on monsoons.

Rising Sea Level: From 1971 till 2019, the Arctic snow cover and the extent of Arctic Sea ice have shrunk by 21% and 43% respectively, and all regions of the Arctic experienced net loss of land ice. This land ice loss in the Arctic is a major contributor to global sea-level rise and it can have a significant impact on India, especially over its 1,300 island territories and maritime features.

Himalayas: The Arctic and the Himalayas, though geographically distant, are interconnected and share similar concerns. The Arctic meltdown is helping the scientific community to better understand the glacial melt in the Himalayas, which has often been referred to as the 'third pole' and has the largest freshwater reserves after the North and South poles. They are also the source of main rivers of India, including the Ganga and Brahmaputra, the basins of which support a population of about 600 million and 177 million respectively and generate over 40 per cent of India's GDP. The study of Arctic is therefore critical to Indian scientists.

(B) Economic and Human Resources

Mineral Resources and Hydrocarbons: Arctic region has rich deposits of coal, gypsum and diamonds and also substantial reserves of zinc, lead, placer gold and quartz. Greenland alone possesses about a quarter of world's rare earth reserves. The Arctic also contains a wealth of hydrocarbon resources. A US Geological Survey (USGS) appraisal of the Arctic estimated that the region "may constitute the geographically largest unexplored prospective area for petroleum remaining on Earth" amounting to 30% of the world's undiscovered natural gas and 13% of the world's undiscovered oil. With the increasing ice-melt, these resources are becoming more accessible and feasible for extraction.

India is the third-largest energy-consuming country in the world, the third-largest oil importer (83%) and the fourth-largest importer of gas which caters to almost half of the total gas consumption. India's gas mix in the energy basket amounts to only 6%, which is among the lowest in the world, compared to the world average of 24%. This is targeted to be scaled up to 15% by 2030. Arctic can therefore potentially address India's energy security needs and deficiency of strategic and rare earth minerals.

(C) Geopolitical and Strategic

China: The melting Arctic ice is also raising the geopolitical temperatures to levels not seen since the Cold War. In January 2018, China's White Paper on Arctic policy called itself a 'Near-Arctic State'. It also referred to trans-Arctic shipping routes as the Polar Silk Road, identifying it as a third transportation corridor for the Belt and Road Initiative (BRI). China's assertion has been highly contested by the US, which has demolished China's locus standi in the Arctic declaring that "there are only Arctic States and Non-Arctic States. No third category exists, and claiming otherwise entitles China to exactly nothing". China has made significant investments in the Arctic, primarily in infrastructure and energy sectors, to the tune of US$ 90 billion, between 2012 and 2017, and is the only country apart from Russia, to be constructing nuclear ice-breakers.

Russia: Russia accounts for almost half of the Arctic in terms of area, coastline, population, mineral wealth and hydrocarbons. Even though the Russian Arctic houses just 1.5 per cent of Russia's population, its contribution to the country's GDP is 15 per cent, and 20 per cent to its exports. Russia could be said to have the most at stake in the Arctic in absolute terms. Facing sanctions, Russia is soliciting funding and collaboration for developing infrastructure in the Arctic and the Northern Sea Route (NSR). Russia considers parts of NSR to be internal waters, regulates transit of merchant ships and restricts passage of foreign warships, which is being opposed by the US.

Shipping Routes: The opening of the shipping routes and possibilities of increased resource extraction is leading to the big three—US, China and Russia—and NATO, jockeying for position and influence in the region. In 2018, Russia and NATO conducted Exercise Vostok and Trident Juncture respectively, their largest since the Cold War. While the former witnessed participation by China, the latter comprised all 29 NATO members (at that time) plus Sweden and Finland and included the first deployment of a US Navy aircraft carrier above the Arctic Circle since 1991. In May 2018, US re-established the 2nd Fleet, which was created in 1950 (and disestablished in September 2011) for countering Soviet naval forces in the North Atlantic.

Boundary Disputes: Apart from the strategic contestation, there are unresolved boundaries between the Arctic States. For instance, US has continental shelf overlap with Canada and Russia, while Russia and Canada themselves have differing continental shelf claims. US and Canada have not yet delimited their maritime boundaries and they also have differences over North West Passage, part of which Canada considers (like Russia for NSR) as its internal waters. Also, Canada and Denmark have a dispute over Hans Island.

Conclusion

Apart from being rich in mineral and oil resources, the Arctic region is also particularly significant due to the many shipping routes that run through it. The adverse effects of climate change are not only impacting the availability of mineral and hydrocarbon resources but are also transforming global shipping routes. India's Arctic Policy is deftly dovetailed, enmeshed and in synergy with the broader policy framework of the Government of India. Most importantly, in keeping with India's civilisational ethos of *Vasudhaiva Kutumbakam*: the world is but one family, India's Arctic Policy is inclusive and participative wherein India offers its readiness to "play its part and contribute to the global good". The release of India's Arctic Policy, therefore, augurs well for India's Arctic endeavours and the world at large.

BIMSTEC And Free Trade Agreement

News Excerpt

The fifth summit of the regional grouping, the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), held virtually in Colombo, has undoubtedly advanced the cause of regional cooperation and integration.

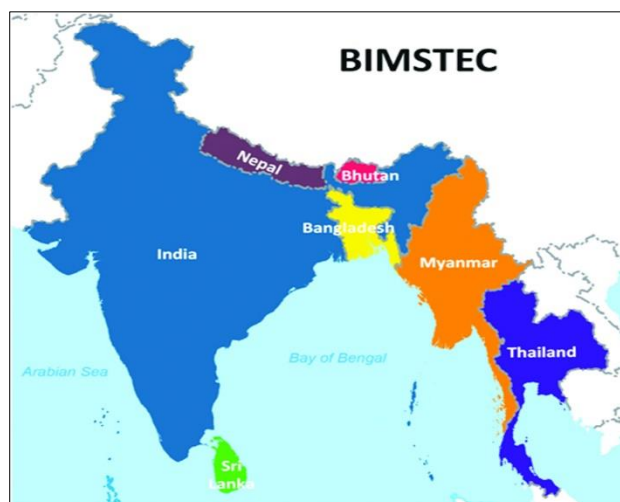| GS CONNECT											
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Pre-Connect

- BIMSTEC includes countries of the Bay of Bengal region, and seeks to act as a bridge between South and Southeast Asia. Originally formed as BIST-EC (Bangladesh, India, Sri Lanka and Thailand Economic Cooperation) in 1997, it became BIMST-EC after Myanmar joined, and BIMSTEC in 2004 with the inclusion of Nepal and Bhutan.

- Despite having been in existence for many years, the grouping had been largely ignored until India gave it a renewed push in October 2016, a month after the terrorist attack in Uri. Alongside the BRICS summit in Goa, India hosted an outreach summit with leaders of BIMSTEC countries. Weeks earlier, some of these countries had supported New Delhi's call for a boycott of the SAARC summit scheduled in Islamabad in November, 2016.

- The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) has passed 23 years since its inception in 1997. Being a regional cooperation initiative, BIMSTEC promotes co-operation on seven key economic areas including trade, investment, and transport and communications. In this connection, member countries are currently negotiating for establishing the BIMSTEC Free Trade Area to propel trade and investment among member countries.

Highlights of the Colombo Summit

➢ BIMSTEC has adopted its Charter. It is an important step towards creating an institutional architecture of the organisation. the signing of the Charter was the main outcome of this summit.

➢ With the Charter, the BIMSTEC now has an international personality. It has an emblem; it has a flag. It has a formally listed purpose and principles that it is going to adhere to. It represents significant evolution of the grouping.

➢ There was a declaration of the Master Plan for Transport Connectivity that would provide a framework for regional and domestic connectivity.

➢ In line with the development of the organisation into a formal structure, the leaders of the member-countries have agreed to divide the working of the grouping into seven segments, with India providing leadership to the security pillar. Ministry of External Affairs says India will be the 'security pillar' of the BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation).

➢ The summit, held in the backdrop of the Ukraine crisis, also drew attention because of the presence of Myanmar, a country ruled by the military, which is a leading violator of human rights in the world. Myanmar is an important constituent member of the BIMSTEC and it has a very important geography.

➢ BIMSTEC is a multilateral regional cooperation platform and the aim is to focus on economic and development cooperation to do activities that genuinely deliver value to people. Members on this platform are countries who are geographically littoral to or dependent upon the Bay of Bengal. For the success of this platform, it is required that all the countries to be present.

Analytica

✓ India had long felt that the potential of SAARC was being under-utilised, and opportunities were being missed due to lack of response and/or an obstructionist approach from Pakistan. At the SAARC summit in Kathmandu in 2014, India said these opportunities must be realised "through SAARC or outside it" and "among us all or some of us".

✓ Bangladesh views BIMSTEC as a platform to position itself as more than just a small state on the Bay of Bengal, and Sri Lanka sees it as an opportunity to connect with Southeast Asia and serve as the subcontinent's hub for the wider Indo-Pacific region.

✓ Nepal and Bhutan aim to connect with the Bay of Bengal region and escape their landlocked geographic positions. For Myanmar and Thailand, "connecting more deeply with India...would allow them to access a rising consumer market and, at the same time, balance Beijing and develop an alternative to China's massive inroads into Southeast Asia.

✓ BIMSTEC is no longer a mere initiative or programme. The question to address is whether it is now capable of tackling the challenges facing the region. Representing a fifth of the world's population that contributes only 4% of the global GDP, can this multilateral grouping trigger accelerated economic development.

✓ Governments showed considerable creativity by agreeing to restrict Myanmar's participation in the summit to the Foreign Minister's level. This obviated diplomatic controversy. Thailand and India will need to be astute in managing Myanmar's engagement until the political situation there becomes normal.

Way Forward: The Personal Touch

▪ The personal engagement of the political leadership should be stepped up. The decision taken in Colombo to host a summit every two years is welcome if implemented. But in the medium term, an annual summit should be the goal, with an informal retreat built into its programme.

▪ BIMSTEC needs greater visibility. India's turn to host the G20 leaders' summit in 2023 presents a golden opportunity, which can be leveraged optimally. Perhaps all its members should be invited to the G20 summit as the chair's special guests.

▪ The suggestion to simplify the grouping's name needs urgent attention. The present name running into 12 words should be changed to four words only — the Bay of Bengal Community (BOBC). It will help the institution immensely. Brevity reflects gravitas.

CEPA between India-United Arab Emirates (UAE)

News Excerpt

Union Ministry of Commerce and Industry, Consumer Affairs, Food and Public Distribution, and Textiles, announced the unveiling of the Comprehensive Economic Partnership Agreement (CEPA) between India and the United Arab Emirates (UAE).

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Pre-Connect

• India and the UAE enjoy excellent bilateral relations, which are deep rooted and historical, sustained and nurtured by close cultural and civilizational affinities, frequent high-level political interactions, and vibrant people to people linkages.

• Growing India-UAE economic and commercial relations contribute to the stability and strength of a rapidly diversifying and deepening bilateral relationship between the two countries. India and the UAE have been each other's leading trading partners.

• These excellent bilateral economic and commercial relations have continued to enhance and deepen over time. From US$ 180 million per annum in the 1970s, India-UAE bilateral trade has steadily increased to US$ 60 billion in FY 2019-20 making the UAE, India's third largest trading partner. With exports to the UAE valued at US$ 29 billion for the year 2019-20, the UAE is also the second largest export destination of India, while Indian imports from the UAE were valued around US$ 30 billion, including 21.83 MMT (US$ 10.9 billion) of crude oil.

• The UAE is also the eight largest investor in India. Moreover, India and the UAE have recently entered into a Memorandum of Understanding (MoU) whereby the UAE has committed US$ 75 billion towards infrastructure development in India.

- In October 2021, Government of Dubai signed an MoU with the Jammu and Kashmir administration for real estate development, industrial parks, IT towers, multipurpose towers, logistics, medical college, super specialty hospital and more.

Salient Features of the India – UAE CEPA

➢ It is a landmark agreement because it's the UAE's first comprehensive strategic partnership with any country, and it is India's first Free Trade Agreement (FTA) in a decade. The partnership has come out with numerous objectives and initiatives, and one of the primary objectives is increasing the bilateral non-oil trade to US$ 100 billion in the next five years.

➢ Currently, the trade between the two countries is US$ 60 billion. The UAE is India's third largest trade partner after the USA and China and the second largest export destination.

➢ The countries have declared establishing a joint hydrogen task force with special focus on green hydrogen. Both the countries have determined to cooperate in the implementation of the Paris Agreement, by scaling up technologies under different agencies such as International Renewable Energy Agency and International Solar Alliance.

> **Sanitary and Phytosanitary (SPS) measures:**
>
> - These are measures are laws, regulations, standards, and procedures that governments employ as "necessary to protect human, animal or plant life or health" from the risks associated with the spread of pests, diseases, or disease-carrying and causing organisms, or from additives, toxins, or contaminants in food, beverages, or feedstuffs.
> - SPS measures are designed to protect animals and plants from diseases and pests, and to protect humans from animal- and plant-borne diseases and pests, and foodborne risks. Examples include specific product or processing standards, requirements for products to be produced in disease-free areas, quarantine and inspection procedures, sampling and testing requirements, residue limits for pesticides and drugs in foods, and prohibitions on certain food additives.

➢ Both the countries have agreed to collaborate in education sector to further encourage and support innovations. For the first time ever, India will set up an overseas Indian Institute of Technology (IIT) in the UAE.The Agreement is a comprehensive agreement, which will cover Trade in Goods, Rules of Origin, Trade in Services, Technical Barriers to Trade (TBT), Sanitary and Phytosanitary (SPS) measures, Dispute Settlement, Movement of Natural Persons, Telecom, Customs Procedures, Pharmaceutical products, Government Procurement, IPR, Investment, Digital Trade and Cooperation in other Areas.

➢ The negotiations for India-UAE CEPA were concluded in a record span of 88 days. The Agreement is expected to enter into force on 01 May 2022.

Impact or benefits:

✓ CEPA provides for an institutional mechanism to encourage and improve trade between the two countries. CEPA between India and the UAE covers almost all the tariff lines dealt in by India and the UAE respectively. India will benefit from preferential market access provided by the UAE on over 97 % of its tariff lines which account for 99% of Indian exports to the UAE in value terms, especially for all labour-intensive sectors such as Gems and Jewellery, Textiles, leather, footwear, sports goods, plastics, furniture, agricultural and wood products, engineering products, medical devices, and Automobiles.

✓ India will also be offering preferential access to the UAE on over 90% of its tariff lines, including lines of export interest to the UAE.

✓ As regards trade in services, India has offered market access to the UAE in around 100 sub-sectors, while Indian service providers will have access to around 111 sub-sectors from the 11 broad service sectors such as 'business services', 'communication services', 'construction and

related engineering services', 'distribution services', 'educational services', 'environmental services', 'financial services', 'health related and social services', 'tourism and travel related services', 'recreational cultural and sporting services' and 'transport services'.

✓ Both sides have also agreed to a separate Annex on Pharmaceuticals to facilitate access of Indian pharmaceuticals products, especially automatic registration and marketing authorisation in 90 days for products meeting specified criteria.

Conclusion

UAE is an important source of India's energy supply and a key partner of India in the development of strategic petroleum reserves, upstream, and downstream petroleum sectors. The agreement will give India greater access to the Middle East and North Africa (MENA) region. It will also serve as a template for a similar agreement with other Gulf Corporation Council (GCC) countries—Saudi Arabia, Qatar, Kuwait, Oman, and Bahrain. Both the nations are striding ahead for a new age partnership. The India-UAE CEPA will further cement the already deep, close and strategic relations between the two countries and will create new employment opportunities, raise living standards, and improve the general welfare of the peoples of the two countries.

Trade Agreements: It is an accord between two or more countries for a specific term of trade, commerce, transit or investment. They mostly involve mutually beneficial concessions. Depending on the terms and concession agreed on by the participating bodies, there are several types of trade agreements-

➢ **Free Trade Agreement:** It is an agreement in which two or more countries agree to provide preferential trade terms, tariff concession etc. to the partner country. Here a negative list of products and services is maintained by the negotiating countries on which the terms of FTA are not applicable hence it is more comprehensive than preferential trade agreement. India has negotiated FTA with many countries e.g., Sri Lanka and various trading blocs as well e.g., ASEAN.

➢ **Preferential Trade Agreement:** In this type of agreement, two or more partners give preferential right of entry to certain products. This is done by reducing duties on an agreed number of tariff lines. Here a positive list is maintained i.e., the list of the products on which the two partners have agreed to provide preferential access. Tariff may even be reduced to zero for some products even in a PTA. India signed a PTA with Afghanistan.

➢ **Comprehensive Economic Partnership Agreement:** It is more comprehensive than an FTA. CECA/CEPA also looks into the regulatory aspect of trade and encompasses and agreement covering the regulatory issues. CECA have the widest coverage. CEPA covers negotiation on the trade in services and investment, and other areas of economic partnership. It may even consider negotiation on areas such as trade facilitation and customs cooperation, competition, and IPR. India has signed CEPAs with South Korea and Japan.

➢ **Comprehensive Economic Cooperation Agreement:** It generally covers negotiation on trade tariff and TQR rates only. It is not as comprehensive as CEPA. India has signed CECA with Malaysia.

➢ **Trade and Investment Framework Agreement:** It primarily defines the scope and provisions of orientation of the potential agreement between the trading partners. It provides for some new area of discussions and set the period for future liberalisation. India has previously signed framework agreements with the ASEAN, Japan etc.

➢ **Bilateral Investment Treaty:** In it two countries decide the conditions for private investments by firms and citizens.

ENVIRONMENT

Micro-Plastic Pollution

News Excerpt

A study by researchers from the Netherlands based institution have found plastic particles in blood samples.

Pre-Connect

- Plastic debris can come in all shapes and sizes, but those that are less than five millimeters in length (or about the size of a sesame seed) are called "microplastics."
- Primary microplastics are tiny particles designed for commercial use, such as cosmetics, as well as microfibers shed from clothing and other textiles, such as fishing nets.
- Secondary microplastics are particles that result from the breakdown of larger plastic items, such as water bottles.

Key Points of the study

- The study looked at the most commonly used plastic polymers. These are polyethylene tetraphthalate (PET), polyethylene (used in making plastic carry bags), polymers of styrene (used in food packaging), poly (methyl methylacrylate) and poly propylene.
- This study contributes to the evidence that plastic particles have not just pervaded throughout the environment, but are pervading our bodies too.
- Researchers analyzed blood samples from individuals and found plastic particles in blood.
- In most of the samples PET plastic is found. It is used in drinking water bottles. Polystyrene was also found, used for packaging food and other food.
- This study makes human health risk assessment in relation to plastic particles. In this sense, it is important to have studies like this one.

Source of Microplastic

- According to the UNEP (2018), 3 million tonnes of annual emissions of microplastics have been released in atmosphere.
- Microplastics pollution originates as a consequence of the manufacture, use, and disposal of products containing plastic polymers.
- During production, industrial emissions and accidental spillages may release microplastics into the environment.
- During the use-phase, microplastics intentionally added to products (e.g. microbeads in cosmetics) are discharged into sewage waters or directly into the environment.
- The wear and tear of synthetic products occurring during their use also regularly generates microplastics. Examples include textile microfibres emitted during washing and wear, tyre wear particles emitted
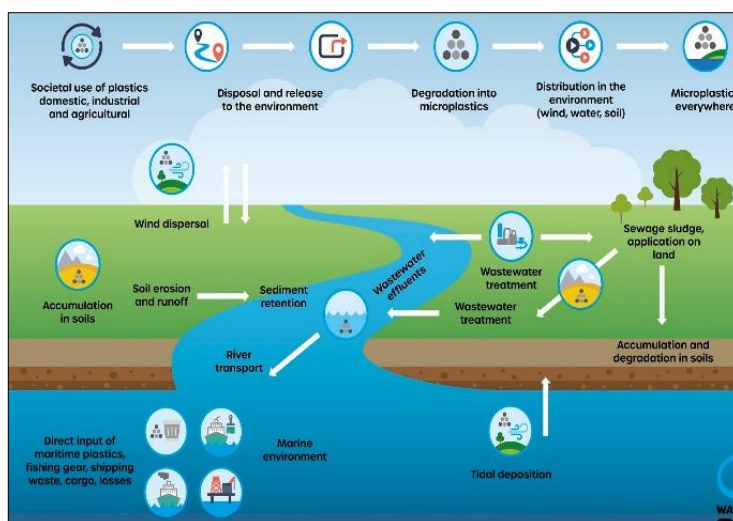
during road transport activity, and the wear off of paint from buildings, ships, and other surfaces.

✓ The degradation and fragmentation of macro plastics discarded into the environment at the end of their useful life, under natural weathering conditions.

✓ Plastic takes thousands of years to decompose and also adversely affects the environment.

Microplastic Impacts

Due to their small size (≤ 5 mm), microplastics pose a threat to animals and the environment.

- **Impact on Environment**: Micro-plastics pollute the water environment, quality of groundwater; change the ecosystem, affects biodiversity by reducing species diversity and act as vectors for spreading toxic chemical additives.

- **Impact on Living Organisms**: Micro-plastics are ingested by zooplanktons and bio-accumulates in the food chain. Riverine fishes are the most exposed freshwater species to Microplastics. Ingestion of Microplastics causes digestive tract blockage and stomach lining damage leading to starvation of the organism, digestion impairment and reduced and delayed reproductive ability, resulting into a lifespan reduction. Heavy metals, organic contaminants, nutrients, and antibiotics are adsorbed onto Micro-plastics which increases eco-toxicity.

- **Socio-Economic**: Severely affected by marine plastic pollution owing to the reduced fish population, loss of income from tourism, damage to coastal agriculture, etc. Consumption of contaminated food further poses health risk for the coastal communities. Micro-Plastic pollution could aggravate the crisis of food security and issue of malnutrition.

> **PEPPER IT WITH**
> Microbeads, Single use plastic, Pseudomonas and Moraxella, Microbes

- **Impact on Human**: Occurrence of micro-plastics across food-chain ensures their presence in human food, increasing the possibility of exposure of associated toxic chemicals to humans. In direct impact, micro-beads can lead to bacterial infections in the gum, skin or injure the cornea by sticking in the eye. In facial products, it can cause tiny skin rips.

Way Forward

- The most natural response to microplastic pollution is recycling. While recycling is not a permanent solution that will remove plastic from the face of the earth. It is, however, a smart solution to prevent microplastic pollution. Actively choosing recycled goods will ensure a greener and better life for everyone on the planet.

- Reducing plastic consumption is an important step that can be taken to ensure that the level of microplastic pollution in the country is removed. From regulating the use of single-use plastic to ensuring proper waste management, several steps can be taken by the government and local bodies to prevent microplastic pollution.

- Taking personal initiatives such as zero-waste trips, shunning disposal food, using your own utensils, quitting the use of bottled water and giving up plastic packaging.

World Energy Transition Outlook 2022

News Excerpt

World Energy Transitions Outlook 2022 was released at the Berlin Energy Transition Dialogue.

Pre-Connect

- World Energy Transitions Outlook 2022 was released by the International Renewable Energy Agency (IRENA).

- It is an intergovernmental organisation that supports countries in their transition to a sustainable energy future, and serves as the principal platform for international cooperation.

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Page 68

- Energy transition means shift from fossil-based systems of energy production and consumption to renewable energy sources like wind and solar, as well as lithium-ion batteries.
- In line with these aims, IRENA provides a wide range of products and services, including:
  - Annual reviews of renewable energy employment
  - Renewable energy capacity statistics
  - Renewable energy cost studies
  - Renewables Readiness Assessments, conducted in partnership with governments and regional organisations
  - to help boost renewable energy development on a country-by-country basis
  - The Global Atlas, which maps resource potential by source and by location
  - Renewable energy benefits studies

Key Highlights

- ➢ The Outlook sets out priority areas and actions based on available technologies that must be realised by 2030 to achieve net zero emissions by mid-century.
- ➢ It outlines priority actions till 2030 to keep 1.5°C alive; calls on governments to fast-track energy transition for more energy security, resilience and affordable energy for all
- ➢ IRENA stated that Short-term interventions addressing the current energy crisis must be accompanied by a steadfast focus on mid- and long-term goals of the energy transition.
- ➢ Despite good progress in some areas, there are large gaps between the current deployment of energy transition technologies and the levels needed to achieve the 1.5°C Paris climate goal.
- ➢ A 1.5°C compatible pathway requires a massive transformation of how societies consume and produce energy.
- ➢ By 2050, the world would need to have net zero emissions, requiring a cut of nearly 37 gigatonnes (Gt) of annual emissions.
- ➢ Renewables would have to increase across all end-use sectors, while a high rate of electrification in sectors such as transport or buildings would require a ten-fold increase in renewable electricity capacity by 2050.

Key performance indicators for achieving the 1.5°C Scenario by 2050

		Recent years (yr)	2050
KPI.01	**Electricity generation** would need to expand three-fold by 2050 compared to 2020 levels, **with renewables** providing 90% of the total electricity supply by 2050 from 26% in 2019.	26%	90%
KPI.02	**The share of renewable energy** in total final energy consumption would increase from 19% in 2019 to 79% by 2050.	19%	79%
KPI.03	Average annual investment for **energy intensity improvement** should scale up 6 times by 2050, implying 11% decrease in total final consumption in 2050.	250 USD billion/yr	>1450 USD billion/yr
KPI.04	The **share of direct electricity** in total final energy consumption must increase from 21% in 2019 to over 50% by 2050.	21%	>50%
KPI.05	The production of **clean hydrogen** and its derivative fuels must ramp up from negligible levels in 2020 to 614 megatonnes (Mt) by 2050.	0.8 Mt	614 Mt
KPI.06	The **total CO_2 captured** from CCS, BECCS and other carbon removal and storage measures must be scaled up to reach 8.5 Gt by 2050 from 0.04 Gt in 2020.	0.04 Gt	8.5 Gt

- ➢ A 1.5°C compatible pathway would bring long-term energy security and energy price stability. Energy efficiency and renewable combined can make countries less dependent on energy imports, diversify supply options and help decouple economies from volatile international fossil fuel price fluctuations.
- ➢ The required scale-up of renewables would require significant and decisive co-ordinated actions across public and private sectors. This would require political will, comprehensive
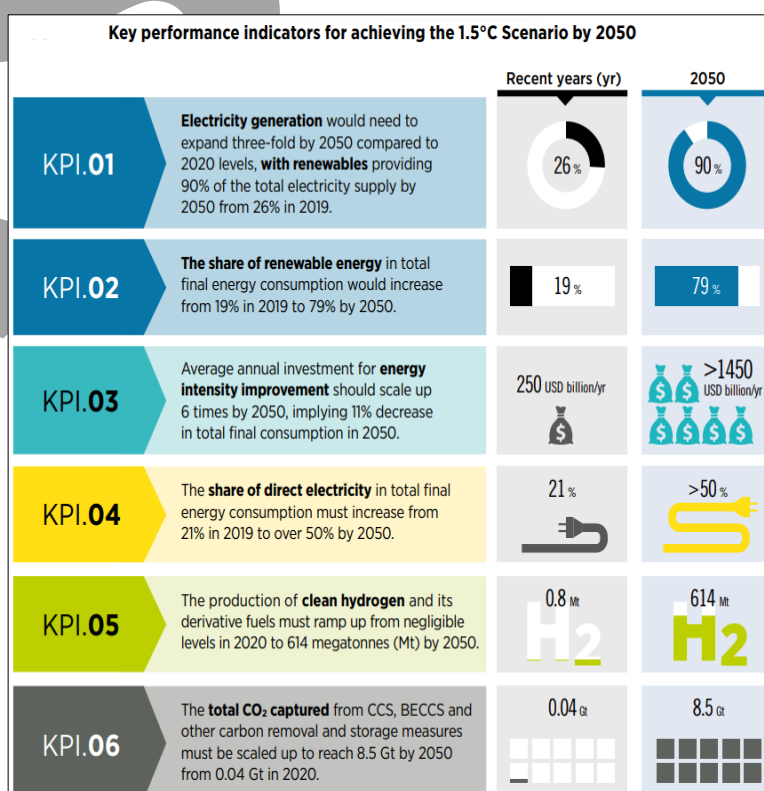
policy frameworks targeting a myriad of barriers and greater levels of both private and public investment.

➢ Investments in energy transition technologies, while having reached record levels, are still not large enough and are concentrated in just a few countries and regions.

PEPPER IT WITH
Green Grids Initiative, OSOWOG, International Solar Alliance, PM-KUSUM

Way Forward

✓ A comprehensive set of cross-cutting, structural policies covering all technological avenues and just transition objectives is needed to achieve the necessary deployment levels by 2030.

✓ Increasing ambition in the National Determined Contributions and national energy plans under the Glasgow Climate Pact must provide certainty and guide investment strategies in line with 1.5°C.

IPCC's Sixth Assessment Report-II

News Excerpt

The latest report of the Intergovernmental Panel on Climate Change (IPCC), 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.

Pre-Connect

- The first part report was released in August, 2021. That one was centred around the scientific basis of climate change.

- 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.

- The Intergovernmental Panel on Climate Change (IPCC) was established in 1988.

- It is the United Nations body for assessing the science related to climate change. It was created to provide policymakers with regular scientific assessments on climate change, its implications and potential future risks.

About IPCC

Established by WMO and UNEP 1988:

- Assess scientific, technical and socio-economic information on climate change, impacts and options for adaptation and mitigation
- Publication of reports
- No research, no monitoring, no recommendations
- Policy relevant but not policy prescriptive
- Extensive review processes of its reports
- Support to UNFCCC

Key Points of the report

➢ 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 report states that 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 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.

➢ The latest 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.

Report and India

✓ 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.

✓ Flooding in Mumbai and heat-waves in Ahmedabad are common occurrences. By 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.

Analytica

▪ This report has highlighted that, by the middle of the century, around 35 million people in India could face annual coastal flooding, with 45-50 million at risk by the end of the century if emissions are high. Direct damage is estimated at $24 billion if emissions are cut as currently promised, and $36 billion, if they are high and ice sheets are unstable. Damage from sea-level rise in Mumbai alone could be up to $162 billion a year by 2050.

▪ Hot extremes including heatwaves have intensified in cities, where they have also aggravated air pollution events and limited functioning of key infrastructure. Observed impacts are concentrated amongst the economically and socially marginalised urban residents.

▪ Infrastructure, including transportation, water, sanitation and energy systems have been compromised by extreme and slow-onset events, with resulting economic losses, disruptions of services and impacts to well- being.

| **PEPPER IT WITH** |
| Kyoto Protocol, Paris Agreement, Montreal Protocol, Kigali Amendment |

▪ Globally, heat and humidity will create conditions beyond human tolerance if emissions are not rapidly eliminated. India is among the places that will experience these intolerable conditions. Urban India is at greater risk than other areas with a projected population of 877 million by 2050, nearly double of 480 million in 2020.

▪ Currently, urbanisation in the country is at 35 per cent, which is likely to increase to 40 per cent in the next 15 years. Mega-cities are growing faster, and even smaller centres are growing rapidly.

Conclusion

✤ These reports can be of immense helpful in formulating the action plans to deal with climate change. The detailed nature of 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 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.

Lead Poisoning

News Excerpt

High levels of lead were found in the blood of thousands of children living around the Kabwe mine in Zambia. The local population has been suffering lead poisoning for generations.

Pre-Connect

- Lead is a cumulative toxicant that affects multiple body systems and is particularly harmful to young children.
- Lead in the body is distributed to the brain, liver, kidney and bones. It is stored in the teeth and bones, where it accumulates over time. Human exposure is usually assessed through the measurement of lead in blood.
- Lead in bone is released into blood during pregnancy and becomes a source of exposure to the developing fetus.
- There is no level of exposure to lead that is known to be without harmful effects.

About Lead Poisoning

- ➢ Lead is a naturally occurring toxic metal found in the Earth's crust. Its widespread use has resulted in extensive environmental contamination, human exposure and significant public health problems in many parts of the world.
- ➢ Important sources of environmental contamination include mining, smelting, manufacturing and recycling activities, and, in some countries, the continued use of leaded paint and leaded aviation fuel.
- ➢ Lead poisoning happens when individual is affected by high levels of lead exposure. Lead poisoning is usually caused by eating or drinking (ingesting) lead, but touching or breathing in the toxic metal can also cause it.

Lead Poisoning in India

- ✓ As per UNICEF report, over 275 million children in India suffer mild to severe effects of lead poisoning.
- ✓ The Ministry of Environment, Forest and Climate Change (MOEFCC) has passed a notification as "Regulation on Lead contents in Household and Decorative Paints Rules, 2016" and has prohibited manufacture, trade, import as well as export of household and decorative paints containing lead or lead compounds in excess of 90 Parts Per Million (PPM).

Impacts

Lead poisoning can affect anyone, but babies and children under the age of 6 are most at risk because their bodies are still developing. Because their bodies are still growing, their brains and nervous systems are more sensitive to the harmful effects of lead.

Disaster Management Plan

News Excerpt

Union Ministry of Rural Development & Panchayati Raj released the Disaster Management Plan.

Pre-Connect

- India has been vulnerable, in varying degrees, to many natural as well as human-made disasters on account of its unique geo-climatic and socio-economic conditions.
- Different parts of the country are highly vulnerable to cyclones, floods, droughts, earthquakes, landslides, etc. Considering the important role that local communities can play in reducing vulnerabilities and early recovery, the Ministry of Panchayati Raj (MoPR) has prepared this

Disaster Management Plan (DMP) so that all Panchayati Raj Institutions along with communities can be prepared for any disaster.

Key Points

- Ministry of Panchayati Raj has developed the Disaster Management Plan (DMP) with an aim to develop disaster resilience at the grassroots level among the Panchayats and establish a framework to align the disaster management measures in rural areas to that of the National Disaster Management Authority.

- It is noteworthy that the Disaster Management Plan of Ministry of Panchayati Raj (DMP–MoPR), incorporates many innovations in addition to being in compliance with Disaster Management Act 2005, National Disaster Management Policy 2009, and guidelines issued by the National Disaster Management Authority.

- The Disaster Management Plan comprehensively covers areas such as institutional arrangement for Disaster Management, Hazard Risk, Vulnerability and Capacity Analysis, Coherence of Disaster Risk Management across Resilient Development and Climate Change Action, Disaster Specific Preventive and Mitigation Measures-Responsibility Framework, Mainstreaming of Community Based Disaster Management Plan of Villages and Panchayats and so on.

- The convergent and collective actions to envision, plan and implement community-based disaster management plans, would be a game changer for our country in managing disasters comprehensively.

- The DMP called for people's participation in preparedness for disaster management and mitigation activities at grassroots level.

- The DMP underlined that the involvement of the community is the key factor in any disaster preparedness strategy and active participation of the community is vital to carry out and sustain the activities relating to disaster management in rural areas.

- The DMP stressed on the need to formulate Panchayat-level and village-level Disaster Management Plans to mitigate the challenges in the event of disaster. DMP says disaster management should be kept in mind while making a master plan for the holistic development of Panchayats in the country. Under the Plan, every Indian village would have "Village Disaster Management Plan" and every Panchayat would have their Disaster Management Plan.
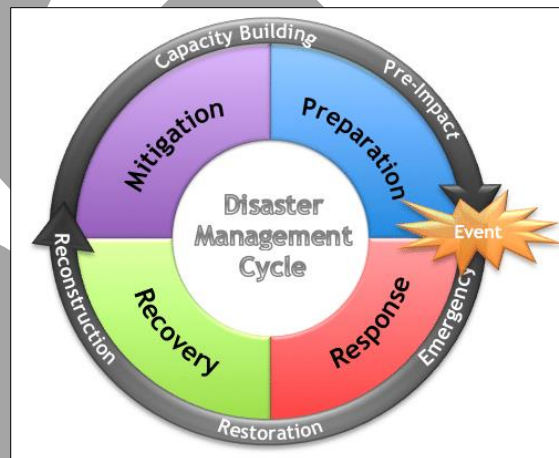
Conclusion

This plan woud contribute to the efforts of the Government in bringing convergence in disaster management and planning in rural areas. The DMP prepared by Villages and Panchayats in consonance with the Disaster Management Plan of Ministry of Panchayati Raj would be useful for addressing disasters in comprehensive manner. All

PEPPER IT WITH
National Disaster Management Act 2005, United Nations Office for Disaster Risk Reduction, SENDAI framework

stakeholders including PRIs, elected representatives and functionaries of Panchayats etc. would participate in planning, implementation, monitoring and evaluation of the plan. It is believed that this plan would be extremely useful for ensuring a participatory planning process for DMPs which is integrated with GPDP for addressing disasters across the country and initiate new era of community-based disaster management, convergence and collective action with programs and schemes of different Ministries and Departments.

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Page 73

Sujlam 2.0 Campaign

News Excerpt

Union Minister of Jal Shakti, launched the Sujalam 2.0 campaign for greywater management at a virtual event hosted by the Department of Drinking Water and Sanitation (DDWS), Ministry of Jal Shakti to mark the World Water Day, 2022.

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Pre-Connect

- In August 2021, the Ministry of Jal Shakti began 'SUJALAM', a '100 days campaign' as part of the 'Azadi Ka Amrit Mahotsav' celebrations to create more and more ODF Plus villages by undertaking waste water management at village level particularly through creation of one million Soak-pits and also other grey water management activities.

- The effort of campaign was directed towards achieving the ODF plus status for villages across the country in an accelerated manner in a short time.

- The campaign was not only built desired infrastructure i.e., soak pit for management of greywater in villages but will also aid in sustainable management of waterbodies.

- The disposal of waste water and clogging of waterbodies in the villages or on the outskirts of the villages remain one of the major problems. The Campaign was proven helpful in the management of the wastewater and in turn would help to revive the waterbodies.

- The key activities that were organised in the villages under the Sujlam campaign include:
  - Organised Community consultations, Khuli Baithaks and Gram Sabha meetings to analyze the ground realities.
  - Passed resolutions to maintain ODF sustainability and tried to achieve needed number of soak pits to manage the grey water.
  - Developed a 100 days' plan to undertake sustainability and soak pit construction related activities

  - Constructed requisite number of soak pits.
  - Retrofitted toilets where needed through IEC and community mobilization.
  - Ensured all newly emerging Households in the villages have access to toilets.
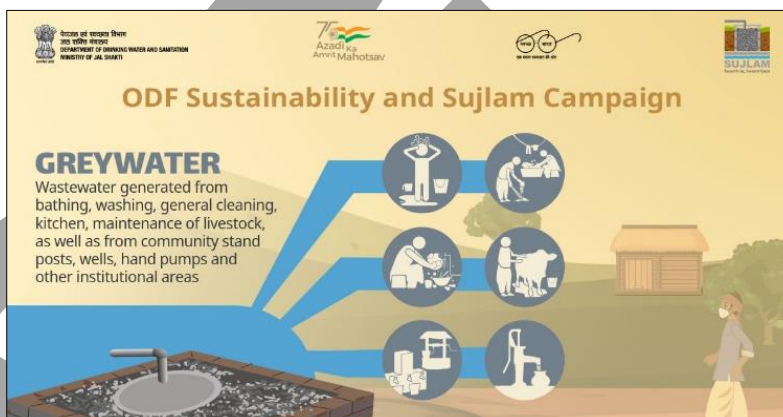
Highlights of the Sujlam 2.0 Campaign

➢ Under the Campaign government will mobilize Communities, Panchayats, Schools, Aanganwadis to undertake greywater management.

➢ Over six lakh villages will see intense activity on Solid and Liquid Waste Management.

➢ The theme for this year's campaign is "Groundwater: making the invisible visible".

➢ It is not only important but also timely. The humanity may not be able to see the groundwater but its impact is visible everywhere.

➢ It is launched with the objective to manage greywater through people's participation.

➢ Under the campaign, we plan to mobilize communities, our institutions like panchayats, schools, Aanganwadis to undertake greywater management.

➢ Greywater can be best managed where it is generated and turns into a major management and infrastructure challenge, if it is allowed to accumulate and stagnate.

➢ Panchayati Raj Institutions would work with people to ensure that greywater is managed at the most appropriate local level through construction of household and community soak pits.

➢ A Joint Advisory was also signed by nine central ministries, on how greywater management will be taken up at their level based on convergence model with all those who are directly associated in programme implementation.

H2Ooooh!

❖ On the occasion of World Water Day, National Mission for Clean Ganga, UNESCO and other partners released three animation films under its initiative "H2Ooooh! – Waterwise program for the Children of India".

❖ The films are based on the stories submitted by school students focusing on protection and conservation of Indian Rivers.

❖ The initiative was launched by UNESCO in July 2021, jointly with the National Mission for Clean Ganga (NMCG) and others.

❖ There is a need to conserve and preserve water for present and future generations, especially the young generation should learn to respect water.

PEPPER IT WITH

Jal Jeevan Mission,
Swachh Bharat Mission,
Jal Jeevan Samvad

Conclusion

Due to unrestricted entry of wastewater into the environment and the transportation of microbial contaminants to humans and organisms, environmental protection requires the use of appropriate natural and low-cost purification systems with high removal efficiency. Due to hazardous impacts of municipal, industrial and hospital wastewater on water, soil, air and agricultural products, wastewater treatment and the proper disposal of the sludge produced are indispensable from an environmental safety point of view. Economically, effective wastewater treatment has important effects on saving water, and preventing unnecessary water losses. In arid and semiarid areas, the water demand has increased and annual rainfall is low. Consequently, reuse of sewage is the most sustainable and long-term solution to the problem of water scarcity.

Himalayan Griffons Vulture

News Excerpt

Around a hundred of Himalayan vultures have died in Assam.

About Vulture

• Local residents wanted to kill stray dogs for which they sprayed pesticide on animal carcasses; but it led to the deaths of vultures as a result of bio-magnification.

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Page 75

- The Himalayan vulture mostly lives the Himalayas on the Tibetan plateau (including India, Nepal and Bhutan, central China and Mongolia).
- It is also found in the Central Asian mountains ranging from Kazakhstan and Afghanistan in the west to western China and Mongolia in the east.
- Himalayan vultures are diurnal and mostly solitary. They eat only dead animals, gathering around carcasses that they find when gliding and soaring over large areas.
- There are around 1,500 to 2,000 vultures in Assam, according to the Bombay Natural History Society (BNHS). The Himalayan griffon is listed as a migratory species among these.

Population

> **Population threats**: The major potential threat to the continued survival of the Himalayan vulture is considered to be death from ingesting diclofenac (NSAID) an anti-inflammatory non-steroidal drug widely used for livestock, primarily in South Asia, which causes visceral gout in birds that have eaten contaminated carcasses and results in renal failure.
> **Population number:** According to the IUCN Red List, currently this species is classified as Near Threatened (NT), but its numbers today appear to be stable.
> **Ecological niche:** Himalayan vultures are localized scavengers of nature, with the important role of removing and processing carrion. They are the most dominant bird scavenger on the Tibetan Plateau, and experience minimal competition for food from other scavengers.

SCIENCE AND TECHNOLOGY

Tracking of space debris by ISRO

News Excerpt

The Indian Space Research Organisation (ISRO) is building up its orbital debris tracking capability by deploying new radars and optical telescopes under the Network for Space Objects Tracking and Analysis (NETRA) project.

Pre-connect

- In 2019, Project NETRA' – an early warning system in space to detect debris and other hazards to Indian satellites was launched.
- The project estimated to cost ₹400 crore, when in place, will give India its own capability in space situational awareness (SSA) like the other space powers — which is used to 'predict' threats from debris to Indian satellites. It also goes so far as to serve as an unstated warning against missile or space attack for the country.
- NETRA's eventual goal is to capture the GEO, or geostationary orbit, scene at 36,000 km where communication satellites operate.
- In the plans are a high-precision, long range telescope in Leh and a radar in the North East. "Along with them, we will also use the Multi-Object Tracking Radar (MOTR) that we have put up at the Satish Dhawan Space Centre in Sriharikota, and the telescopes at Ponmudi and Mount Abu" to get a broad SSA picture.

Space junk or debris

- ➢ Space junk or debris consist of spent rocket stages, dead satellites, fragments of space objects and debris resulting from ASAT.
- ➢ Hurtling at an average speed of 27,000 kmph in LEO, these objects pose a very real threat as collisions involving even centimetre-sized fragments can be lethal to satellites.

Need for such project

- ✓ Data released by the ISRO last week point to an increasingly grim scenario. For protecting its space assets, the ISRO was forced to perform 19 collision avoidance manoeuvres (CAM) in 2021, of which 14 were in Low Earth Orbit (LEO) and five in the geostationary orbit, according to ISRO's Space Situational Assessment for the year. The number of CAMs jumped from just three in 2015 to 12 in 2020 and 19 in 2021.
- ✓ Last year, the space agency monitored 4,382 events in LEO and 3,148 events in the geostationary orbit where space objects closely approached Indian assets. Fragments from the Fengyun-1C satellite (part of the anti-satellite test (ASAT) by China in 2007) and the Cosmos 2251-Iridium satellite collision in 2009 accounted for the maximum number of these threats. The observations also covered 84 "close approaches of less than one km' 'between Starlink satellites and Indian assets.

About the new radars and optical telescopes

- ▪ A space debris tracking radar with a range of 1,500 km and an optical telescope will be inducted as part of

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Space junk in numbers

- 2,000 active satellites in Earth's orbit
- 3,000 dead satellites in Earth's orbit
- 34,000 pieces of space junk larger than 10 centimetres
- 128 million pieces of space junk larger than 1 millimetre
- One in 10,000: risk of collision that will require debris avoidance manoeuvres.

establishing an effective surveillance and tracking network under NETRA.

- The government has given the go-ahead for the deployment of the radar, which will be capable of detecting and tracking objects 10 cm and above in size. It will be indigenously designed and built.
- Radars and optical telescopes are vital ground-based facilities for keeping an eye on space objects, including orbital junk.
- IRSO plan to have two such radars deployed 1,000 km apart for spatial diversity.
- At present, ISRO have a Multi Object Tracking Radar at Sriharikota range, but it has a limited range. To protect our space assets, we need to augment our capabilities.

Analytica

Risk poses by Space debris

- Fortunately, at the moment, space junk doesn't pose a huge risk to our exploration efforts. The biggest danger it poses is to other satellites in orbit.
- These satellites have to move out of the way of all this incoming space junk to make sure they don't get hit and potentially damaged or destroyed.
- In total, across all satellites, hundreds of collision avoidance manoeuvres are performed every year, including by the International Space Station (ISS), where astronauts live.

Pluto, the Solar System's largest dwarf planet

News Excerpt

Pluto, the Solar System's largest dwarf planet, just became even more interesting with a report that icy lava flows have recently covered substantial tracts of its surface.

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Pre-connect

- Pluto is a dwarf planet in the Kuiper Belt, a donut-shaped region of icy bodies beyond the orbit of Neptune. There may be millions of these icy objects, collectively referred to as Kuiper Belt objects (KBOs) or trans-Neptunian objects (TNOs), in this distant region of our solar system.
- In 2015, NASA's New Horizons spacecraft made its historic flight through the Pluto system – providing the first close-up images of Pluto and its moons and collecting other data that has transformed our understanding of these mysterious worlds on the solar system's outer frontier.

More about the news

- In this context, "recently" means probably no more than a billion years ago. That's old, of course — and there is no suggestion that volcanoes are still active — but it's only a quarter the age of the Solar System and no one knows how Pluto brewed up the heat needed to power these eruptions.
- The news, coming nearly seven years after NASA's New Horizons probe made its spectacular flyby of Pluto is thanks to analysis of images and other data by a team led by Kelsi Singer of the Southwest Research Institute in Boulder, Colorado.
- Singer's team draw particular attention to a mountainous feature named Wright Mons, which rises 4-5km above its surroundings. It is about 150km across its base and has a central depression (a hole) 40-50km wide, with a floor at least as low as the surrounding terrain.
- The team claims that Wright Mons is a volcano, and cite the lack of impact craters as evidence that it is not likely to be older than 1-2 billion years.
- Many other areas of Pluto have been around long enough to accumulate large numbers of impact craters – no recent icy lava flows have covered them.

➤ As volcanoes go, Wright Mons is a big one. Its volume exceeds 20 thousand cubic kilometres. Although considerably less than the volume of Mars's biggest volcanoes, this is similar to the total volume of Hawaii's Mauna Loa, and much greater than the volume of its above sea-level portion. This is particularly impressive given Pluto's small size, with a diameter about a third that of Mars and a sixth that of Earth.
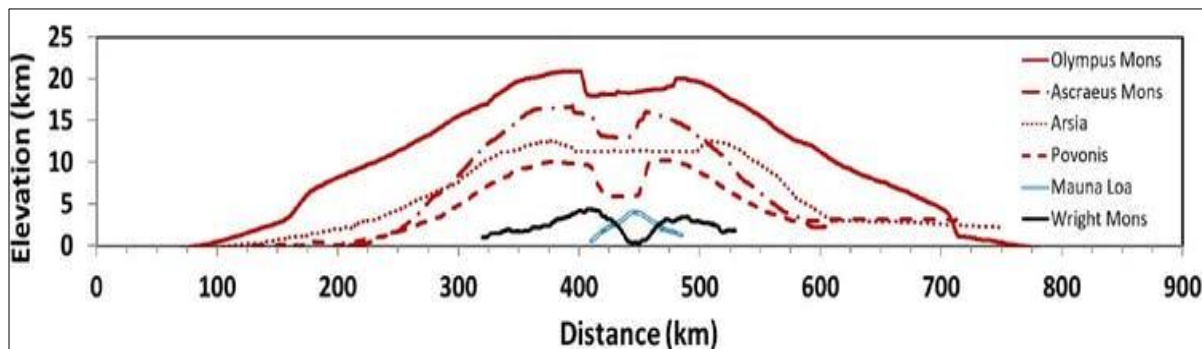
The Wright Mons

✓ In detail, the slopes of Wright Mons and much of its surroundings are seen to be crowded with hummocks up to 1km high and mostly 6-12km across.

✓ The team conclude that these hummocks are made primarily of water-ice, rather than nitrogen- or methane-ice that covers some other young regions on Pluto.

✓ They argue that this is consistent with the material strength necessary to form and preserve these domes, but they do recognise small patches of much weaker nitrogen-ice, mainly in the central depression.

✓ The hummocks were likely created by some sort of ice volcanism, known by the technical term "cryovolcanism" — erupting icy water rather than molten rock.

✓ Pluto's bulk density shows that it must have rock in its interior, but its outer regions are a mixture of ices (water, methane, nitrogen and probably ammonia and carbon monoxide, too, all of which are less than a third as dense as rock) in the same way that the crust of the Earth and other rocky planets is a mixture of several silicate minerals.

What melts the ice?

▪ Ice, of course, melts at much lower temperatures than rock. And when there is a mixture of two ices, melting can begin at a lower temperature than for either of the pure ices (the same principle applies in silicate rock made of different minerals).

▪ This makes melting even easier. Despite this, it is a surprise to find evidence of relatively young water-rich cryovolcanic eruptions on Pluto, because there is no known heat source to power them.

▪ There is only very limited scope for Pluto's interior to be heated by tidal forces — a gravitational effect between orbiting bodies, such as a moon and a planet — which warm the interiors of some of the moons of Jupiter and Saturn. And the amount of rock inside Pluto is not enough to produce much heat from radioactivity.

▪ Singer and her coworkers speculate that Pluto somehow held on to heat from its birth, which was unable to leak out until late in the body's history. This would be consistent with Pluto having a deep internal liquid water ocean, suggested based on other evidence.

Conclusion

That was a remarkable achievement, but it leaves us wanting to know more. What extra details are lurking in the poorly imaged half of Pluto? It will probably be decades before we find out, or learn much more about how these icy volcanoes formed.

Pacer Initiative

News Excerpt

Polar Science and Cryosphere Research (PACER) scheme has been approved for continuation during 2021-2026 through National Centre for Polar and Ocean Research (NCPOR), an autonomous institute under the Ministry of Earth Sciences.

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Pre-connect

Polar Science and Cryosphere Research (PACER) scheme comprising the Antarctic program, Indian Arctic program, Southern Ocean program and Cryosphere and Climate program.

Major achievements of the PACER scheme in the recent three years are as follows:

- Executed 39th& 40th Indian Scientific Expedition to Antarctica. 41st Indian Scientific Expedition to Antarctica is ongoing.Ten sediment cores were collected from lakes to reconstruct the past climate associated with the ice-sheet dynamics.
- Various glaciological and geophysical measurements were carried out in coastal Dronning Maud Land (cDML) to understand the modern snow accumulation patterns around the ice rises and the remote contribution to the glaciochemical processes.
- In addition, field-based studies were conducted in the lakes of Larsemann hills, East Antarctica for understanding of biogeochemical process in supraglacial environments.
- Clear-air atmospheric observatories containing automatic weather stations, a suite of sensors to measure aerosol and greenhouse gas concentrations has been established at Maitri and Bharati stations. Analysis of ice cores were carried out to understand dissolved organic carbon pathways and long-term climate variability over Antarctica.

> ### The National Centre for Polar and Ocean Research (NCPOR)
>
> ❖ The National Centre for Polar and Ocean Research (NCPOR) was established as an autonomous Research and Development Institution of the Ministry of Earth Sciences (formerly Department of Ocean Development), Government of India on the 25th May 1998.
>
> ❖ With a mission mandate that is quite challenging, the Centre is designated as the nodal organization for the co-ordination and implementation of the Indian Antarctic Programme, including the maintenance of India's permanent station in Antarctica.
>
> ❖ Spread across 147,660 sq. mts sprawling area, set atop a picturesque plateau, NCPOR is located in India's most seafaring state of Goa.
>
> ❖ At NCPOR the scientific mandate is multidisciplinary. Operating in a complex matrix, which has as its focal theme, research in those areas of the polar science currently not being undertaken by any other institution in India.
>
> ❖ In a rapid stride, not only have the basic infrastructure and computing facilities been established, but also true scientific recognition earned. The Universities of Goa and Mangalore have recognized NCPOR as a research centre for the pursuit of doctoral research.

- Twenty-three research projects related to glaciology, marine science, polar biology, and atmospheric science were successfully carried out during 2019-20 Arctic Expedition.
- IndARC mooring system along with Hydrophone system was successfully retrieved and deployed in Kongsfjorden, Svalbard.
- Coastal cruises were undertaken in the Arctic Svalbard archipelago to carry out biogeochemical and microbial research in the glacio-marine system. Modelling initiatives

- were started for various applications using Arctic Regional Ocean Model, Arctic regional atmospheric model with Chemistry module, and Global sea-ice simulations.
- Glaciological field campaigns were carried out in six benchmark glaciers in Chandra basin of Lahaul-Spiti region of Western Himalaya.
- Winter snow accumulation over the glaciers was recorded using snow pits and snow corer. Differential Global Positioning System (DGPS) and Ground Penetrating Radar (GPR) survey were conducted. Snow, ice, meltwater, water and cryoconite samples were collected from various glaciers and lakes.
- Two new Automatic Weather Station (AWS) systems were installed at Baralacha La, a high elevation site in the arid Spiti region to strengthen infrastructure across the Chandra basin.

Analytica
India in Arctic

➢ India is the most recent country to commence Arctic research as it established its Arctic research station as recently as 2008.

➢ India's Arctic programme aims to contribute to the development, consolidation and dissemination of the current understanding of climate change, its impacts and adaptations in the Norwegian Arctic, Svalbard. India's Arctic research includes atmospheric, biological, marine and earth sciences and glaciological studies.

➢ The atmospheric research encompasses investigations into aerosols and precursor gases with respect to their radiative, physical-chemical and optical properties and studies of the effects of space weather on the auroral ionosphere.

➢ Biological studies include sea-ice microbial communities; and in marine research, phytoplankton pigments, nutrients, pH, DO, sea-water salinity and other ecological parameters have been investigated. Earth sciences and glaciological observations include studies of snow-pack production of carbon monoxide and its diurnal variability.

India's Antarctic Programme

✓ India is one such country that is studying Antarctica through 'ice cores' retrieved by drilling holes into the vast ice-sheets of the coldest, driest and windiest continent on the planet.

✓ Antarctica holds scientific interest for Indian research projects due to a number of reasons – to study the origin and eco-history of continents, climate change, meteorology and molecular biodiversity of the region. Indian scientists have discovered 20 new microbes in the Antarctic and published over 300 research publications based on Antarctic studies.

✓ The Indian Antarctic Programme is a multi-disciplinary, multi-institutional programme under the control of the National Centre for Antarctic and Ocean Research, Ministry of Earth Sciences, Government of India. Under the programme, atmospheric, biological, earth, chemical, and medical sciences are studied by India, which has carried out 35 scientific expeditions to the Antarctic till now.

GSAT 7 satellite

News Excerpt

Recently, the Defence Acquisition Council (DAC) has given the Acceptance of Necessity (AoN) for capital acquisition proposals for defence services amounting to Rs 8,357 crore and also cleared the procurement of a GSAT 7B satellite, along with equipment like Night Sight (image intensifier).

Pre-connect

- The first military commutations satellite launched by India is for the Indian Navy. This satellite GSAT-7 (also called Rukmini) was launched during September 2013 and is currently providing excellent service.

- It is a multi-band military communications satellite, which can simultaneously network about 60-70 ships and 70-80 aircraft seamlessly. This satellite has nearly 2,000 nautical mile 'footprint' over the Indian Ocean Region.
- In 2015 a commutations satellite called GSAT-6 was launched by ISRO, which is also known to cater for strategic requirements of the country. GSAT-6 is known to provide quality and secure communication.

About GSAT 7 Series Satellites

➢ GSAT 7 satellites are advanced satellites developed by the Indian Space Research Organisation (ISRO) to meet the communication needs of the defence services. The GSAT 7 satellite was launched in August 2013 from an Ariane 5 ECA rocket from Kourou in French Guiana.

➢ It is a 2,650 kg satellite which has a footprint of nearly 2,000 nautical miles in the Indian Ocean region. This satellite is mainly used by the Indian Navy for its communication needs.

➢ The GSAT 7 provides a gamut of services for military communication needs, which includes low bit voice rate to high bit rate data facilities, including multi-band communications.

➢ Named Rukmini, the satellite carries payloads in UHF, C-band and Ku-band, and helps the Navy to have a secure, real time communication link between its land establishments, surface ships, submarines and aircraft.

➢ The satellite was injected into a geosynchronous transfer orbit (GTO) of 249 km perigee (nearest point to earth), 35,929 km apogee (farthest point to earth) and an inclination of 3.5 degree with respect to the equator.

Role of the GSAT 7B satellite

✓ The GSAT 7B will primarily fulfil the communication needs of the Army. Currently, the Army is using 30 per cent of the communication capabilities of the GSAT 7A satellite, which has been designed for the Indian Air Force (IAF).

✓ The GSAT 7B will also help the Army enhance its surveillance in border areas. While many features of this satellite are still a closely guarded secret, it is expected that the state of the art, multi-band, military-grade satellite shall be a shot in the arm for the communication and surveillance needs of the Army.

What other kinds of military satellites does India have?

- An Electromagnetic Intelligence Gathering Satellite (EMISAT), developed by ISRO, was launched in April 2020 through a Polar Satellite Launch Vehicle (PSLV-C45). It has an Electronic Intelligence (ELINT) package called Kautilya, which allows

What is the role of the GSAT 7A satellite, which is already operational?

❖ The GSAT 7A was launched in 2018 from the Satish Dhawan Space Centre in Sriharikota, and has gone a long way in boosting the connectivity between the ground radar stations, airbases and the airborne early warning and control aircraft (AEW&C) of the IAF.

❖ It also helps in satellite controlled operations of unmanned aerial vehicles (UAVs) which gives a great deal of reliability to the operations as compared to ground controlled operations.

❖ This satellite has 10 channels in Ku band with switchable frequency for mobile users, one fixed Gregorian or parabolic antenna, and four steerable antennae.

❖ A GSAT 7C satellite is on the cards for the IAF, and a proposal to this effect was cleared by the DAC in 2021. This satellite would facilitate real time communication with IAF's software defined radio communication sets. It will increase the capability of the IAF to communicate beyond the line of sight in a secure mode.

Page82

the interception of ground-based radar and also carries out electronic surveillance across India.

▪ The ELINT package provides the capability in direction-finding of radar and fixing their locations. It is placed in a 748-km orbit, and is said to be based on the Israeli satellite system. This satellite circles the globe pole-to-pole, and is helpful in gathering information from radars of countries that have borders with India.

▪ India also has a RISAT 2BR1 synthetic aperture radar imaging satellite, which was launched in December 2019 from Sriharikota. It has the capability to operate in different modes including very high resolution imaging modes of 1×0.5 metre resolution and 0.5×0.3 m resolution with a swath of 5-10 km.

Coronal Mass Ejections

News Excerpt

Indian researchers have developed a simple technique of separating the constant background of the Solar Colona and revealing the dynamic corona.

GS CONNECT											
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Pre-Connect

- Coronal mass ejections (CMEs) are dynamic structures in the Solar Corona and are capable of driving the Space Weather in near-Earth space. It becomes imperative to separate such structures and visually or automatically identify the CMEs through the radial distances in the images taken using coronagraphs.

- The density of the outermost layer of the atmosphere of the Sun – Corona – decreases with distance radially outwards. As the intensity of the corona observed in white

  ❖ CMEs travel outward from the Sun at speeds ranging from slower than 250 km per second (km/s) to as fast as near 3,000 km/s.
  ❖ The fastest Earth-directed CMEs can reach our planet in as little as 15-18 hours. Slower CMEs can take several days to arrive.
  ❖ They expand in size as they propagate away from the Sun and larger CMEs can reach a size comprising nearly a quarter of the space between Earth and the Sun by the time it reaches our planet.

light depends on the density of particles in the atmosphere, it decreases exponentially. If the contrast between the constant corona and transient CMEs is not high, detection of CMEs becomes a challenge.

About new technique

➢ The simple approach of subtracting the constant background can improve efficiency of identification of Coronal Mass Ejections (CME) -- events in which a large cloud of energetic and highly magnetized plasma erupts from the solar corona into space, causing radio and magnetic disturbances on the earth. It can also give a clear picture of the characteristics of CMEs and make their study easier.

➢ This method, which subtracts the constant background, brings out the transient corona, followed by dividing the result by an azimuthally uniform background to reduce the radial decrease in intensity. A combination of these two steps allows us to identify the structures such as CMEs throughout the field of view of the coronagraph images.

GM Crops

News Excerpt

Recently, the Central government has for the first time issued an order exempting certain types of genome edited crops from the stringent regulations applicable on genetically modified or GM crops thus giving a big boost to their further research and development.

GS CONNECT

Pre-connect

Genome editing or gene editing was discovered back in 2012, but Indian regulators took nearly a decade to comprehend its potential for developing crops resistant to biotic and abiotic stresses and with nutritional superiority.

What is Site-Direct Nuclease (SDN)?

- Site-Directed Nuclease (SDN) genome editing involves the use of different DNA-cutting enzymes (nucleases) that are directed to cut the DNA at a predetermined location by a range of different DNA binding systems. After the cut is made, the cell's own DNA repair mechanism recognizes the break and repairs the damage, using one of two pathways that are naturally present in cells

- An SDN is introducing a double strand break which is the starting point for each gene editing approach. When this break is repaired via the host cellular repair mechanisms without the use of an added repair template, the approach is defined as SDN-1.

- When a homologous repair template is added and the break is repaired via HR using this template, the approach is defined as SDN-2.

- When the added template possesses DNA with homologous ends in combination with nonhomologous sequences and the break is repaired via HR using this template, then recombinant DNA is added to the genome and the approach is defined as SDN-3.

What is genome editing?

- ➢ A decade ago, scientists in Germany and the US discovered a technique which allowed them to 'cut' DNA strands and edit genes. For agriculture scientists this process allowed them to bring about desired changes in the genome by using site directed nuclease (SDN) or sequence specific nuclease (SSN).

- ➢ Nuclease is an enzyme which cleaves through nucleic acid — the building block of genetic material.

How is gene editing different from GMO development?

- ✓ Genetically modified organisms (GMO) involves modification of the genetic material of the host by introduction of a foreign genetic material.

✓ In the case of agriculture, soil bacteria is the best mining source for such genes which are then inserted into the host genome using genetic engineering. For example, in case of cotton, introduction of genes cry1Ac and cry2Ab mined from the soil bacterium Bacillus Thuringiensis (BT) allow the native cotton plant to generate endotoxins to fight pink bollworm naturally. BT Cotton uses this advantage to help farmers naturally fight pink bollworm which is the most common pest for cotton farmers.

✓ The basic difference between genome editing and genetic engineering is that while the former does not involve the introduction of foreign genetic material, the latter does. In the case of agriculture, both the techniques aim to generate variants which are better yielding and more resistant to biotic and abiotic stress. Before the advent of genetic engineering, such variety improvement was done through selective breeding which involved carefully crossing plants with specific traits to produce the desired trait in the offspring. Genetic engineering has not only made this work more accurate but has also allowed scientists to have greater control on trait development.

The Environment (Protection) Act,1986

❖ The Environment (Protection) Act, 1986 authorizes the central government to protect and improve environmental quality, control and reduce pollution from all sources, and prohibit or restrict the setting and /or operation of any industrial facility on environmental grounds. The Environment (Protection) Act was enacted in 1986 with the objective of providing for the protection and improvement of the environment. It empowers the Central Government to establish authorities charged with the mandate of preventing environmental pollution in all its forms and to tackle specific environmental problems that are peculiar to different parts of the country. The Act was last amended in 1991.

❖ The Environment (Protection) Rules lay down procedures for setting standards of emission or discharge of environmental pollutants.

❖ The objective of Hazardous Waste (Management and Handling) Rules, 1989 is to control the generation, collection, treatment, import, storage, and handling of hazardous waste.

❖ The Manufacture, Storage, and Import of Hazardous Rules define the terms used in this context, and sets up an authority to inspect, once a year, the industrial activity connected with hazardous chemicals and isolated storage facilities.

❖ The Manufacture, Use, Import, Export, and Storage of hazardous Micro-organisms/ Genetically Engineered Organisms or Cells Rules,1989 were introduced with a view to protect the environment, nature, and health, in connection with the application of gene technology and micro-organisms.

What are the regulatory issues which have prevented wider adoption of this technique?

▪ Across the world, GM crop has been a topic of debate, with many environmentalists opposing it on the grounds of bio safety and incomplete data. In India, the introduction of GM crops is a laborious process which involves multiple levels of checks.

- The Genetic Engineering Appraisal Committee (GEAC), a high power committee under the Ministry of Environment, Forest and Climate Change, is the regulator for introduction of any GM material and in case of agriculture multiple field trials, data about biosafety and other information is necessary for getting the nod before commercial release of any GM crop. Till date the only crop which has crossed the regulatory red tape is Bt cotton.

- Scientists both in India and across the world have been quick to draw the line between GM crops and genome edited crops.

- The latter, they have pointed out, has no foreign genetic material in them which makes them indistinguishable from traditional hybrids. Globally, European Union countries have bracketed genome edited crops with GM crops. Countries like Argentina, Israel, US, Canada, etc have liberal regulations for genome edited crops.

SECURITY

IONS MARITIME EXERCISE 2022 - IMEX 22

News Excerpt

The Maritime Exercise 2022 (IMEX-22) of the Indian Ocean Naval Symposium (IONS) was held in March 2022 in **Marmugao Port in Goa and in the Arabian Sea.**

Key poinys

- The exercise's goal was to improve participating **warships and cooperation** in **humanitarian assistance and disaster relief (HADR)** missions among members' navies.
- The exercise witnessed participation of 15 out of the 25 member nations of IONS.
- The exercise is considered **a big step forward in regional fleets' ability to collaborate and respond jointly to natural disasters in the region**, and it opens the door for even deeper regional cooperation in the future.
- Warships, Maritime Reconnaissance aircraft (**Surveillance aircraft**), and helicopters from the navies of Bangladesh, France, India, and Iran took part in the exercise.
- The exercise was also attended by **22 observers from 15 IONS member**s.
- The participants **evaluated the IONS HADR criteria and devised response methods** for providing HADR from sea to shore as well as assisting ships and vessels in trouble at sea.

About IONS

- ➢ The Indian Ocean Naval Symposium, or IONS, is a platform for increasing maritime cooperation among the Indian Ocean Region's littoral nations.
- ➢ The forum contributes to the maintenance of peaceful relations between nations, and is thus essential to the development of an effective maritime security architecture in the Indian Ocean Region, as well as to our collective prosperity.
- ➢ The inaugural IONS Seminar was held by the **Indian Navy in 2008.**
- ➢ IONS includes **24 nations that permanently** hold territory that abuts or lies within the Indian Ocean, and **8 observer nations.**
- ➢ **South Asian Littorals:** Bangladesh, India, Maldives, Pakistan, Seychelles, Sri Lanka and United Kingdom (British Indian Ocean Territory)
- ➢ West Asian Littorals: Iran, Oman, Saudi Arabia and United Arab Emirates East African Littorals: France (Reunion), Kenya, Mauritius, Mozambique, South Africa, and Tanzania.
- ➢ South East Asian and Australian Littorals: Australia, Indonesia, Malaysia, Myanmar, Singapore, Thailand and Timor-Leste.
- ➢ Observers: China, Germany, Italy, Japan, Madagascar, the Netherlands, Russia and Spain are the observers.

Medium Range Surface to Air Missile (MRSAM)

News Expert

India successfully tested a medium-range surface-to-air missile (MRSAM) at the **Chandipur,** off the coast of Odisha.

Pre-connect

- This MRSAM version was developed jointly by **DRDO** and **Israel Aerospace Industries (IAI)** for use by the Indian Army.
- A multi-function radar, a **mobile launcher system**, and additional vehicles are included in this weapon system. It's the **major** milestones for an '**Aatmanirbhar Bharat**'.

Features

- The mobile launcher is capable of transporting, deploying, and firing eight canisterized missiles. In a vertical firing position, these can be fired in single mode or ripple mode.
- 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 meters in length and weighs around 275 kg.
- It is equipped with fins and canards to stabilize its flight and provide it with manoeuvrability.
- 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 up to a range of 70 km.

Articulated All-Terrain Vehicles

News-Excerpt

The Indian Army has shown interest in Articulated All-Terrain Vehicles for use in Ladakh and Kutch.

Features

- It's a tracked, **amphibious carrier** with two cabins for off-road mobility.
- The equipment's unique design reduces ground pressure on the soil, and a pull-push mobility mode of two cabins offers mobility in a variety of terrains, such as snow, desert, and slush.
- The cabin body has **ballistic protection** to protect troops travelling in it from small gun fire.
- In snow-covered terrain and marshy or sandy areas, these vehicles are **extremely useful** for moving soldiers or supplies.
- They can get to places where wheeled vehicles can't because of **deep snow, slush, or marshy terrain,** and they're great for patrols and quick deployment in operational scenarios.

Exercise Lamitiye 2022

News-Expert

The **9th edition** of the India-Seychelles Joint Training Exercise, LAMITIYE-2022, concludes in Seychelles.

Pre-connect

- Lamitiye, which in Creole **means** friendship, is a **biennial training** event being conducted in Seychelles **since 2001.**
- The **Indian Army** contingent comprising troops from the 2/3 **Gorkha Rifles group (PIRKANTHI Battalion)** represented in this exercise.
- It's significant in terms of security challenges faced by both the nations in the backdrop of the current global situation and growing security concerns in the **Indian Ocean Region**.

Significance

- The objective is to build and promote bilateral military relations in addition to exchanging skills, experiences, and good practices between **both armies.**
- Both army jointly train, plan and execute a series of well-developed **tactical drills** for neutralization of likely threats that may be encountered in a **Semi-Urban** environment.
- The military combat exercise also showcase new generation equipment and technology for conducting joint operations.

Page 88

➢ The joint military exercise will enhance the level of defence co-operation between the Indian Army and Seychelles Defence Forces (SDF) and will further manifest in enhancing the **bilateral** relations between the two nations.

Exercise Dustlik

News-Expert

The 3rd edition of Indo-Uzbekistan joint field training exercise "EX DUSTLIK" concluded at **Yangiarik, Uzbekistan.**

Pre-connect

- The 2nd edition of the India-Uzbekistan joint military exercise "DUSTLIK" commenced in 2021 at **Ranikhet**.
- **The Grenadiers battalion that** represented India at this exercise is one of the Indian Army's most highly decorated battalions.
- This battalion has the unique distinction of participating in almost **all the pre and post-independence operations.**
- This battalion has been awarded eight Pre-Independence Battle Honours. In post-independence, it has earned the **theatre honour "RAJASTHAN"** in the 1965 war and the **battle honour "JARPAL"** in the 1971 war.

Significance

➢ The joint exercise focused on **Counter Terrorism operations** in semi-urban terrain under a United Nations Mandate.

➢ With growing Chinese presence in the region, relations with Uzbekistan is important for India's security, connectivity and counter-terrorism efforts.

➢ Uzbekistan has a strong military in the region and is a **key player in the region** will be of great importance for India from a security point of view.

➢ Being a part of Commonwealth of Independent States (**CIS**) huge reserves of gas, uranium and gold, its relations with its neighbouring countries namely Tajikistan and Kyrgyzstan are rough due to water issues.

➢ The **Commonwealth of Independent States (CIS),** is a regional intergovernmental organization in **Eastern Europe and Asia.**

➢ Founded in 1991 after the dissolution of the Soviet Union.

➢ Member states 12 — Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.

➢ Members adopted the **Alma-Ata Declaration**, which confirmed the promise of the former republics to cooperate in various fields of external and internal policies.

INS Shivaji

News Expert

The INS Shivaji was recently named a **Centre of Excellence (CoE)** in the field of Marine Engineering by the Ministry of Skill Development and Entrepreneurship (MSDE).

Pre-connect

- The Indian Naval Station INS Shivaji is located in Lonavala, Maharashtra.
- It houses the **Naval College of Engineering,** which educates and trains **Indian Navy** and **Coast Guard** officials. The organisation was commissioned as HMIS Shivaji on February 15, 1945.

- INS Shivaji's Centre of Excellence (Marine Engineering) was established in 2014 with a broad mandate that included the induction of **niche technologies** for naval applications, quality research in collaboration with **R&D and academic institutes** of high reputation.
- The larger goal here was to improve the skills of the personnel across the Indian Navy, Friendly Foreign Navies, and the entire ecosystem.
- The recognition of the INS Shivaji as a Centre of Excellence by the MSDE is the **first** of its type for any military organisation, and it underlines the ongoing commitment to skill and technological development.
- The Ministry of Skill Development and Entrepreneurship (MSDE) has **designated** a Centre of Excellence (CoE).

Art and Culture

Buddha statues in Bamiyan

News Excerpt

The Taliban regime in Afghanistan has said it would protect the ancient Buddha statues. Bamiyan Buddhas have been brought back to life in the form of 3D projections in an event called "A Night with Buddha".

Pre-Connect

- According to UNESCO, the rise of Bamiyan was closely connected with spread of Buddhism across Central Asia, and that in turn was linked to the political and economic currents of that time.
- **The Kushans** made themselves the unavoidable middlemen between China, India and Rome, and **prospered on the revenues of the Silk Road**.
- The Kushans fostered a **syncretic culture**, in which tribal traditions from Central Asia fused with artistic conventions derived from the Hellenized Mediterranean and with the ideologies coming from Buddhist India.
- The Bamiyan Buddha statues, great examples of a confluence of Gupta, Sassanian and Hellenistic artistic styles.
- The locals call them "**salsal**" and "**shamam**a." Salsal means "**light shines through the universe,**" while Shamama means "**Queen Mother.**"

About Bamiyan Buddha

- ➤ The Buddha statues, hewn from sandstone cliffs and were once the tallest standing Buddha in the world.
- ➤ The Bamiyan valley, northwest of Kabul which located in between Hindu Kush from the Koh-i-Baba Mountain.
- ➤ The Buddha statues and the cave art in **Bamiyan Valley are an outstanding representation of the Gandharan School in Buddhist art in the Central Asian region.**
- ➤ The Bamiyan Valley is the most monumental expression of the western Buddhism. It was an important centre of pilgrimage over many centuries.
- ➤ Due to their symbolic values, the monuments have suffered at different times of their existence, including the deliberate destruction in 2001, which shook the whole world.
- ➤ **The Cultural Landscape and Archaeological Remains of the Bamiyan Valley were inscribed on the World Heritage List** in 2003 and at the same time placed on the List of World Heritage in Danger.

Surajkund International Crafts Mela

News Expert

After a two-year gap, the 35th Surajkund International Crafts Mela was inaugurated by the Governor of Haryana.

Pre-Connect

- Surajkund Crafts Mela was hosted for the first time in 1987.
- The Surajkund Mela is unique as it **showcases the richness and diversity** of the handicrafts, handlooms and cultural fabric of India, & is the largest crafts fair in the world.
- 'Theme State' 2022- **Jammu & Kashmir**, showcasing its rich heritage and distinct culture via handicrafts and art forms.
- **Uzbekistan** was the partner Nation for 35th Surajkund International Crafts Mela 2022.

Olchiki Script

News Excerpt

For the first time, India's Constitution has been translated in Ol Chiki script.

About the language

- The Ol Chiki script is the official writing system for Santali, an Austroasiatic language. It is also known **as "Ol Chemet," "Olchiki," and "OI"** which was developed by **Dr Raghunath Murmu** in 1925**.** The script is **written from left to right**.

- Santhals were the great fighters during the British regime in India. They **wagged war against the permanent settlement of Lord Cornwallis in 1855.**

- The Constitution of India has special provisions for the development of the Scheduled Castes and the Scheduled Tribes, **Article 350 empower Right to conserve distinct Language, Script or Culture and Instruction in Mother Tongue under Article 350.**

- Article 15(4) gives Special provisions for advancement of other backward classes.

- Indian government was obligated to undertake the development of the Santali language and to allow students appearing for school-level examinations and entrance examinations.

- In 2003, the 92nd Constitutional Amendment Act added Santali to Schedule VIII to the Constitution of India along with the Bodo, Dogri and Maithili languages.

- **Santhal is the third-largest tribe while Bhil is the most numerous tribe in India, according to the 2011 Census of India.**

- Santhali tribes are mostly found in the states of West Bengal, Bihar, Orissa, Jharkhand and Assam.

Navroj

News Expert

On the occasion of the Parsi New Year, Navroz, the Prime Minister, recently conveyed wishes.

About

- Nowruz, or Navroz, the Iranian New Year that marks the beginning of the spring season.

- It is celebrated with great fervour and enthusiasm among various **Parsi** communities across the world, including India.

- In India, Navroz is known as Jamshed-i-Navroz, after the Persian monarch Jamshed, who is known for creating the **Shahenshahi calendar**.

- **Ghiyas ud din Balban** introduced the famous Persian festival of Nowruz in India.

- In 2009, Navroj was added on the **UNESCO** list of India's Intangible Cultural Heritage of Humanity.

- In India, prominent numbers of the Parsi community who follow Zoroastrianism still remain in Mumbai and Gujarat, who celebrate Navroz with ardour.

Miscellaneous

Boltzmann Medal

- Physicalist Professor **Deepak Dhar** has become the **first** Indian to be awarded the Boltzmann Medal. He shared the medal with **John J. Hoefield** of Princeton University.
- Prof Dhar is presently the emeritus faculty at the Indian Institute of Science Education and Research (IISER), Pune.
- Dhar has been given the award "for his seminal contributions to several areas of statistical physics, including **exact solutions** of self-organised criticality models, **inter-facial growth**, and universal long-time relaxation in **disordered magnetic systems**, exact solutions in **percolation** and cluster counting problems and definition of the spectral dimension of fractals."
- The Commission on Statistical Physics of the International Union of Pure and Applied Physics (IUPAP) presents this medal once **every three years** for contributions in the field of statistical physics held in Tokyo.
- The award consists of the **gilded** Boltzmann medal with the **inscription** of **Austrian** physicist and philosopher **Ludwig Boltzmann.**

Earth Hour

- Earth Hour empowered millions of people to take a moment of **solidarity**, a moment of calm to reflect on their commitment to protecting the planet.
- People across the world will join hands to **switch off** their lights for one hour from 8:30 to 9:30 p.m. in their local time zone in order to observe the 15th Earth Hour.
- Earth Hour is the world's **largest grassroots** environmental movement.
- Started **in 2007 by World Wildlife Fund (WWF)** and partners as a symbolic lights-out event in Sydney to raise awareness of climate change.
- Earth Hour is now one of the world's largest grassroots movements for the environment. Held every year on the **last** Saturday of March.
- Earth Hour engages supporters in more than **190 countries** and territories, all taking action to ensure a brighter future for people and the planet.
- India commemorated its **75th year of independence** and recognized the efforts of **"75 Heroes of Conservation"**, sharing the inspirational stories of how these individuals have helped "Shape Our Future".
- Earth Hour has also gone far beyond the symbolic action of switching off - it has become a catalyst for positive environmental impact, driving **major** legislative changes by harnessing the power of the people and collective action.

Malabar Rebellion

- August 2021, marks the **centenary** of the Malabar rebellion, which is also known as the Moplah rebellion.
- It had been an uprising of **Muslim tenants against British rulers and local Hindu landlords.**
- It has often been perceived as one of the **first nationalist uprisings in southern India**.
- It has even been **described as a peasant revolt.**
- The incidents of the uprising took place in regions which are currently under the Malappuram district in north Kerala.
- In fact, in 1971, the then Kerala government had included the participants of the rebellion in the category of freedom fighters.
- Lord **Reading** (1921-1926) Governor General of that time.

National Youth Parliament Festival 2022

- Lok Sabha Speaker, Om Birla addressed the valedictory function of the **3rd edition** of National Youth Parliament Festival -2022 today in the Central Hall of Parliament.

- It's **jointly** held by the **Lok Sabha Secretariat** and the **Ministry of Youth Affairs and Sports.**
- The NYPF's mission is to hear the voices of young people aged 18 to 25, who will enter a variety of careers in the coming years, including public service.
- During the valedictory occasion, the top three national youth winners will get the opportunity to address the Lok Sabha Speaker.
- It is an innovative programme to **equip** young people with an understanding of parliamentary procedures and democratic processes.
- NYPF is based on the **idea given** by the Prime Minister in his Mann Ki Baat Address in 2017.
- In the **1st** edition of NYPF 2019, the theme was "Be the Voice of New India and Find Solutions and Contribute to Policy".

World Sparrow Day 2022
- World Sparrow Day is observed every year on March 20th to raise about awareness of the bird.
- World Sparrow Day is an initiative of the Nature Forever Society, a non-governmental organization (NGO) led by internationally renowned conservationist **Mohammed Dilawar.**
- The **theme** for this year is "Monitor the Sparrows & other common birds".
- World Sparrow Day secretariat is urging people to monitor sparrows and other common birds this year using the **Common Bird Monitoring of India**, a citizen science initiative of **Nature Forever Society**.
- The humble house sparrow is considered important because ecologists see it as a **sentinel**.
- Sparrow is a very social bird and is gregarious at all seasons when feeding, often forming flocks with other types of bird.
- House sparrows are becoming **extinct** everywhere, including in India. Experts say there's a need to spread awareness on their conservation.
- **Wipro-Nature Forever Society Sparrow Awards** were instituted in 2011 with an aim to identify citizens who are an inspiration for the citizens to get involved in conservation.
- The House Sparrow (Passer domesticus) is perhaps the most widespread, commonly seen wild bird in the world.
- The house sparrow is in danger of becoming extinct. Radiation from cell phone and television towers Pesticide use has **increased**, building patterns have **changed**, and gardens have **vanished** from residences, all of which have contributed to the rapid **drop** in the number of sparrows in recent years.

Zoji-La Pass
- Border Roads Organisation (BRO) established the unprecedented breakthrough on the gateway connect between Union Territories of Ladakh and Jammu & Kashmir
- It is set to be the world's longest bi-directional tunnel.
- It is located on the Srinagar-Leh highway and reduces the distance between Baltal (Sonamarg) and Minamarg in Ladakh's Kargil region from **40 to 13 kilometres on NH1-1.**
- Travel time is reduced from three hours to 15 minutes.
- Also known as the "Mountain Pass of Blizzards".
- The route is **strategically** important as Ladakh is a frontier region, with Pakistan-occupied Kashmir across the Line of Control towards the **northwest** and China on the other side of the Line of Actual Control to the **east.**
- '**Project** Beacon' and '**Project** Vijayak' associated with it.
- Earlier, the Border Roads Organization functioned under the Ministry of Road Transport and Highways. Now it is completely controlled by the **Ministry of Defence.**

Concept Clearing Assignment

1. Discuss the utility and significance of India's research initiatives in the Arctic and Antarctica with special reference to the Pacer scheme.

2. What are the applications of genome editing in the field of agriculture? What factors have inhibited wider adoption of GM crops in India?

3. How does the constitution of India ensures protection of the rights of minorities?

4. Critically evaluate the effectiveness of Anti-defection law in meeting its objectives.

5. Examine the merits of inclusion of the indigenous language in the 8th schedule of Indian constitution.

6. Is the National Commission for Protection of Child Rights (NCPCR) able to strategize and tackle the problems that children face effectively? Give reasons in support of your answer.

7. A hallmark of any civilised society lay in the maturity of its Criminal Justice System. In light of this statement explain the need and scope of the recently undertaken comprehensive review of the Indian criminal justice system.

8. The outcomes of the Columbia Summit will undoubtedly enhance the effectiveness of BIMSTEC as an instrument of regional cooperation and integration. Comment.

9. Highlight the role played by exports in Indian economy. What steps are needed to boost the export sector?

10. India needs a labour-intensive model of economic growth to address the problem of unemployment. Do you agree with this assessment?

11. Semiconductors are the foundation of modern electronics driving the next phase of digital transformation under Industry 4.0. What measures have been taken to boost the semiconductor industry in India?

12. What are the salient features of the recently released Disaster Management Plan? How will it help in augmenting the disaster preparedness?

13. What are the primary distinguishing features of the Gandhara school of Buddhist art? Give examples to support your answer.

14. What are the primary factors for identifying India as one of the vulnerable climate hotspots?

15. What do you understand by the term 'De-Dollarization'? What are the possible geopolitical and geoeconomical implications of de-dollarization?

PT Oriented Questions

1. With reference to the Bamiyan Buddha, which of the following statements is/are correct?
   1. The Buddha statues, hewn from sandstone cliffs and were once the tallest standing Buddha in the world.
   2. The cave art in Bamiyan Valley are an outstanding representation of the Mathura School in Buddhist art.

   Select the correct answer using the codes given below:
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

2. Which of the following is/are the objectives of Surajkund International Crafts Mela?
   1. To display crafts and loom techniques by organizing demonstration sections in the Mela grounds.
   2. To set up an environment in which rural crafts traditions could be displayed.
   3. To undertake the promotion of export of handlooms and handicrafts.

   Select the correct answer using the codes given below:
   (a) 1 and 2 only
   (b) 3 only
   (c) 2 and 3 only
   (d) 1, 2 and 3

3. With reference to the Space Junk, consider the following statements:
   1. Space junk or debris consist of spent rocket stages, dead satellites, fragments of space objects and debris resulting from ASAT.
   2. These objects pose a very real threat as collisions involving even centimeter-sized fragments can be lethal to satellites.
   3. In 2019, Project NETRA' – an early warning system in space to detect debris and other hazards to Indian satellites was launched.

   Which of the statements given above is/are not correct?
   (a) 1 and 2 only
   (b) 2 and 3 only
   (c) 1 and 3 only
   (d) None of the above

4. Consider the following statements regarding the Pluto:
   1. It is a donut-shaped region of icy bodies before the orbit of Neptune.
   2. It is situated in the Haumea Belt.
   3. It is also known as the Solar System's largest dwarf planet.

   Which of the statements given above is/are correct?
   (a) 1 and 2 only
   (b) 3 only
   (c) 2 and 3 only
   (d) 1, 2 and 3

5. Which one of the following best describes the term "Wright Mons" sometimes seen in news?
   (a) A Spyware
   (b) An inter-continental ballistic missile system recently tested by Russia
   (c) A mountainous feature on a distant planet
   (d) None of the Above

6. Which of the following is are the major achievements of the Pacer Initiative?
   1. Executed 39th & 40th Indian Scientific Expedition to Antarctica.
   2. Various glaciological and geophysical measurements were carried out in coastal Dronning Maud Land (cDML).

3. Sediment cores were collected from the mountains to reconstruct the past climate associated with the ice-sheet dynamics.

Select the correct answer using the codes given below:

(a) 1 and 2 only
(b) 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

7. With reference to the National Centre for Polar and Ocean Research (NCPOR), which of the following statements is/are not correct?

1. It was established as an autonomous Research and Development Institution of the Ministry of Earth Sciences.
2. It was formerly known as the Department of Ocean Development.
3. It is designated as the nodal organization for the co-ordination and implementation of the Indian International Space Station Programme.

Select the correct answer using the codes given below:

(a) 1 only
(b) 2 and 3 only
(c) 3 only
(d) 1, 2 and 3

8. Which of the following is/are the functions of the Defence Acquisitions Council (DAC)?

1. Give 'in principle' approval to Capital acquisitions in the Long-Term Perspective Plan (LTPP).
2. Give 'in principle' acceptance of necessity to each Capital acquisition project.
3. Monitor the progress of major projects on feedback from the Defence Procurement Board.

Select the correct answer using the codes given below:

(a) 1 and 2 only
(b) 3 only

(c) 2 and 3 only
(d) 1, 2 and 3

9. With reference to the Malabar Rebellion, consider the following statements:

1. August 2021, marks the centenary of the Malabar rebellion.
2. It had been an uprising of Hindu tenants against British rulers and local Muslim landlords.
3. It is also known as the Moplah rebellion.

Which of the statements given above is/are correct?

(a) 1 and 3 only
(b) 2 only
(c) 2 and 3 only
(d) 1, 2 and 3

10. Consider the following statements regarding the IONS (Indian Ocean Naval Symposium) MARITIME EXERCISE 2022 - IMEX 22:

1. Its goal was to improve participating warships and cooperation in humanitarian assistance and disaster relief (HADR) missions among members' navies.
2. IONS is a platform for increasing maritime cooperation among the Indian Ocean Region's littoral nations.
3. The exercise witnessed participation of the 25 member nations of IONS.

Which of the statements given above is/are not correct?

(a) 1 and 2 only
(b) 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

11. Which of the following is/are the objectives of Pradhan Mantri Fasal Bhima Yojna?

1. To provide insurance coverage and financial support to the farmers in

Page 97

the event of failure of any of the notified and non-notified crop.

2. To stabilise the income of farmers to ensure their continuance in farming.

3. To ensure flow of credit to the agriculture sector.

Select the correct answer using the codes given below:

(a) 1 and 2 only
(b) 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

12. With reference to the Sealed cover Jurisprudence, which of the following statements is/are not correct?

1. It is a practice used by the judiciary, of accepting information from private agencies in sealed envelopes that can only be accessed by judges.

2. Supreme Court derives its power to use it from Rule 7 of order XIII of the Supreme Court Rules.

3. Section 123 of the Indian Evidence Act of 1872 provides law to accept it.

Select the correct answer using the codes given below:

(a) 1 only
(b) 1 and 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

13. With reference to the legal position of gambling in India, which of the following statements is/are correct?

1. Horse racing and lotteries are legal in India.

2. Horse racing involves some prior skills so it isn't all about gambling.

3. Several Indian states have legalized lotteries.

Select the correct answer using the codes given below:

(a) 1 and 2 only
(b) 3 only
(c) 2 and 3 only

(d) 1, 2 and 3

14. Consider the following statements:

1. The expression "minorities" is defined in the Constitution.

2. Article 29 of the Constitution deals with the Protection of interests of minorities.

3. Article 30 deals with the right of minorities to establish and administer educational institutions.

Which of the statements given above is/are correct?

(a) 1 and 2 only
(b) 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

15. With reference to the Anti-Defection Law, consider the following statements:

1. The Anti-Defection Law is contained in the 11th Schedule of the Constitution.

2. It was enacted by the Parliament in the year 1985.

3. The law punishes individual MPs and MLAs from changing party after being elected.

Which of the statements given above is/are not correct?

(a) 1 only
(b) 1 and 2 only
(c) 2 and 3 only
(d) 1, 2 and 3

16. Consider the following statements:

1. Union Territories of Puducherry, Ladakh and Chandigarh have representation in the Rajya Sabha.

2. Puducherry has one, Ladakh has four and Chandigarh has three representatives in the Rajya Sabha.

3. Elected members of the Legislative Assembly form the electoral college for electing the MPs for Rajya Sabha.

Which of the statements given above is/are correct?

(a) 1 and 2 only
(b) 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

17. Consider the following statements regarding the Deep Ocean Mission:
1. It will help strengthen the observational network in the Indian Ocean.
2. It aims to improve the understanding of oceans, their biodiversity, climate change along with the development and demonstration of technology.
3. It will facilitate a dedicated observational system to capture long term changes in ocean climatic conditions.
Which of the statements given above is/are correct?
(a) 1 and 2 only
(b) 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

18. With reference to the Eighth Schedule of the Constitution, which of the following statements is/are correct?
1. Part XVII of the Constitution deals with the languages in Articles 343 to 351.
2. It lists all the languages exist in India.
3. The eighth schedule recognises a total of 22 languages as the official languages.
Select the correct answer using the codes given below:
(a) 1 and 3 only
(b) 2 only
(c) 2 and 3 only
(d) 1, 2 and 3

19. Which of the following statements is/are correct?
1. The maternal mortality ratio (MMR) is defined as the number of maternal deaths during a given time period per 100,000 live births during the same time period.
2. It depicts the risk of maternal death relative to the number of live births and essentially captures the risk of death in a single pregnancy or a single live birth.
Select the correct answer using the codes given below:
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

20. Consider the following statements regarding the India-Maldives Bilateral Ties:
1. India was among the first to recognise Maldives after its independence in 1965 and to establish diplomatic relations with the country.
2. Maldives opened a full-fledged High Commission in New Delhi in November 2004, at that time one of its only four diplomatic missions worldwide.
3. India established its mission at the level of resident High Commissioner in Maldives in the year 1972.
Which of the statements given above is/are correct?
(a) 1 and 2 only
(b) 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

21. With reference to the Bucharest Nine Countries, consider the following statements:
1. All nine countries were once closely associated with the European Union, but later chose the path of unilateralism.
2. It also parts with the three Baltic republics of Estonia, Latvia, and Lithuania.
3. It comprises Romania, Poland and Hungary.

Which of the statements given above is/are correct?

(a) 1 and 2 only
(b) 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

22. Consider the following statements regarding IPCC's Sixth Assessment Report-II:

1. The first part of the IPCC's Sixth Assessment report was released in August, 2021.
2. IPCC's Sixth Assessment Report-II is centred around the scientific basis of climate change.

Which of the statements given above is/are not correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

23. Consider the following statements regarding Earth Hour:

1. Earth Hour is an annual tradition started by the World Wildlife Fund in 2007 in New Delhi.
2. Its objective is to raise awareness about climate change.
3. Participants in more than 190 countries turn off their lights for one hour.

Which of the statements given above is/are correct?

(a) 1 and 2 only
(b) 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

24. With reference to the De-Dollarization, which of the following statements is/are correct?

1. It describes a move away from this world order to one where nations sell their US Treasuries to hold reserves in other currencies or gold.
2. Nations seek to use their own currencies for transactions between their most important trade partners.
3. US dollar is likely to play a central role for sometime to come structural trends are starting to decrease its importance.

Select the correct answer using the codes given below:

(a) 1 and 2 only
(b) 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

25. With reference to the Green Bonds, which of the following statements is/are correct?

1. These are floating-income financial instruments which are used to fund projects that have positive environmental and or climate benefits.
2. These are not like any other regular bonds.
3. Sovereign green bond will be a part of the government's borrowing programme.

Select the correct answer using the codes given below:

(a) 1 and 2 only
(b) 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

26. Which of the following leaf modifications occur(s) in the desert areas to inhibit water loss? (CSE2018)

1. Hard and waxy leaves
2. Tiny leaves
3. Thorns instead of leaves

Select the correct answer using the code given below:

(a) 2 and 3 only
(b) 2 only
(c) 3 only
(d) 1, 2 and 3

27. Consider the following statements: (CSE-2018)

1. The Parliament of India can place a particular law in the Ninth Schedule of the Constitution of India
2. The validity of a law placed in the Ninth Schedule cannot be examined by any court and no judgement can be made on it

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

28. He wrote biographies of Mazzini, Garibaldi, Shivaji and Shrikrishna; stayed in America for some time; and was also elected to the Central Assembly. He was (CSE-2018)
(a) Aurobindo Ghosh
(b) Bipin Chandra Pal
(c) Lala Lajpat Rai
(d) Motilal Nehru

29. Which of the following has/have shrunk immensely/dried up the recent past due to human activities? (CSE-2018)
1. Aral Sea
2. Black Sea
3. Lake Baikal

Select the correct answer using the code given below:
(a) 1 only
(b) 2 and 3
(c) 2 only
(d) 1 and 3

30. "Rule of Law Index" is released by which of the following? (CSE-2018)
(a) Amnesty International
(b) International Court of Justice
(c) The Office of UN Commissioner for Human Rights
(d) World Justice Report

Answers

No.	Ans	No.	Ans	No.	Ans
1.	(a)	11.	(c)	21.	(c)
2.	(d)	12.	(a)	22.	(b)
3.	(d)	13.	(d)	23.	(c)
4.	(b)	14.	(c)	24.	(d)
5.	(c)	15.	(a)	25.	(b)
6.	(a)	16.	(b)	26.	(d)
7.	(b)	17.	(d)	27.	(a)
8.	(d)	18.	(a)	28.	(c)
9.	(a)	19.	(c)	29.	(a)
10.	(b)	20.	(a)	30.	(d)