

GS 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.

When it comes to evaluation, we are altogether at a different level. We are also reaching every nook and corner with this expertise for the aspirants of CSE. Now you can write a Mains Answer and get it evaluated from our Expert Team and can get Feedback. [Drop a mail at evaluation@ksgindia.com](mailto:Drop_a_mail_at_evaluation@ksgindia.com) for registering yourself in our race to perfection. Don't wait, it's your golden chance to crack this exam and fulfill your passionate dream.

Team KSG

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GS - I	Culture-Art Forms, Literature and Architecture from ancient to modern times.	Indian history significant events, personalities, issues and the Freedom Struggle	Post independence issues, National boundary and disputes	Indian society features, issues, globalization and diversity	Women - issues and developments	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, biotechnology and human welfare	Innovations, intellectual property, Awards, POI and other important aspects of S&T	Environment ; government initiatives, various judgment, pollution, degradation and conservation efforts	Disaster & Disaster Management	Challenges to internal security, Various Security forces and agencies and their mandate, Cybersecurity, moneylaundering and its prevention.
GS - IV	Ethical issues related to family society, education, Corruption etc.	Ethics in public and private administration	Issues	Related laws and rules	Governance/ e - Governance	Ethics in international issues	Personalities and their teachings	Other important topics			
Misc.											

Contents

POLITY

EWS Judgement	4
MGNREGA and Pandemic	5
Convicted Leaders Disqualification	7
Prasar Bharti Sole Broadcaster	8
First Amendment	10
Ninth Schedule	10
RTI exemption for Bank	12
Anti-Doping Act (ADA)	13
Age of Consent	14
Governor's Role	15

SOCIAL ISSUES

Global TB Report	18
Wage Inequality	19
Global Hunger Index	20
One Health	22
State of Rural Women	23
Two Finger Test	25
Mother Tongue Survey	27
World Population Day	28
Smart Phones and Indian Children	29

ECONOMY

Old Pension Scheme vs New Pension Scheme	31
Financial Risk Associated with Big Techs	32
CCI Fine on Google	33
Internationalisation of Rupee	35
Central Bank Digital Currency	36
Increase in Minimum Support Price (MSP)	38
Failure in Inflation Targeting	40
Sovereign Green Bond	42
Digital Bank Units	43

INTERNATIONAL RELATIONS

G-20 Summit	45
India-ASEAN Relations	46
India-Australia Ties	49
President Xi Jinping	50
Iran Protest	51

ENVIRONMENT

UNFCCC's Conference of Parties-27	53
GM Crops	56
Rejuvenation of Indian rivers	58
UNICEF Report	59
Emission gap report 2022	60

Carbon market	61
Invasive species in Mudumalai Tiger Reserve.....	62
Rhino Horn	65
Mangrove alliance for Climate.....	66
Green washing.....	68
Bio diversity and Galapagos Island.....	69
Ground Water use in India	71
Glyphosate	73

SCIENCE & TECHNOLOGY

Barium in Exoplanets.....	75
NavIC Expansion	76
Organic Fertilizer	77
End of Mars Orbiter Mission (MoM)	78
Launch Vehicle Mark (LVM) 3.....	79
Pillars of Creation: JWT	80
DNA Test.....	81
Beaver Blood Moon	82
Mission Prarambh	83

SECURITY ISSUES

Delhi Declaration	85
Tactical Transport Aircraft.....	86
Theatre Commands	87
Listing of Terror accused	88

ART AND CULTURE

Mangarh Massacre.....	90
Coins with Religious Symbols	91
Kashi Tamil Sangamam.....	92

CONTEMPORARY ETHICS CASE STUDIES

Conflict Resolution in Case Studies	94
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PHILOSOPHY OF THE MONTH - 96

Self-Reflection for Peace	96
The Greatest Force-Ahimsa	96

PT CONCATENATION - 98

Person in News.....	109
MAP CONNECT	110

DATA OF THE MONTH - 112

THEMATIC ESSAYS.....	114
PT ORIENTED QUESTIONS.....	116
ANSWERS.....	119

POLITY

EWS Judgement

News Excerpt

A Constitution Bench of the Supreme Court in a 3:2 majority decision upheld the validity of the 103rd Constitutional Amendment.

About Economically Weaker Section (EWS) ReservationGenesis

- EWS was introduced through the 103rd Constitutional amendment act.
- The act amended Article 15 and Article 16 of the constitution and inserted 15(6) and 16(6).
- It provides for reservation in jobs and admissions in educational institutes for EWS.
- Both Centre and the states can provide reservations to EWS.
- The reservation is in addition to the existing reservations and carries a maximum limit of 10% of total seats.
- The basis of the EWS lies in Article 46 (DPSP) of the constitution which mandates that the state should protect the educational and economic interests of the weaker sections of society.
- Minority educational institutions under Article 30 (1) are excluded from the reservation.
- Economic weakness will be decided based on criteria such as family income and other indicators of economic disadvantage.

Benefits

- It fulfils the goal of social, economic, and political inclusion. It opens the doors for the most distressed, poorest of all people who due to their economic backwardness have remained excluded from attending higher educational institutions and public employment.
- It will remove the stigma associated with reservation because reservation has historically been related to caste.
- It diversifies national priorities as it introduced a form of economic criteria for the poor.

Challenges

- ✓ It might twist the idea of social justice by bequeathing further privilege to communities that are believed to be beholders of an oppressive caste system
- ✓ Lack of unavailability of Data on whether forward castes are inadequately represented in government jobs and higher educational institutions.
- ✓ The criteria used by the government to decide the eligibility for this reservation are vague & arbitrary. There was no consideration of GDP per capita for every State. Without knowing the income distance between states, fixing a yardstick would be difficult.

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

- ❖ In 1979, the Morarji Desai government set up the Mandal Commission to identify socially or educationally backward classes to address caste discrimination.
- ❖ Chaired by B.P. Mandal, the Commission recommended that members of OBCs be given 27 per cent reservations for jobs under the Central government and public sector undertakings.
- ❖ This would take the total number of reservations for Scheduled Castes and Scheduled Tribes and OBC to 49 per cent.



✓ It can be misused as a Vote Bank

Court Observation

Since it was a split verdict two views emerged

Majority View:

- EWS Quota doesn't violate the basic structure of the constitution and reservation in addition to the existing reservation does not violate provisions of the constitution.
- Reservation is an instrument of affirmative action by the state for the inclusion of both socially and economically backward classes along with the class at a disadvantage.
- The 50% ceiling limit provided under the Indira Sawhney judgment is not inflexible. Also, the ceiling is limited to the SC/ST/SEBC/OBC communities and not the general category.
- The basic structure is not breached when the state makes provisions for education.
- Article 15(4), 15(5), and 16(4) makes SC/ST and backward classes a separate category altogether.

Minority View:

- The idea behind reservation was to enable equal access and therefore any economic criteria which exclude SC/ST/OBC just because they had pre-existing benefits is injustice.
- Though the EWS quota claims that it creates a level playing field exclusion of SC, ST, OBC discriminates against the equality code and violates basic structure.
- Breach of the 50% ceiling limit would become "a gateway for further infractions and result in compartmentalization"

Conclusion

In long run, the focus of the government should be on improving the education infrastructure and the quality of education. Access to quality health and education can alone end the recent race among various communities to get classified as 'backward'. Dr. Ambedkar was of the view that reservations are to be seen as temporary and exceptional. But unfortunately, reservation is seen as a tool for electoral gains. It's time for India to realize the fact that reservation is not the panacea for its social problems.

Will private college have EWS quota?

Under Article 15(5) of the Constitution, the state has power to make reservations in private educational institutions. They cannot be standing outside national mainstream. As they are education centers and everyone have right to education. They will have EWS quota.

PEPPER IT WITH

Article 350, Mandal Commission, Subcategorisation within OBC, SECC-2011

MGNREGA and Pandemic

News Excerpt

The study conducted by the Centre for Sustainable Employment showed that 39% of the surveyed households did not get a single day of work in the COVID-19 year.

Pre-Connect

About MNREGA

The Mahatma Gandhi National Rural Employment Guarantee Act, 2005 (MGNREGA) was notified on September 7, 2005. The mandate of the Act is to provide at least 100 days of guaranteed wage employment in a financial year to every rural household whose adult members volunteer to do unskilled manual work.

- The MGNREGA provides a legal guarantee for wage employment.
- It is a demand-driven program where the provision of work is triggered by the demand for work by wage-seekers.
- There are legal provisions for allowances and compensation both in cases of failure to provide work on demand and delays in payment of wages for work undertaken.

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- The MGNREGA overcomes problems of targeting through its self-targeting mechanism of beneficiary selection, that is, a large percentage of the poorest of the poor and marginalized seek employment under the Scheme.
- The Act incentivizes States to provide employment, as 100 percent of the unskilled labor cost and 75% of the material cost of the program is borne by the Centre.

What survey reveal?

As of 2022-23, there are 15.4 crores, of active workers, under the MGNREGA. The study titled "Employment guarantee during COVID-19 — The Role of MGNREGA in the year after the 2020 lockdown" conducted by Centre for Sustainable Employment, Azim Premji University, Collaborative Research and Dissemination (CORD), Samaj Pragati Sahyog and NREGA consortium was released. As per the survey:

- ✓ For households who found work in both periods (pre-COVID and during COVID), the increased earnings from MGNREGA were able to compensate for somewhere between 20% and 80% of income loss depending on the block.
- ✓ For households who had not worked in the pre-COVID year but found work during the COVID year, MGNREGA earnings compensated for anywhere between 20% and 100% of income lost from other sources".
- ✓ MGNREGA was unable to meet the actual demand from the ground.

- ✓ Across the eight blocks, on average 39% of households did not get a single day's work.

As per the survey, the reasons for such a downfall were:

- The major reason for not getting as much work as needed, across all blocks, was the lack of adequate work being sanctioned/opened.
- On average, 63% of all job card-holding households cited this reason in the surveyed blocks.
- The program functioning should be based on timely payment of wages but only 36% of all households that worked in the COVID year said that they got their wages within 15 days as laid down by the Act.

Way Forward

- MGNREGA is designed to absorb shocks such as the pandemic. But to enable this, the program budget should increase as per the demand for work, that does not happen.

Efforts by Government during COVID-19 in Rural India

Measures were taken by the Ministry of Rural Development for providing relief and boosting employment and livelihood opportunities in rural areas during the Corona Virus pandemic.

- ❖ Garib Kalyan Rojgar Abhiyaan (GKRA) was launched for 125 days to boost employment and livelihood opportunities for returnee migrant workers and similarly affected citizens in rural areas, in the wake of the COVID-19 pandemic.
- ❖ It included four schemes:
 - Mahatma Gandhi National Rural Employment Guarantee Scheme
 - Pradhan Mantri Awaas Yojana- Gramin
 - Pradhan Mantri Gram Sadak Yojana
 - Shyama Prasad Mukherjee RURBAN Mission
- ❖ Garib Kalyan Rojgar Abhiyan was implemented across six States that are Bihar, Uttar Pradesh, Rajasthan, Madhya Pradesh, Odisha, and Jharkhand to provide livelihood opportunities to migrant workers and rural citizens.
- ❖ Pradhan Mantri Awaas Yojana- Gramin aims to assist eligible rural households with the construction of Pucca houses with basic amenities
- ❖ Under DAY-NRLM, Deen Dayal Upadhyaya Grameen Kaushalya Yojana, and Rural Self Employment Training Institutes were introduced.
- ❖ Both these schemes are aimed at increasing the employability of rural poor youth either for wage or self-employment.
- ❖ Till quarter-2 of FY 2021-22, many hectares of the area has been brought under horticulture afforestation, and protective irrigation and wasteland have been treated and made cultivable.
- ❖ Prime Minister Krishi Sinchayee Yojana worked for generating man-made employment.

- The radically new character of the program requires innovative approaches for effective implementation. This will ensure that the novel elements of the MGNREGA are realized appropriately on the ground; at the cutting-edge level of its implementation.
- An Annual Report prepared by the Central Employment Guarantee Council (CEGC), on the outcomes of MGNREGA is required to be presented annually by the Central Government to Parliament.
- Likewise, the annual reports prepared by State Employment Guarantee Councils (SEGC) are to be presented to State Legislatures by the State Governments, facilitating oversight by elected representatives.
- Each individual rather than each household should get 100 days of work in a year.

PEPPER IT WITH

National Social Assistance Programme, Directive Principles of State Policy, Internal Migration in India, One Nation-One Ration

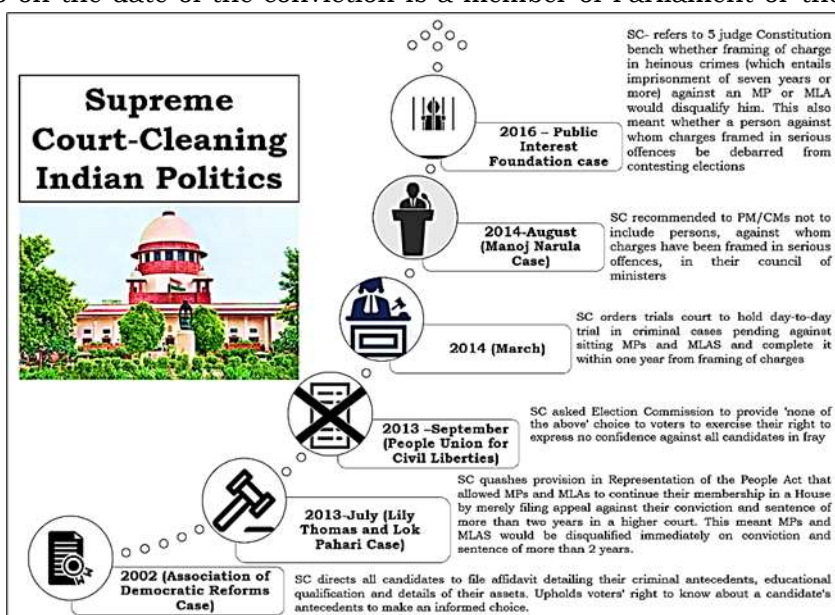
Convicted Leaders Disqualification**News Excerpt**

Recently, An Indian legislator was convicted on criminal charges and has been disqualified and his seat was declared vacant by the State's Legislative Assembly secretariat.

Pre-Connect**Criterion For Disqualification**

As per Section 8 of the Representation of People Act, 1951

- A person convicted of any offense and sentenced to imprisonment for not less than two years shall be disqualified from the date of such conviction and shall continue to be disqualified for a further period of six years after his release.
- In the case of a person who on the date of the conviction is a member of Parliament or the Legislature of a State can take effect until three months have elapsed from the date.
- Or if within that period an appeal or application for revision is brought in respect of the conviction or the sentence until that appeal or application is disposed of by the court.
- It does not bar individuals who have criminal cases pending against them from contesting elections therefore the disqualification of candidates with criminal cases depends on their conviction in these cases.

**Criminalization of Indian Politics**

- The criminalization of politics means the participation of criminals in politics. It means that persons with criminal backgrounds contest in the election and get elected as a member of parliament or state legislature.
- In India, nearly 43% of MPs in the new Lok Sabha have criminal cases. The increasing number of members with criminal records in parliament is a threat to true democracy.
- According to data available from the Supreme Court, a total of 4,984 criminal cases involving legislators were pending in various courts across the country as on December 1, 2021.

- Criminals join politics for several reasons:
 - Crime Pays: Politics legitimize one's gains from crime and power their finances further.
 - No Other Choice: Criminals have been pushed out of their traditional fields due to economic liberalization and changing labor markets.
 - Motivation: Criminals are more highly motivated than other politicians and thus more likely to deliver on electoral promises.

Reasons

- ✓ Increasing nexus between politicians and bureaucracy.
- ✓ The increasing interference of politicians in the administration
- ✓ At the time of the election, political parties spend a huge sum of money buying the votes for another illegitimate purpose
- ✓ The people don't pay attention to the people to whom they are going to cast their vote, whether they have any criminal background or not.
- ✓ The poor governance of the country also plays an important role in increasing the criminalization of politics. It doesn't have the proper laws and rules for governing the procedure of the election.

Impact

- **Impacts good governance:** Candidates tend to harm the efforts taken by the government as they are mostly involved in wrongful activities.
- **Distrust among voters:** Candidates with criminal records create an environment of distrust and disharmony among people. Instead of trusting their candidates, they vote in fear.
- **Impact working of honest administration:** These lawbreakers tend to influence and control the administration, especially lawmakers. This adversely affects the working of honest administrators.
- **Against the principle of democracy:** The very spirit of democracy gets affected as democracy is all about people's representatives representing their problems to parliament. Instead, they become troublemakers.

Law commission in its 179th report on Decriminalising politics suggested that:

- ❖ The people with criminal backgrounds should be disqualified for five years or until acquittal.
- ❖ The person who wants to contest the election must furnish details regarding any pending case, with the copy of the FIR/complaint, and also furnish details of all assets.

No action was taken on the recommendation by the government due to a lack of consensus amongst the

Way Forward

- ✚ **Better Laws and Act:** There should be an amendment in the RP act to debar those persons from contesting elections against whom any serious Nature of crimes is pending.
- ✚ **Awareness among voters:** A kind of awareness program should be started for voters to make them aware of their right to know the criminal background of the person to whom they are going to cast their votes.
- ✚ **Empowering Election Commission:** The election commission should be given more rights to prevent the criminalization of politics. A penalty should be inflicted on those political parties who give tickets to those persons who have a criminal background.
- ✚ Taking Advice from a recommendation from Committees like Dinesh Goswami, and the Inderjeet Committee which recommend state funding of elections.

PEPPER IT WITH

Representation of People Act, Association for Democratic Reforms, Prevention of Corruption Act, Dinesh Goswami Committee, Conviction Rate of Politicians

Prasar Bharti Sole Broadcaster

News Excerpt

The Information and Broadcasting Ministry issued an advisory stating that no Centre, State or UT governments can enter into broadcasting on their own. They had to get it through the sole public broadcaster Prasar Bharti. This has emerged

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

as another issue with federalism in India as the move will affect Tamil Nadu's Kalvi TV and Arasu Cable and Andhra Pradesh government's IPTV.

Pre -Connect

About Prasar Bharti

- Prasar Bharati is India's State-Owned public broadcasting agency.
- It is a statutory autonomous body set up by Prasar Bharti Act.
- It comprises the Doordarshan Television Network and Akashvani All India Radio, which were earlier media units of the Ministry of Information and Broadcasting.

About the Advisory

- Advisory is issued as per the recommendation of the Telecom Regulatory Authority of India (TRAI), the **Supreme Court judgment in the Cricket Association of Bengal case, and the Law Ministry's legal opinion.**
- The advisory says no Ministry or department of government at the Centre, States, and Union Territories and their associated entities should enter into broadcasting or distribution of broadcasting activities in the future.
- Those already broadcasting their content should get it done through Prasar Bharati, the public broadcaster, and the entities distributing the broadcasting content have been asked to "extract themselves" from it by December 31, 2023.
- State Governments have been asked to enter into "suitable agreements" with the public broadcaster to broadcast content for educational purposes.
- Until any suitable agreement is done, uninterrupted broadcasts of the ongoing education channels and other scheduled programs would be allowed.

About TRAI Recommendation

- ✓ The TRAI had suggested that the Central and State governments, their companies, undertakings, joint ventures with the private sector, and the entities funded by the governments should not be allowed to enter the business of broadcasting and, or, distribution of TV channels.
- ✓ The recommendations were based on the Sarkaria Commission's recommendation and the Cricket Association case verdict.
- ✓ It suggested that the arm-length relationship between Prasar Bharti and Government should be strengthened and such measures should ensure the functional independence and autonomy of Prasar Bharti.
- ✓ The TRAI had cited the views of the Sarkaria Commission and the Verghese Committee, noting that for controlling the "centrifugal" tendencies, the demand for either a concurrent or an exclusive power to the States regarding broadcasting could not be supported by giving a reply to the demand by some States to have their broadcasting stations.

Appointment of Chairman of Prasar Bharti

The Chairman and the other Members, except the ex-officio Members, the Nominated Member and the elected Members shall be appointed by the President of India on the recommendation of a committee consisting of –

- ❖ The Chairman of the Council of States, who shall be the Chairman of the Committee;
- ❖ The Chairman of the Press Council of India established under section 4 of the Press Council Act, 1978 and
- ❖ One nominee of the President of India.

Supreme court Observation on Public broadcaster

- ❖ The state control really meant governmental control, which in turn meant control of the political party or parties in power for the time being.
- ❖ The public service broadcasting should be in the hands of a corporation (s) set up under a statute and the constitution of such a corporation (s) should be such as to ensure their impartiality in political, economic and social matters and on other public issues.

PEPPER IT WITH

Telecom Disputes Settlement and Appellate Tribunal, Prasar Bharati Procurement Policy, Telecom Regulatory Authority of India.

First Amendment

News Excerpt

The Supreme Court has agreed to examine a PIL challenging changes made to the right to freedom of speech and expression by the first amendment to the Constitution in 1951.

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Q	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
V											

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About the First Amendment

- The First Amendment was passed by the Provisional Parliament, members of which had just finished drafting the Constitution as part of the Constitutional Assembly, in 1951. Thus, Articles 15, 19, 85, 87, 174, 176, 341, 342, 372, and 376 were amended.
- It provided for the preservation of laws governing the acquisition of estates, etc.
- The Ninth Schedule was added to protect land reforms and other laws from judicial review.
- Articles 31A and 31B were added after Article 31.
- Changes such as exempting land reforms from scrutiny to providing protections for backward classes were introduced.
- Restrictions on the right to free speech increased.

Reason for Amendment

A series of court judgments that limited the Executive's imperious reach was germane to the conflict. Courts struck down provisions of public safety laws, press-related laws, and criminal provisions that were deemed to be incompatible with the constitutional right to freedom of speech. Hemmed in by a judiciary committed to protecting constitutional guarantees and the pressures of commitment to a political agenda, Ex-PM JL Nehru opined that the constitution is for people and if it comes in the way of reforms and development of common masses then surely it is time to amend the Constitution.

Petitioner Arguments

The petitioner is arguing that Section 3(1) and Section 3(2) of the amending act are troublesome for various reasons:

- They added two objectionable insertions in Article 19 restricting freedom of speech and expression which were restrictions in the interest of public order and in relation to incitement to an offence. And the same time omitted the expression "tends to overthrow the State" as appears in the original text.
- These changes are problematic for several reasons:
 - They neglect national security especially when India's sovereignty is facing threats from extremism and radicalism.
 - They will validate several laws that prima facie violate the right to freedom of speech and expression- a fundamental right.
 - They will protect several controversial laws such as IPC sections 124A (Sedition), Section 153A (Promotion of enmity between different groups) 295A, 505, etc. from the vice of unconstitutionality.
 - Rather than advancing the constitution, they damage democracy and republicanism, and supremacy of the Constitution.
 - Making these two sections beyond the amending power of Parliament is itself a violation of the basic structure doctrine.

PEPPER IT WITH
42nd Constitutional Amendment, Right to Property in India, Land Reforms in India

Ninth Schedule

News Excerpt

Recently, the Government of Jharkhand passed two bills in the assembly but asserted that they would come into force only after the Centre carries out amendments to include these in the Ninth Schedule of the Constitution.

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Q	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
V											

Pre-Connect

About Ninth Schedule

- The Ninth Schedule contains a list of central and state laws which cannot be challenged in court. The Schedule became a part of the Constitution in 1951 through the first amendment.
- Through the First Amendment, Article 31A (extends protection to 'classes' of laws) and Article 31B (shields specific laws or enactments- giving birth to Schedule IX) were also added.
- Article 31B has a retrospective operation. If an act is held unconstitutional and thereafter is put under the 9th schedule it will be considered as its part since its commencement. SC had termed it as a drastic and novel method of an amendment
- The first Amendment added 13 laws to the Schedule. Currently, there are 284 such laws are shielded from judicial review.
- Most of the laws protected under the Schedule concern agriculture/land issues, the list includes other subjects, such as reservation.

Understanding Judicial Review

- Judicial Review act as a cornerstone for the principle of constitutionalism as it upholds the principle of the rule of law and the doctrine of separation of powers.
- On a broader scale there are mainly three aspects of judicial review, they are-
 - Judicial review of administrative actions
 - Reviewing Judicial pronouncements, and
 - Review of the action of the legislature.
- The nature of the judicial review is procedural Indian Judicial review has its root directly in several Articles of the Indian Constitution e.g. Articles 13, 32, 131 to 136, 143, 226, and 227.
- Judicial review is responsible for balancing the interests and powers of different organs of the government and in assisting in the maintenance of control by marking a boundary to limit uneven encroachment of the authorities towards a person's constitutional rights and among themselves.

Dr BR Ambedkar on the issue of Judicial review remarked

"If I was asked to name any particular Article in the Constitution as the most important, it is Article 32 without which the Constitution would be a nullity- it would not refer to any other Article except this one. It is the very soul of the Constitution and the very heart of it and I am glad that the house had realized its importance".

Courts and Ninth Schedule

Three key judgements answer the question of whether the Ninth Schedule is completely Exempt from Judicial Scrutiny. These are:

- ✓ **Keshavananda Bharati v. State of Kerala**– The court introduced a new concept of the "Basic structure of the Indian Constitution" and stated that, "all provisions of the constitution can be amended but those amendments which will abrogate or take away the essence or basic structure of constitution which included Fundamental Rights are fit to be struck down by the court".
- ✓ **Waman Rao v. Union Of India**–SC ruled that "those amendments which were made in the constitution before 24th April 1973 (date on which judgement in Keshavananda Bharati was delivered) are valid and constitutional but those which were made after the stated date are open to being challenged on the ground of constitutionality and the State is only immunized for its acts before the judgement in Keshavananda Bharati. This is also known as the **"Doctrine of Prospective Over-Ruling" which means that 'only what follows after is bound to abide by the rules and what has happened earlier will not be taken into account**
- ✓ **I R Coelho v. State of Tamil Nadu** held that every law must be tested under Art. 14, 19, and 21 if it came into force after 24th April 1973. In addition, the court upheld its previous rulings and declared that any act can be challenged and is open to scrutiny by the judiciary if it does not align with the basic structure of the constitution. In addition, it was held that if

PEPPER IT WITH

Schedules of Constitution of India, Doctrine of Basic Structure, Article 13

the constitutional validity of any law under the ninth schedule has been upheld before, in the future it cannot be challenged again.

Conclusion

By its very nature, Article 31B and Ninth Schedule are prone to misuse which started after the 4th amendment when few non-agrarian laws were excluded from the scope of judicial scrutiny. But ultimately, the intervention of the Apex Court from time to time ensured put a check on the powers of the law-making body by describing the basic structure of the Indian Constitution.

RTI exemption for Bank

News Excerpt

The Supreme Court recently agreed to examine a plea by public and private sector banks to be exempt from disclosing financial information about Non-Performing Assets (NPAs).



Pre-Connect

About RTI Act 2005

- Right to Information Act 2005 mandates timely response to citizen requests for government information.
- It is an initiative taken by the Department of Personnel and Training,
- An RTI Portal Gateway is provided by the Ministry of Personnel, Public Grievances, and Pensions to the citizens for quick search of information on the details of first Appellate Authorities, PIOs, etc.
- Regarding RTI various disclosures are published on the web by various Public Authorities under the government of India as well as the State Governments
- Sections 8 and 9 of the Act, provide for certain categories of information to be exempted from disclosure.
- The Act also provides for the appointment of a Chief Public Information Officer to deal with requests for information.
- The basic object of the Act is to promote transparency and accountability in the working of the Government.

About Issue

- In the 2015 judgment in the Jayantilal N Mistry case, RBI was entitled to issue directions to the banks to disclose the information even concerning the individual customers of the bank.
- The apex court dismissed objections and made it clear that the banking regulator must act with transparency and not hide information that might embarrass individual banks.
- RBI came out with disclosure policies in 2016 and 2019 which endeavored to dilute the impact of the court verdict.
- Several Banks like HDFC Bank Axis and ICICI bank, and SBI filed applications for recall of the 2015 judgment.
- Then the court issued an interim order in December 2019 restraining RBI from disclosing inspection reports of the banks.
- In April 2021, the plea for a recall of the 2015 judgment was dismissed.
- The banks again pressed their petitions before the court where questions were raised if they could be allowed to seek correction of a judgment under Article 32 (writ jurisdiction) of the Supreme Court.
- The Supreme Court now has agreed to examine a joint plea by various public sector and private banks to be exempted from disclosing an array of financial information relating to non-performing assets (NPAs), losses from trading operations, show-cause notices, and penalties.

Why Banks are seeking an RTI exemption?

- ✓ Banking regulator receives and holds a lot of sensitive information, the disclosure of which may not be in the interest of the nation.

- ✓ The banks have the commercial secrets of customers and privacy should be the priority. No bank customer wants his safeguards/parameters should be disclosed to anyone.
- ✓ the RTI Act does not apply to private entities like them as they are not public authorities under the Act and therefore, information about such banks and their customers cannot be sought under the RTI Act, let alone confidential/sensitive information of such banks/FIs.
- ✓ The RBI inspections are highly confidential, banking is a matter of faith and trust.
- ✓ SC in the Justice KS Puttasamy vs UoI case recognizes the fact that the right to privacy is a sacrosanct facet of fundamental rights.
- ✓ There should be a balance between the "Right to privacy" and the "Right to Information".

Section 8

Section 8 in The Right to Information Act, 2005 provides for exemption from disclosure of information. Some of the exemptions are:

- ❖ Information related to disclosure of which would prejudicially affect the sovereignty and integrity of India,
- ❖ Information which has been expressly forbidden to be published by any court of law or tribunal or the disclosure of which may constitute contempt of court;
- ❖ Information related to the disclosure of which would cause a breach of privilege of Parliament or the State Legislature;
- ❖ Information including commercial confidence, trade secrets or intellectual property, the disclosure of which would harm the competitive position of a third party,
- ❖ Information received in confidence from foreign government;
- ❖ Information related to the disclosure of which would endanger the life or physical safety of any person

Counter Argument

- The inspection reports just give specific details of the working of the bank which includes supervision of its lending policies
- Defaulters like Vijaya Mallya and Mehul Choksi was caught because of this policy
- The whole document doesn't give any confidential information not even the customer's name.
- The judgment was delivered after hearing Indian Banking Association.

PEPPER IT WITH

Central Vigilance Commission,
Central Information Commission,
Banking Regulation Act 1949,
Non-performing assets.

Anti-Doping Act (ADA)

News Excerpt

The government of India has recently enacted the Anti-Doping Act, 2022 which is a mark of India's commitment to the anti-doping movement.

Pre-Connect

About doping

- Doping refers to the use of banned substances in competitive sports. Performance-enhancing drugs (PEDs) are another term used for drugs used by athletes to improve their athletic performance.
- In general, the following classes of drugs are banned: Street drugs, stimulants, anabolic steroids, peptide hormones (i.e., human growth hormone [hGH]), alcohol and beta blockers (for archery and rifle shooting only), diuretics, beta-2 agonists, anti-estrogens, blood doping, and gene manipulation.

Key features of the ADA

- It prohibits athletes, support personnel, and other individuals from engaging in doping.
- Any violation will result in disqualification forfeiture of medals, points, and prizes, and even financial sanctions.

- National Anti-Doping Agency becomes a statutory body, headed by a director general appointed by the central government. Agency will plan, implement and monitor anti-doping activities. It will investigate anti-doping rules and promote anti-doping research.
- It will establish a National Board for Anti-Doping in Sports which will:
 - Make recommendations to the government on anti-doping regulation and compliance with international commitments on anti-doping.
 - Oversee the activities of the Agency and issue directions to it.
- National Dope Testing Laboratory will now be the principal dope testing laboratory. More labs can be established by the central government.

NADA

National Anti-Doping Agency (NADA) was set up as a registered society under the Societies Registration Act of 1860 on November 24, 2005, with a mandate for Dope-free sports in India. National Anti-Doping Agency is mandated for Dope-free sports in India. The primary objectives are to implement anti-doping rules as per the WADA code, regulate the doping control program, promote education and research, and create awareness about doping and its ill effects. The primary functions of NADA are as under:

- ❖ To implement the Anti Doping Rules to achieve compliance by all sports organizations in the Country.
- ❖ Coordinate the dope testing program through all participating stakeholders.
- ❖ To promote anti-doping research and education to inculcate the value of dope-free sports.
- ❖ To adopt best practice standards and quality systems to enable effective implementation and continual improvement of the program.

Significance of ADA

- ✓ It will ensure time-bound justice for athletes and enhance cooperation among agencies in fighting doping.
- ✓ Fulfill India's international obligations for clean sports.
- ✓ Establish a robust, independent mechanism for anti-doping adjudication.
- ✓ It will build institutional capabilities in anti-doping and enable the hosting of major sports events.
- ✓ It will create a statutory framework in the form of legislation for the prohibition of doping in sports and for enforcing anti-doping activities in the country.

Issues with ADA

- The government may remove the Director General from the office on grounds of misbehavior or incapacity or "such other ground". Hence the independence of the Director General is questionable.
- The main issue with the act is that the qualifications of the Director General are not specified in the act.
- Board has powers to remove the members of the Disciplinary Panel and Appeal Panel.

PEPPER IT WITH

NDTL, Doping Risk, Fit India Movement, Khelo India

Age of Consent

News Excerpt

Karnataka High Court has urged the Law Commission of India to rethink the age of consent for adolescents. The court asserted this while dismissing a plea on POCSO Act.

Pre-Connect

Understanding the POCSO (Protection of Children from Sexual offense) Act

- Under the act, a child is a person who is below 18 yrs of age.
- Under the act, different forms of sexual abuse are included ranging from penetrative to non-penetrative assault. It also includes sexual harassment and pornography.



- It casts police in the role of child protectors during the process of investigation.
- Under the act, any case of child sexual abuse must be disposed of within one year from the date the offense is reported.
- Sexual assault is considered aggravated when the abused child is mentally ill or when the abuse is committed by a person in a position of trust or authority like a family member, police officer, teacher, or doctor.
- The Act was amended in 2019 and more stringent punishment like the death penalty, for sexual crimes against children was added.

In 2021, in the Vijayalakshmi vs State Rep case, the Madras High Court, while dismissing a POCSO case, said the definition of 'child' under Section 2(d) of the POCSO Act can be redefined as 16 instead of 18. "Any consensual sex after the age of 16 or bodily contact or allied acts can be excluded from the rigorous provisions of the POCSO Act." The court suggested that the age difference in consensual relationships should not be more than five years. This, it said, will ensure that a girl of an impressionable age is not taken advantage of by "a person who is much older."

Concerns with the Law

- Age factor is highly misused under the law, on multiple instances, courts had quashed criminal proceedings as they were frivolous. Even if a 16-year-old girl gives her consent then sexual intercourse with her will be considered rape.
- It pushed many young couples who are in consensual and non-exploitative relationships into the criminal justice system.
- It creates an additional burden on courts and diverts attention from the investigation and prosecution of actual cases of child sexual abuse and exploitation.

Way forward

- ✓ The government court should look into the matter with greater empathy and responsibility towards children.
- ✓ Adolescents need to be made aware of the stringent provisions of the Act.
- ✓ Suitable education material for adolescents on the law on sexual offences and its consequences should be made available in schools, colleges, and wherever possible.
- ✓ High Court should often intervene and use its power under Section 482 of the Criminal Procedure Code to prevent abuse of the process of any Court or otherwise to secure the ends of justice.
- ✓ The age for marriage is increased to 21 but it can also affect children as they will go in shells for a longer period. Thus, these children should be kept in mind.
- ✓ The law related to children should be just and fair as it is a sensitive matter.

PEPPER IT WITH

Special Marriage Act of 1954, The Sarda Act 1929, Convention on the Elimination of All Forms of Discrimination against women, 1979, The Hindu Marriage Act 1955

Governor's Role

News Excerpt

The recent controversy between the governor of Kerala governor and ministers of the state has again raised the issue of the role of the governor in states.

Can Governor remove Ministers?

- Under Article 164, the Chief Minister is appointed by the Governor; and the other Ministers are appointed by the Governor on the CM's advice. It adds that Ministers hold office at the pleasure of the Governor.
- In a constitutional scheme in which they are appointed solely on the CM's advice, the 'pleasure' referred to is also taken to mean the right of the Chief Minister to dismiss a Minister and not that of the Governor. Without the advice of the Chief Minister Governor cannot remove a Minister on its own.



Role of Governor in a parliamentary system

The position, role, powers, and conditions of office of the Governor are described in Articles 153-161 of the Constitution. The position of Governor is similar to that of the President at the Union. The Governor is appointed by the President (on the advice of the central government) and, therefore, acts as the vital link between the Union and the state governments.

Important powers of the Governor:

- S/He is the head of the state's executive power. The executive power of the state shall be vested in the Governor and shall be exercised either directly or through an officer subordinate to him in accordance with this constitution.
- He acts on the advice of the council of ministers, which is responsible, in accordance with the parliamentary system, to the state legislature.
- The Governor of a State shall have the power to grant pardons, reprieves, respites, or remissions of punishment or to suspend, remit or commute the sentence of any person convicted of any offence against any law relating to a matter to which the executive power of the State **extends**.

Consequences of defaming Governor

- ✓ The Supreme Court upheld the constitutional validity of the country's criminal defamation laws, ruling that they are not in conflict with the right to free speech.
- ✓ This means individuals and media organizations, including social media platforms, can be prosecuted for defaming someone.
- ✓ On the same ground, a governor can go to court and file a defamation case against the minister and sue him.

The Sarkaria Report says

The Governor is the constitutional head of the State and has a right to be consulted, warn, and encourage' and his role is that of an overwhelmingly that of friend, philosopher, and guide' to his Council of Ministers."

It wanted the Governor to be a "detached figure and not too intimately connected with the local politics of the State".

Punchhi Commission

It recommended a time limit for Governor to grant assent or reserve it for consideration of the President.

"The Punchhi Commission felt that the NCRWC's recommendations require immediate implementation and should be brought in by way of a constitutional amendment. It recommended deleting the doctrine of pleasure from the governor's office.

The National Commission suggested that the "Governor of a should be appointed by the President, after consultation with the Chief Minister of that State

Pleasure of Governor

- ❖ The pleasure doctrine is a concept derived from English common law, under which the crown can dispense with the services of anyone in its employ at any time.
- ❖ In India, Article 310 of the Constitution says every person in the defence or civil service of the Union holds office during the pleasure of the President, and every member of the civil service in the States holds office during the pleasure of the Governor.
- ❖ Article 311 imposes restrictions on the removal of a civil servant. It provides for civil servants being given a reasonable opportunity for a hearing on the charges against them.
- ❖ There is also a provision to dispense with the inquiry if it is not practicable to hold one, or if it is not expedient to do so in the interest of national security.
- ❖ The pleasure of the President referred is that of the Union government, and the Governor's pleasure is that of the State government.

Some Issues related to friction between State -Governor

- B.R. Ambedkar, in one of his famous speeches in the Constituent Assembly, said that "the Governor under the Constitution has no functions which he can discharge by himself" and that he has only "certain duties to perform".
- States oppose the move to provide the Governor with more powers in decision-making.

- According to Article 167 (c), the Governor can alert the Council of Ministers about a decision taken by any Minister that escaped the attention of the Council whereas Article 163 (1) implies that the Governor is generally bound by the Cabinet decision.
- According to Article 239(2) of the Constitution, the Governor can act as administrator of an adjoining Union Territory if appointed by the President, and on such an appointment, he can “exercise his functions as such administrator independently of his Council of Ministers”.
- Under Article 200, he can choose to withhold the assent to a Bill at the first instance. He has to give assent to the Bill if the House reiterates it. He can also reserve a Bill for consideration by the President.
- Article 356 enables President’s Rule in a State based on a Governor’s report about the “failure of constitutional machinery in States”.
- In 2016, when the Arunachal Pradesh Governor got actively involved in the disqualification process, a function that fell within the realm of the Speaker, then the Supreme Court turned the clock back and restored the Congress government. The court clarified that the Governor was not vested with an unlimited power of discretion.

PEPPER IT WITH

Celmancy Power of President vs
Power of Governor, Office of Lt.
Governor

Way Forward

- ✚ There is an urgent need to take M. M Punchhi Commission recommendations seriously to prevent more friction.
- ✚ More clarity regarding powers and duties should be included in the constitution.
- ✚ Governors should stick to their defined duties, in quest of more power Governors tend to sometimes cross boundaries, and hence Supreme court has to intervene.
- ✚ States need to cooperate with Governors and work together despite hustling for powers, they should focus on their respective work.

SOCIAL ISSUES

Global TB Report

News Excerpt

As per The WHO Global Tuberculosis Report 2022, as many as 1.6 million people died from tuberculosis in 2021 during the COVID-19 pandemic. This is the first time in many years that an increase has been reported in the number of people falling ill with TB and drug-resistant TB.

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Pre-Connect

Understanding Tuberculosis

- Tuberculosis (TB) is a communicable disease that is a major cause of death worldwide.
- It is caused by the bacillus *Mycobacterium tuberculosis*, which is spread when people who are sick with TB expel bacteria into the air.
- The three stages of TB are Primary infection, Latent TB infection, and Active TB disease.
- Isoniazid, Rifampin, Ethambutol, Pyrazinamide, and Rifapentine are some of the common drugs used in the treatment.

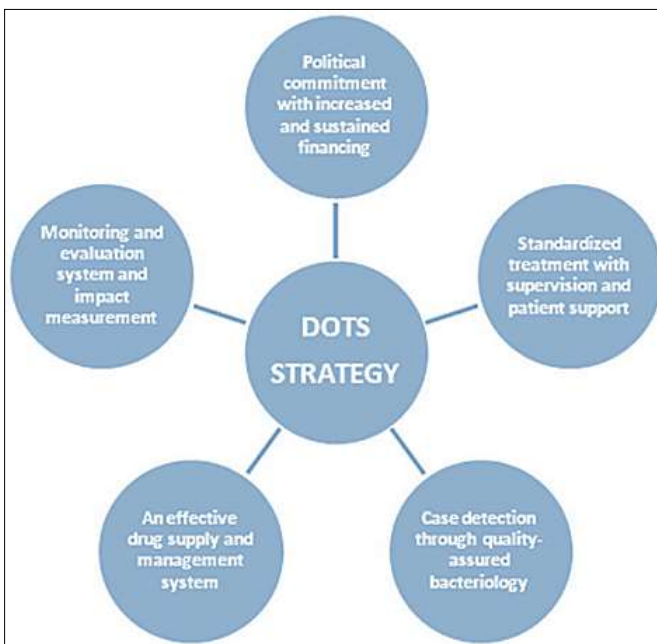
The BCG (bacille Calmette-Guérin) vaccine

This Vaccine protects against tuberculosis (TB). The vaccine may be given to persons at high risk of developing TB. It is also used to treat bladder tumors or bladder cancer in early stages.

It is one of the most widely used of all current vaccines, reaching >80% of neonates and infants in countries where it is part of the national childhood immunization programme. BCG vaccine has a documented protective effect against meningitis and disseminated TB in children.

Key Findings of the Report

- The COVID-19 pandemic continues to have a damaging impact on access to TB diagnosis and treatment and the burden of TB disease increased.
- There is a large global drop in the reported number of people newly diagnosed from TB with 7.1 million in 2019 to 5.8 million in 2020 and a partial recovery, to 6.4 million in 2021.
- The three countries that accounted for most of the reduction in 2020 were India, Indonesia, and the Philippines with 67% of the global total.
- Reductions in the reported cases suggest that the number of people with undiagnosed and untreated TB has grown.
- Globally, the estimated number of deaths from TB increased between 2019 and 2021 with an estimated 1.4 million deaths among HIV-negative and 187 000 among HIV-positive people a combined total of 1.6 million.
- The TB incidence rate rose by 3.6% between 2020 and 2021, reversing declines of about 2% per year for most of the previous 2 decades.
- The number of people provided with treatment for RR-TB and multidrug-resistant TB (MDR-TB) has declined between 2019-2021. Thus indicating a decline in global spending on essential TB services.



Challenges in Eliminating Tuberculosis

- ✓ Inadequate diagnostics and treatment; multidrug-resistant tuberculosis (MDR TB).

- ✓ HIV co-infection.
- ✓ Sputum-smear microscopy sometimes failed to detect extrapulmonary or smear-negative TB. It is less effective in children and HIV-positive patients whose smear results are often negative.
- ✓ The introduction of the DOTS program facilitates detection of the TB by sputum-smear microscopy. The treatment process takes time up to 6–9 months.

India and Tuberculosis

- India has set a target for the complete elimination of Tuberculosis (TB) by 2025.
- India was one of the three countries that accounted for most of the reduction in tuberculosis in 2020.
- In India, TB is still one of the most commonly prevalent diseases as far as both morbidity and mortality are concerned.

PEPPER IT WITH

COVID-19, Crimean-Congo haemorrhagic fever, The WHO list of pathogens with epidemic and PHEIC potential, Lassa Fever

Wage Inequality

News Excerpt

The Board of Control for Cricket in India (BCCI) announced a “pay equity policy”, saying that its centrally-contracted men and women players would get the same match fees.

CURRENT CONNECT										
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Pre-Connect

Gender Pay Gap

As per the International Labour Organisation (ILO), the “gender pay gap” refers to the difference in average wages between all women and all men who are engaged in paid employment. It is often used as an indicator of gender inequality in the world of work and is also used to monitor progress towards gender equality by nations and internationally.

Pay Parity

Pay parity is ensuring that employees in the same job and location are paid fairly relative to one another, regardless of their gender or ethnicity.

Some of the reasons for the Gender Pay Gap are:

- There are more senior men than women in the workplace as a whole, and as senior people tend to be paid more than junior people, this hurts the gender pay gap.
- Women ‘choose’ to care for children, so they naturally end up in part-time jobs, below their skill levels, and with fewer progression opportunities. Many of the more poorly-paid occupations are those traditionally done by women.
- The equal pay issue is one of discrimination: paying men and women different amounts for doing the same job.

India's Initiative to reduce the gender gap

Beti Bachoo Beti Padhao

- The government has announced the Beti Bachao Beti Padhao initiative to ensure the survival, protection, and empowerment of the girl child. This is a joint initiative of the Ministry of Women & Child Development, Ministry of Health & Family Welfare and Department of School Education & Literacy, Ministry of Education
- The objectives of this initiative are:
 - Prevention of gender-biased sex-selective elimination
 - Ensuring survival & protection of the girl child
 - Ensuring education and participation of the girl child

Sukanya Samridhi Yojana

- ✓ Sukanya Samridhi Yojana is a small deposit scheme of the Government of India meant exclusively for a girl child and is launched as a part of the Beti Bachao Beti Padhao Campaign. The scheme is meant to meet the education and marriage expenses of a girl child.

- ✓ Under the scheme, a minimum of Rs 1000 and a maximum of Rs 1,50,000 can be deposited. Some of the benefits associated with opening an account under the yojana include a high-interest rate, savings on income tax, a lock-in period when an account reaches the maturity age account balance including the interest rate will be paid to the policyholder and lastly the policyholder receives interest even when the scheme reaches maturity.

Mahila Shakti Kendra

- The government of India approved the scheme, Pradhan Mantri Mahila Shakti Kendra (MSK) for 2017-18 up to 2019-20 to empower rural women through community participation and to create an environment in which they realize their full potential.
- State Resource Centre for Women (SRCW) is meant for all States/UTs. District Level Centre for Women (DLCW) was set up in 640 districts in a phased manner. Block Level initiative covered 115 most backward blocks
- The scheme has been discontinued in 2022.

Women Entrepreneurship-Stand Up India

- ✚ Women-owned business enterprises are playing a prominent role in society by generating employment opportunities in the country, bringing in demographic shifts, and inspiring the next generation of women founders.
- ✚ Start-up India is committed to strengthening women's entrepreneurship in India through initiatives, schemes, the creation of enabling networks and communities, and activating partnerships among diverse stakeholders of the start-up ecosystem.

Women Reservation Bill

- The Constitution (One Hundred and Eighth Amendment) Bill, 2008 seeks to reserve one-third of all seats for women in the Lok Sabha and the state legislative assemblies. The allocation of reserved seats shall be determined by such authority as prescribed by Parliament.
- One-third of the total number of seats reserved for Scheduled Castes and Scheduled Tribes shall be reserved for women of those groups in the Lok Sabha and the legislative assemblies.

Women Parliamentarians in India

The global proportion of women parliamentarians has increased by 0.6% points to reach 26.1 percent according to the IPU's (Inter-Parliamentary Union) latest 'Women in Parliament 2021'.

Women in Indian Parliament:

- Total number of women in present Lok Sabha 81
- Total number of women in present Rajya Sabha 33
- Seats are not reserved for females and males, in Parliament.

Reasons for low Representation:

- ❖ Politics is often seen as a male bastion, and women are discouraged from entering it on the pretext that it is not a 'feminine' profession.
- ❖ Women are most of the time, designated roles that require "care and compassion."
- ❖ Young women face severe infrastructural barriers for entering in politics. This includes a lack of clean toilets and safe accommodation during field work.
- ❖ Many female candidates were often made to contest in elections as "namesakes" for their husbands.
- ❖ Lack of understanding of politics
- ❖ Lack of resources at basic level

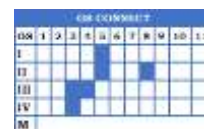
PEPPER IT WITH

Global Gender Gap Report 2022, Education and gender equality, COVID 19 and women

Global Hunger Index

News Excerpt

India ranked 107 out of 121 countries in the Global Hunger Index 2022 with a child-wasting rate of 19.3 percent highest in the world. The government has claimed that it is a strategy to taint India's image as a Nation that does not fulfill the food security and nutritional requirements of its population.



Pre-Connect

India's Global Hunger Index 2022

In the 2022 Global Hunger Index, India ranks 107th out of 121 countries with sufficient data to calculate 2022 GHI scores. With a score of 29.1, India has a level of hunger that is **serious**.

Reason for Hunger in India

- **Hidden Hunger:** The presence of multiple micronutrient deficiencies (particularly iron, zinc, iodine, and vitamin A), which can occur without a deficit in energy intake as a result of consuming an energy-dense, but nutrient-poor diet.
- **Unidentified hunger:** Inaccuracy in identifying Below the Poverty line and criteria used are inefficient.
- **Lack of immunization:** Barriers to immunization include a lack of knowledge about childhood vaccinations, unreasonable fears about vaccine safety, or lack of transportation. These all factors lead to deficiencies in children.
- **Lack of adult nutritional plan:** Schemes like POSHAN, and the Anganwadi services scheme are launched to deal lack of nutrition in children but still there is an urgent need for a strategy that targets vulnerable adult populations at the local level.
- **Declining agricultural output:** The agriculture output from small and marginal holdings is either stagnant or declining due to reasons such as reduced soil fertility, fragmented lands, or fluctuating market price of farm produce.
- **Decline in relative income:** This has adverse effects on their capacity to buy adequate food, especially when food prices have been on the rise.
- **Lack of access to PDS:** The public distribution system (PDS) of the state is not functioning well or is not accessible to everyone and needs more access and simplification.
- **Gender inequality:** It is highly connected to food and nutrition security at a local, national, and global level. The more gender inequality there is in a country, the hungrier and more malnourished people are.

How can we reduce hunger?

- Farmers should be empowered first, to get good agricultural outputs. Government should empower small and marginal farmers to grow more crops by focusing on capacity building of the small and marginal farmers.

Government Initiatives to tackle Hunger

POSHAN Abhiyan:

The focus of Abhiyaan is to lay emphasis on nutritional status of adolescent girls, pregnant women, lactating mothers and children from 0-6 years age.

PM Matree Vandana Yojana:

It is a Centrally Sponsored DBT scheme with the cash incentive of ₹ 5000/- (in three instalments) being provided directly in the bank/post office account of Pregnant Women and Lactating Mothers.

Food Fortification:

Food Fortification is a scientifically proven, cost-effective, scalable and sustainable global intervention that addresses the issue of micronutrient deficiencies. FSSAI fortified staples namely Wheat Flour and Rice (with Iron, Vitamin B12 and Folic Acid), Milk and Edible Oil (with Vitamins A and D) and Double Fortified Salt (with Iodine and Iron)

Mission Indra Dhanush:

The Mission focuses on interventions to improve full immunization coverage for children in India from 65% in 2014 to at least 90% earlier than 2020, this will be done through special catch-up drives. The government has identified 201 high focus districts (during Phase-I) across the country.

Eat Right Movement:

Eat Right India adopts a judicious mix of regulatory, capacity building, collaborative and empowerment approaches to ensure that our food is good both for the people and the planet. The tagline 'Sahi Bhojan. Behtar Jeevan', thus, forms the foundation of this movement

- The concept of cheap canteens like Jadavpur Jyotidevi Shramajeevi Canteen, and Amma canteens have proved to be successful in dealing with hunger.
- Implementation of schemes like the Public Distribution System, Mid-Day meal should be made easy without many technical complexities.
- More schemes like MNREGA which are focussed on empowering the rural poor unemployed should be introduced or modified and implemented well to achieve better goals.
- Certain NGOs and religious places should be funded for food distribution as many poor people rely on them for meals.

Why are Global Hunger readings wrong?

- The nomenclature of GHI conveys the wrong message it conveys as if the country is starving for basic food and millions are victims of starvation deaths. That's not at all the case in India.
 - GHI neglected the Pan-India PM Garib Kalyan Anna Yojana (PMGKAY) program which helped in preventing many from starvation during the Covid-19. It has been well applauded by multilateral agencies like the UNDP, IMF, World Bank, etc.
 - Three out of the four indicators used for the calculation of the index are related to the health of Children and cannot be representative of the entire population.
- ✓ The fourth indicator estimate of the Proportion of the Undernourished (PoU) population is based on an opinion poll conducted on a very small sample size of 3000 which is not only wrong but unethical especially when it is about a country like India.

PEPPER IT WITH

Global Competitiveness Report,
Global Gender Gap Report,
Global Nutrition Report

Conclusion

The Global Hunger Index is riddled with inadequate and poorly described data and a lack of conceptual clarity. It detracts attention from the very real challenges of improving nutrition and reducing child mortality. There is a need for a much more comprehensive index, like the Multi-dimensional Poverty Index (MPI) of UNDP than the GHI to capture the status of the entire population.

One Health

News Excerpt

Four multilateral agencies have launched a global 'One Health' plan to better address threats to all living beings as well as the environment. The 'Quadripartite' — comprising the United Nations (UN) Food and Agriculture Organization (FAO), the UN Environment Programme (UNEP), the World Health Organization (WHO), and the World Organisation for Animal Health — unveiled the five-year One Health Joint Action Plan.

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Pre-Connect

One Health Joint Action Plan

The One Health Joint Plan of Action (2022-2026) seeks to improve the health of humans, animals, plants, and the environment while contributing to sustainable development. The Joint Plan of Action will create a framework and integrate systems and capacity to collectively better prevent, predict, detect and respond to health threats.

The five-year plan outlines six action tracks:

- Enhancing One Health's capacities to strengthen health systems.
- Reducing the risks from emerging and re-emerging zoonotic epidemics and pandemics
- Controlling and eliminating endemic zoonotic
- Controlling neglected tropical, and vector-borne diseases.
- Strengthening the assessment, management, and communication of food safety risks.
- Curbing the silent pandemic of antimicrobial resistance

One Health Concept

- 'One Health is an integrated, unifying approach to balance and optimize the health of people, animals, and the environment. It is particularly important to prevent, predict, detect, and respond to global health threats such as the COVID-19 pandemic.
- The One Health approach is particularly relevant for food and water safety, nutrition, and the control of zoonosis which are diseases that can spread between animals and humans, such as flu, rabies, and Rift Valley fever.

Global action plan on antimicrobial resistance

Antimicrobial resistance threatens the very core of modern medicine and the sustainability of an effective, global public health response to the enduring threat from infectious diseases

In 2015 World Health Assembly adopted a global action plan on antimicrobial resistance, to improve awareness and understanding of antimicrobial resistance through effective communication, education and training.

Significance

- ✓ The plan has outlined joint action to preserve antimicrobial efficacy. It also focused on ensuring sustainable and equitable access to antimicrobials for responsible and prudent use in human, animal, and plant health has been outlined for it.
- ✓ One Health is one of the guiding principles of the new international agreement for pandemic prevention, preparedness, and response.
- ✓ To strengthen collaboration and policies across these many areas and reduce the risk of future pandemics and epidemics while also addressing the ongoing burden of endemic and non-communicable diseases
- ✓ A One Health approach is necessary to make sure that all sectors and stakeholders communicate and collaborate successfully.

PEPPER IT WITH

One Health Pilot Project, Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS), Lumpy skin disease and its impact

Way Forward

- ✚ To implement One Health, major structural changes are required to integrate the human, animal, and environmental health fields and support multi-sectoral communication, collaboration, coordination, and capacity strengthening.
- ✚ Surveillance that monitors the risks and helps to identify patterns across these many areas is needed.
- ✚ In addition, new research should integrate the impact of these different fields, particularly on the drivers that lead to crises.
- ✚ A One Health approach must be central to our shared work to strengthen the world's defences against epidemics and pandemics such as COVID-19.

State of Rural Women

News Excerpt

Women need to be included in all facets of livestock development — breeding, veterinary care, extension services, training, or access to credit and markets.

Pre-Connect

Women in rural India

- Rural women are key agents for achieving the transformational economic, environmental, and social changes required for sustainable development.
- But limited access to credit, health care, and education are among the many challenges they face, which are further aggravated by the global food and economic crises and climate change.
- Empowering them is key not only to the well-being of individuals, families, and rural communities but also to overall economic productivity.

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- Rural women are vital and productive workers in India's national economy. There is a statistical bias in underestimating the role of rural women in development.

Rural women's role in India's agricultural revolution

As per the census, India is an agrarian economy with about 54.6 per cent of the total workforce engaged in agricultural and allied sector activities. Rural women are torchbearers for social, economic, and environmental transformation for the 'New India'.

• Women as a workforce:

- In India, Agriculture employs about 80 per cent of rural women. Empowering and mainstreaming rural women's workforce in agriculture can bring a paradigm shift toward economic growth.
- It will enhance food and nutrition security and alleviate poverty and hunger and also be a step towards achieving Sustainable Development Goals by 2030.
- As per the Ministry of Statistics and Programme Implementation, the workforce participation rate for rural females is significantly higher at 41.8 percent than for urban women participation rate at 35.31 percent.

• Women in livestock and cattle rearing:

- The livestock accounted for 5% of national income and 28% of agricultural GDP in 2018-19 and is one of the most rapidly growing components of the rural economy of India
- In rural households that own livestock, women are invariably engaged in animal rearing.

• Women in Dairy:

- There were five million women members in dairy co-operatives in 2015-16, and this increased further to 5.4 million in 2020-21.
- Women accounted for 31% of all members of dairy producer cooperatives in 2020-21.

Challenges faced by rural women

✓ Poverty

- With a lack of services and infrastructure, rural women carry a great part of the burden of providing water and fuel for their households.
- The majority of rural women suffer not only from economic poverty but also from 'information poverty'.

✓ Unstable rural economy

- Women's employment has taken an alarming dip in rural areas as they are limited to manual labor while men take up machine-related work, they are forced to take up short-term transient work.

✓ Data Collection Problems

- Employment surveys such as the Periodic Labour Force Survey fail to collect data on specific activities of persons engaged primarily in domestic duties. So, the undercounting of women in the livestock economy continues.
- Exception of participation in dairy co-operatives, specifically in milk marketing, women's role in the livestock economy is not as widely known or discussed.

✓ Patriarchal rural society

- Gender inequalities in rural employment exist and persist because of a range of interlinked social, economic, and political factors.

Government initiatives for empowering rural women:

Pradhan Mantri Kaushal Vikas Yojana

Ministry of Skill and Development's flagship scheme Pradhan Mantri Kaushal Vikas Yojana (PMKVY) strives to promote increased participation of women in the workforce through appropriate skilling and gender mainstreaming of skills. Under PMKVY, over 40 lakh women have been certified which constitutes more than 40% of the total certified

Skill India Mission:

- ❖ Long term and short-term training to promote increased participation of women in the workforce through appropriate skilling and gender mainstreaming of skills.
- ❖ Under the Recognition of Prior Learning (RPL), more than 4 lakh women candidates have been oriented in different skill areas, recognizing their existing skills through a formal certificate and giving them a means to earn better livelihood.
- ❖ Through training partners such as Mann Deshi Foundation, Shri Mahila Sewa Sahkari Bank Limited and Sri Sarada Math Rasik Bhita are working exclusively on skill development of women, especially in rural areas.
- ❖ National Entrepreneurship Awards, recognized entrepreneurial journeys of women at them.
- ❖ Skill India is encouraging participation of women in new-age job roles aligned to Industry such as Artificial Intelligence, 3D printing, Data Analytics etc. and has witnessed increased participation of women in hard skills like welding, automobile mechanics etc.

- Men exercise decisions even in women-only dairy cooperatives, and local elections using females as just winning faces.
- Domestic violence is high in Indian homes
- ✓ **Poor Health and sanitation**
 - Rural women lack maternal health care as well as menstrual health care.
 - Lack of separate toilets for girls in schools, lack of security while traveling from home to school, and lack of female teachers in schools, are some of the reasons behind the high drop-out rate of girls from schools.
- ✓ **Lack of Technical Knowledge**
 - Women livestock farmers lacked technical knowledge on the choice of animals (breeding) and veterinary care. According to the village surveys, men invariably performed these specific tasks and took animals for artificial insemination.
 - Women in poor households, without collateral to offer to banks, found it difficult to avail of loans to purchase livestock.

Way Forward

- **Education and training:** Rural women in India are less literate than rural men. There is a negative attitude of the family towards educating the girl child. Hence educating them, will empower them.
- **More surveys:** More surveys should be conducted so that more issues that are obstructing women from growing and working come up and can be solved.
- **Ease in banking process:** Women in poor households, without collateral to offer to banks, found it difficult to avail of loans. Banking and other techniques should be made simple and user-friendly, especially in rural areas.
- **Improvement in implementation of schemes:** Schemes are launched but their implementation becomes difficult because of a lack of information among rural women and secondary harsh technical processes. Hence implementation needs improvement.
- Women should be included in every stage of decision-making and development of agriculture. Rural women should be empowered by giving them decision-making powers, especially at the village level.
- **Promote Gender Equality:** It is well established that educating and providing women with opportunities to take part in skilled paid employment provides benefits to families and the nation.

PEPPER IT WITH

State of women in India, Gender equality, National Commission for women, Role of women in Research and Development

Two Finger Test

News Excerpt

The Supreme Court imposed a ban on the two-finger test in a rape case. The Supreme Court said that those conducting the 'two-finger test' on alleged rape victims will be held guilty of misconduct.



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Pre-Connect

About Two-finger Test

- The test is a Per Vaginum examination also called a two-finger test.
- The test is based on determining the laxity of vaginal muscle and examining whether the hymen is ruptured or not. The test involves the women subjected to assault and inserting two fingers into a woman's vagina by a medical practitioner.
- The test has been criticized by many women and human rights activists and even the WHO handbook dealing with sexual assault victims says, "There is no place for virginity (or 'two-finger') testing; it has no scientific validity."
- However, the process has been touted as unscientific and regressive, and such 'information' has no bearing on an allegation of rape.
- Per vaginum examination can be done only in adult women when medically indicated.

About Judgement

- Any person including a medical professional found conducting a two-finger test on a victim in rape or penetrative sexual assault cases will be guilty of misconduct.
- The court also stated the test is based on the incorrect assumption about a sexually active woman cannot be raped.
- The woman's sexual history is immaterial while adjudicating whether the accused raped her.
- Persistent attacks on survivors' character will not be tolerated.
- Further, the probative value of a woman's testimony does not depend upon her sexual history.
- The court stated "Whether a woman is "habituated to sexual intercourse" or "habitual to sexual intercourse" is irrelevant for determining whether the components of Section 375 of the IPC (rape) are present in a particular case."

Earlier attempts to ban Two finger test

- ❖ After the Nirbhaya case in 2012, the Verma Committee formed under former CJI JS Verma, recommended the banning of the two-finger test.
- ❖ In 2013, under the Criminal Laws (Amendment) Act, 2013, the test was made illegal.
- ❖ In 2013 the apex court had held that the two-finger test violates a woman's right to privacy and asked the government to provide better medical procedures to confirm sexual assault.
- ❖ In the International Covenant on Economic, Social, and Cultural Rights 1966 and the UN Declaration of Basic Principles of Justice for Victims of Crime and Abuse of Power 1985, the apex court said rape survivors are entitled to legal recourse that does not re-traumatise them or violate their physical or mental integrity and dignity.
- ❖ In April this year, the Madras High Court directed the state to ban the two-finger test.
- ❖ National Medical Commission (NMC), made modifications to modules for forensic medicine, including guidelines about the two-finger test.

Why the test is wrong?

- ✓ **Traumatizing for women:** A woman has to through the pain that the test demands after facing such a dilemma. It's emotionally, physically, and mentally traumatizing.
- ✓ **Unscientific in Nature:** The test is based on the hymen's determination, whether a woman is sexually active or not. However, it might be present or not present in women from birth or might rupture due to extreme physical work, not necessarily due to sexual intercourse. Hence, it is baseless and unscientific. Moreover, a test is based on the laxity of vagina muscles which again depends on many factors. For example, tension, psychological state, some infections, etc. Even, the WHO claims there is no validity of this test.
- ✓ **Downgrades privacy and dignity of women:** This is unethical and violates the basic right to privacy and hampers women's dignity. Also, no woman would ever give consent for such a baseless test but they have to go through it. This test is against basic human rights.
- ✓ **Patriarchal and sexist:** This test is both sexist and patriarchal. It puts already victimized women in a state of dilemma, where their choice, rights, and dignity are put at stake. Moreover, the convicted person has nothing to prove, the victim is victimized more.
- ✓ **Survivors are silenced and intimidated:** Survivors face discrimination and inaction from the police and other legal authorities and are often coerced into settling or compromising their cases even though this is not permitted under Indian law.

Significance of this judgement in India

- **Change in pattern:** This judgement has immense significance because it breaks the historical pattern of rape convictions in India. There will be a new perspective in rape-related judgements where women will not be subjected to tyranny.
- **Breaks stereotypes about women's virginity:** This judgement also breaks the stereotypical image of women's virginity judgement based on the presence of a hymen. Moreover, this judgement also gives women the right to privacy even in matters of sexual intercourse.
- **Restores faith in courts:** Through this judgement is refreshing in terms of judgement as we get new hope and faith in the court's decision. Moreover, there are many repressive laws and processes which need to be restructured, this judgement gives us new hope for betterment.

- **Proceedings based on ethics:** This judgement establishes that even during proceedings court will work as per ethical means, which are morally right. Also, this judgement has given a message that women's dignity is important. The judgement is important as now a continuous attack on survivors' character based on their sexual or relationship history, will no longer be tolerated.

PEPPER IT WITH

Marital Rape, Nirbhya Fund, Gender based violence in India, LGBTQ rights

Mother Tongue Survey

News Excerpt

The Ministry of Home Affairs (MHA) has completed the Mother Tongue Survey of India (MTSI) with field videography of the country's 576 languages.

Mother Tongue Survey of India

- It is a project that "surveys the mother tongues, which are returned consistently across two and more Census decades".
- It also analyses the linguistic features of these languages.
- NIC and National Film Development Corporation (NFDC) together will document and preserve the linguistic data of surveyed mother tongues in audio-video files.
- For the present survey, government will be using new geospatial technology and special software.

Significance of MTSI

- **Preserving India's cultural diversity and heritage:** The survey will readdress the long-lost forgotten languages of different regions.
- **Nurture creativity:** The mother tongue lays a strong foundation for the expression of creativity.
- **Language is a tool for intellectual and emotional expression** and is a vehicle for the inter-generational transmission of culture, scientific knowledge, and worldview. It connects the past with the present.
- **Preserving Languages:** When a language declines, it takes with it an entire knowledge system and a unique perspective of viewing the universe.
- **Languages can fulfil the essence of effective democracy:** The mother tongue will not only become the medium of instruction at the primary level but also take all steps to make it the language of administration, banking, and judicial proceedings.
- **Encouraging both literature and science** helps in **decolonizing the minds** of Indian Youth.

Language Profile of India

More than 19,500 languages and dialects are spoken in India as mother tongues, according to the Language Census. There are 121 languages which are spoken by 10,000 or more people in the country. Near about 196 languages in India are classified as endangered. In India, there are a number of tribal languages, many of which are headed towards extinction. In India, Hindi was the most spoken mother tongue, followed by Bengali.

National Curriculum Framework

- ✓ The new National Curriculum Framework (NCF) has recommended that the mother tongue should be the primary medium of instruction in schools for children up to eight years of age.
- ✓ As per NCF, evidence from research confirms the importance of teaching children in their mother tongue during the foundational years and beyond.
- ✓ It ensures that the medium of instruction until at least Grade five or at least eighth will be in the mother tongue languages.
- ✓ The policy did not place a bar on learning any language, be it "English or any global language" but it is focused on encouraging local languages.
- ✓ The focus is on promoting the mother tongue and regional languages.

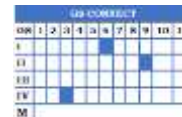
PEPPER IT WITH

New Education Policy, Special Officer for Linguistic Minorities, Scheduled languages of India.

World Population Day

News Excerpt

On World Population Day, the United Nations Department of Economic and Social Affairs released the World Population Prospects 2022. Around mid-November, the world will have 8 billion living human beings, according to an estimate from the United Nations.

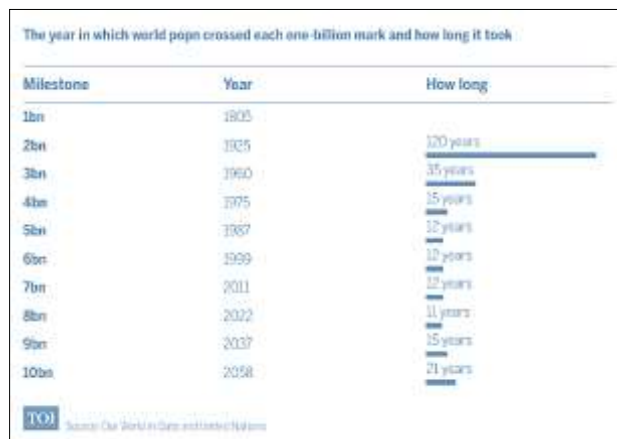


Pre-Connect

Malthus Theory: Propounded in the 18th century by Thomas Malthus. It states that whenever the human population surpassed the earth's ability to feed them, famines would wipe out enough people to restore equilibrium. Malthus believed that humanity's failure to keep its population in check would lead to poor living standards.

The World Population Prospects (WPP) Report

- It is the biennial report prepared by the Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat.
- The first edition was published in 1951 and recently it published the 27th edition of the same.



Key highlights of the present report are:

- The global population has increased from 7.9 billion in 2021 to 8 billion in 2022.
- India is expected to surpass China as the world's most populous country in 2023.
- By 2030, the world's population could grow to around 8.5 billion and 9.7 billion in 2050, before reaching a peak of around 10.4 billion in 2080s. The population is expected to remain at that level until 2100.
- There is an increase of almost 9 years since 1990 as life expectancy reached 72.8 years in 2019.
- Reductions in mortality are projected to result in average longevity of around 77.2 years globally in 2050.
- Life expectancy at birth for women exceeded that for men by 5.4 years globally, with female and male life expectancies standing at 73.8 and 68.4, respectively.
- More than half of the projected increase in the global population up to 2050 will be concentrated in eight countries: the Democratic Republic of the Congo, Egypt,

Impact of COVID 19

All components of population change, including fertility, mortality and migration have been impacted during COVID:

- Global life expectancy at birth fell to 71 years in 2021 from 72.8 in 2019
- The pandemic's impact on life expectancy has varied across regions.
 - In Central and Southern Asia and Latin America and the Caribbean, life expectancy at birth fell by almost three years between 2019 and 2021.
 - The combined population of Australia and New Zealand gained 1.2 years due to lower mortality risks during the pandemic.
- The impact on fertility levels has been mixed.
 - In low and middle-income countries, both availability and demand for contraception, remained relatively stable.
 - In high-income countries, successive waves of the pandemic may have generated short-term fluctuations in numbers of pregnancies and births.

Ethiopia, India, Nigeria, Pakistan, the Philippines, and the United Republic of Tanzania.

- There will be more pressure on resources as the 46 least developed countries (LDCs) are among the world's fastest-growing and several are projected to double in population between 2022 and 2050.

Impacts on World:

- **Impact on Power balance:** As the population in the West ages, the global strategic fulcrum will shift towards Asia and Africa.
- **Ageing of Population:** An ageing population across the globe will lead to new challenges ranging from socio-economic to political. This will also act as an opportunity for younger countries like India to export their skilled manpower to serve the ageing countries.
- **Declining Fertility:** According to the WPP report, Global fertility is projected to decline to 2.1 births per woman by 2050. This will help in easing the pressure on the resources and aid in combating climate change. However, it also rings an alarm bell for the depopulation of the world.
- **Migration factor:** It will be the key driver of population growth in high-income countries. Migration created by changing age composition and labor demands poses a different challenge. With a growing influx of culturally diverse migrants, host cultures find themselves between a rock and a hard place.
- **Ethnic Tensions:** With an increasing number of immigrants, the labor force problem may settle down but it also increases the power of minorities in these host countries which creates ethnic tensions.

Way Forward

India is required to take several steps in the coming times such as:

- India should work towards enhancing the lives of its current and future citizens and address challenges plaguing its economy.
- In order to reap the benefits of the demographic dividend India must invest in the education and health of its workforce.
- Sustainable and inclusive development is the best contraceptive for population growth.

Key Challenges for India

- ❖ With a growing number of aged populations, the dependency will increase on working-age people who will be expected to support a growing number of the aged.
- ❖ Providing quality jobs is one of the major challenges India has to deal with.
- ❖ Along with quality jobs dealing with sustainable growth maintenance, in the backdrop of climate change will be a big challenge.
- ❖ The labor force participation of women in India has been declining, this will impact the growth trajectory of India.

Smart Phones and Indian Children

News Excerpt

Indian children are the youngest to reach mobile maturity, said a McAfee study conducted amongst parents and children across 10 geographies.

About the Issue in India

- Smartphone use in the country among children between the age of 10-14 is 83%, which is 7% higher than the international average of 76%.
- This has resulted in several negative impacts on children such as:
 - **Increase in online risk:** It may lead to cyberbullying of kids in India as they have high exposure to online risks. Additionally, some 22% of Indian children experienced cyberbullying at some time which was notably 5% higher than the global average of 17%, found the study. Both children and parents are usually unaware of cyber security rules.
 - **Financial Risk:** Chances of Children leaking financial information are very high. They can engage in a private conversation without knowing their real identity.



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- **Phantom Pocket vibration syndrome:** Phantom pocket vibration syndrome is a condition where many children and a few adults have a false feeling that their cell phone is vibrating in their pockets when it's not. According to recent research, the brain tissues of children absorb about two times more microwave radiation than that of adults, and other studies have reported that the bone marrow of children absorbs ten times more microwave radiation than that of adults.
- Excessive screen time can be associated with symptoms of stress, anxiety, depression, and addiction.
- Obesity due to sedentary screen time, decrease in focus and attention spans, constant feeling of fatigue, feeling of distance from parents are some other harmful effects of smartphone addiction.

The Pandemic Factor

The Covid-19 Pandemic shifted the access to the education to the online platform. As a result, many children were forced to use smartphone for learning process. However, multiple survey points towards the fact that there was no significant improvement in learning ability of children rather it caused smartphone addiction in children.

Best Practices to counter the Mobile addiction

- Recently, California proposed a bill targeting the social media companies responsible for harming children who have become addicted to their products and would no longer let parents sue popular platforms like Instagram and TikTok.
- Belgium, France, Germany, and other technologically sophisticated governments are passing laws or issuing warnings about children's use of wireless devices.
- U.S. and Australia are framing policies on limiting screen time for children. It also discouraged parents from allowing pre-schoolers to be physically inactive for extended periods. In essence, it argued for a family-based strategy for parents to craft a mindful approach to digital technology.
- The American Academy of Pediatrics suggests no screen time for children under two, and a maximum of one hour per day for those aged two to five years focused on high-quality content.

Family Centre feature

- ❖ Recently, Snapchat has launched its first parental control tools which will allow parents to see who their teens are talking to, but not the substance of their conversations.
- ❖ Parents can invite their teens to join Family Center on Snapchat.
- ❖ With teens consent, parents will be able to view their kids' friends list and who they have messaged on the app in the past seven days.
- ❖ They won't be able to see personal messages.
- ❖ Prior to Family Center, Snap already had some teen protection policies in place.

Way Forward

- ✓ There is a need for strict policies restricting the age-wise use of smartphones in India, we should take inspiration from Belgium, and the USA which have shown interest in the ill effects of smartphones on children.
- ✓ More surveys should be conducted, like the USA recently surveyed what happened when smartphones are taken away from children, the results were good as children became habitual in a few weeks.
- ✓ Health hazards related to smartphones should be publicized and awareness programs related to the risk of smartphones should be organized.
- ✓ Children should also indulge in physical activities; schools should be made more interested in including various co-curricular activities.

PEPPER IT WITH

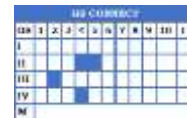
Cyber laws in India, New Education Policy UDANN Scheme

ECONOMY

Old Pension Scheme vs New Pension Scheme

News Excerpt

In recent times, the revival of the Old Pension Scheme (OPS) has become a center stage of Indian politics, especially after the state of Rajasthan and Chhattisgarh already reverted to the Old Pension Scheme.



Pre-Connect

Understanding OPS and NPS

- OPS or PAYG (Pay as you Go) scheme is an **unfunded pension scheme** (employee do not have to contribute) where current revenues fund pension benefits.
- PAYG involved a direct transfer of resources **from the current generation of taxpayers to fund the present pensioners.**
- **Causes behind discontinuance of PAGY scheme:**
 - Unviable pension debt cost for the governments (because of Increasing life expectancy)
 - It gave incentive for early retirement, depriving government of the service of employees.
- Pension sector reforms in India started with the OASIS report in 1999 as part of the financial sector reforms. The basic aim of these reforms was to transform the financial markets on free market principles.
- In 2003, the Government of India decided to introduce New Pension Scheme (NPS) (based on Project OASIS report) for all those who joined government services after January 1, 2004. For states, **it was made voluntary** but within 2 years 27 states joined the scheme.
- Contribution in NPS trust of employee:
 - Employees (10% of Basic Pay)
 - Government (14% of Basic Pay)
- The NPS Trust is regulated by **Pension Fund Development Regulatory Authority (PFRDA)** through the PFRDA (NPS Trust) regulations, 2015. PFRDA appoints the Chairman, Trustees and the CEO of the NPS Trust.
- Contribution to NPS trust **is invested in G-Sec, Corporate bonds, shares depending on employee preferences via fund managers (like LIC Pension fund, Kotak Mahindra Pension Fund).**

Problems associated with NPS

- ❖ The uncertainty associated with the pension amount on retirement.
- ❖ Impact of market fluctuations on the pension vis-à-vis stable returns to the inflation-linked pension of the OPS.
- ❖ Employee and Government contributions (either or both) are not being transferred for investment in time.
- ❖ A part of maturity amount is taxable which makes it unpopular.
- ❖ NPS is complex with multiple options which makes it difficult for many employees to understand it.
- ❖ Lack of any guaranteed pay out feature deters risk averse sections.

Viability of OPS

There are several reasons which point toward the fact that OPS is not a viable option for India these include:

- **Overstretched State Government Finances:** High contribution to pension from state government's revenue means that they have little fund left to invest in development projects like building roads and schools.
- Almost 56% of the expenditure of the states that is committed (interest payments, salary, and pension payments) is met out of state revenue receipts. In some states like Punjab, Kerala, West Bengal, and Andhra Pradesh it is even higher than 70% of the state's revenue receipts. This means there is very less funding available for development, for example, the Government of Rajasthan's decision to revert to OPS would mean that 6% of families in Rajasthan will control 56% of state revenue while the remaining 94% have to survive on the remaining 44%.
- **Unsustainable debt burden:** According to an estimate If all Indian states migrate to OPS then liabilities will be around 13% of India's GDP.

- **Demographic Factor:** India's demographic profile is currently undergoing a structural change with declining fertility, increasing longevity, and ageing Southern States coupled with young Northern States. An increase in the old-age dependency ratio imposes significant demands on the working-age population to maintain the intergenerational flow of benefits to the pensioners.

Government Initiatives to make NPS more attractive

The Government of India on its part has taken several decisions to make NPS more attractive such as:

- ✓ The Government now makes a 14% matching contribution against the 10% monthly contribution of employees.
- ✓ A subscriber would be adequately compensated for any non-deposit or delayed deposit of contributions during 2004-12.
- ✓ The employee has now the exclusive right to choose the fund manager and his investment pie.
- ✓ 60% of the corpus is tax-free and the entry age has now been raised to 70 years

Recommendations to make NPS more effective:

Comptroller and Auditor General of India (CAG) in its report made recommendations to make NPS more effective. These include:

- A foolproof system needs to be put in place to ensure that all nodal offices and eligible employees are registered under NPS.
- Delays need to be penalized and compensation effected to avoid a loss to the subscriber.
- Government to ensure that rules on service matters are in place for the government NPS subscribers.
- Government must identify all cases of legacy contributions, not remitted to a Trustee Bank and ensure its remittance with due interest and compensation to prevent loss to the subscriber.
- In line with PFRDA Act, immediate steps are to be taken to provide **Minimum Assured Return** to the subscriber, ensuring timely social security post-retirement.

PEPPER IT WITH

PFRDA, Jeevan Praman, Atal Pension Yojana, PM Shram Yogi Mandhan, National Social Assistance Programme, Pravasi Bhartiya Bima Yojana

Conclusion

The sudden reversion to the old pension scheme with retrospective effect is bound to increase the current expenditure of the state governments. The actual effect of the decision will be felt after 2035. India should learn from Brazil whose almost 12-13 percent of the GDP goes into paying pensions. India with just 16 percent of the tax to GDP ratio doesn't have the wherewithal to revert to the OPS. Further, it is not justifiable to spend 12-13% of GDP on just 2% of government employees. Government should instead focus on solving some of the issues related to NPS to make it more acceptable.

Financial Risk Associated with Big Techs

News Excerpt

Reserve Bank of India, in a recent paper, flagged the financial risk and challenges associated with the Big techs (Large non-financial technology firms).



Understanding Big Tech in the Financial sector

- **The technology firms such as Alibaba, Amazon, Facebook, Google, and Tencent** are jointly considered big tech due to the data networks they generate.
- Big Tech is providing three major financial services which are **payments, credit provisioning, and banking**. For this, they use subsidiaries or joint ventures with varying ownership control.
- There are several advantages Big Tech has in the financial sector over other players such as a **large client base, customer data, and the generation of a strong network**.

- Services like a search engine and e-commerce platforms along with financial muscle allow them to create **a strong footprint and also have a financial muscle to withstand competitive pressures.**

Risk to Financial Sector due to Big Techs

- **Complex Governance Structure-** It limits effective oversight and design of entity-based regulation.
- **Shadow Banking-** Their direct exposure to financial services can lead to shadow banking (practice of banking like activities performed by non-banking finance companies, which are not subject to strict regulation).
- **Cross-Functional Database-** Since they use third-party service providers they can easily acquire cross-functional databases which can be exploited to their advantage.
- **Data Privacy-** Their data processing is opaque and therefore privacy is a big issue.
- **Level-Playing Field:** Because of their inherent advantage in terms of a clientele base using their non-financial services like search engine, e-commerce platforms, nascent fintechs will find it difficult to compete with them. They use tools like the exclusivity of participants, discriminate across vendors, give preferential treatment to their products, bundle their services, and create cross-product subsidization.

Base Erosion and Profit Shifting (BEPS)

Many multinational corporations avoid taxation of their profit in host countries by transferring their profit to shell companies in a tax haven. This they do by showing the transfer as an operating cost as a result they show zero profit. This is known as Base Erosion and Profit Shifting. India has joined OECD/G20 Inclusive Framework tax deal to deal with the issue.

India's Response

- ✓ RBI is taking efforts to make sure that **payment data is locally stored** and bring all critical payment intermediaries into the formal framework.
- ✓ India has also taken initiatives **to increase the payment acceptance infrastructure.**
- ✓ India is also developing **a new data protection law.**

PEPPER IT WITH

Minimum Alternative Tax, Corporation Tax, GAFA Tax, Shell Companies, Inventory based model vs Marketplace based model of e-commerce, GDPR

Measures Suggested

- **Ensure Competition and Market contestability-** Introduce regulations to preserve a level playing field and competition by ensuring equitable access to data.
- **Securing Data Protection and Data-Sharing-** Make sure that the user's data is collected and utilized for the purpose consented by the respective user. Users must also be able to get their data back from big tech. There is a need for a more comprehensive open banking regime, which protects business users from deceptive or misleading practices.
- **Tracking Conduct of Business-** There is a need to lay clear rules defining a list of do's and don't's to stop Big Techs from imposing unfair conditions on businesses and consumers. Also, laws should be made which protect the fundamental rights of users online and make digital space safer.
- **Track New Linkages:** Emerging markets need to be mindful of the new inter-linkages that big techs might create with the existing financial institutions.

CCI Fine on Google

News Excerpt

The Competition Commission of India (CCI) has slapped a fine on Google's parent company Alphabet Inc.

Pre-Connect

Competition Commission of India (CCI)

- It is a **statutory body** established under the Competition Act 2002.
- It is one of the affiliated offices of **Ministry of Corporate Affairs.**
- It consists of a Chairperson and **6 Members appointed by the Central Government.**
- It is a **quasi-judicial body** that eliminates practices harming competition.



- It promotes and sustains **competition** and protects the **interests of consumers** and **ensures freedom of trade** in the markets of India.
- It is also required to **give an opinion on competition issues** on a reference received from a statutory authority established under any other law.
- It also **undertakes competition advocacy**, creates public awareness, and **imparts training on competition issues**.

Google Fallacy

CCI Charged Google for two reasons:

- **Google's Mobile Application Distribution Agreement (MADA)** forces **Original Equipment Manufacturers (OEM)** to pre-install **Google Mobile Suite (GMS)** which doesn't come with the **option of uninstalling**. This is considered by CCI as a violation of **Section 4** of the Competition Act which is related **to the abuse of a dominant position**.
- **Google's Play Store doesn't allow** mobile app developers to use third-party payment services on its app store. It forces them exclusively and mandatorily use **Google Play's billing system (GPBS)** not only for receiving payments for apps and other digital products but also for certain in-app purchases. **However, it doesn't have the same policy for its own apps like YouTube.**

Shortfalls of CCI decision

- ✓ **Google is not alone:** Device makers who are using Android OS are also pre-installing their apps which are later uninstalleable. But since

Competition Act (CA) 2002

The CA 2002 was brought on the recommendation of the Raghvan committee. The act replaced **The Monopolies and Restrictive Trade Practices Act, 1969** (MRTP Act). The act prohibits anti-competitive agreements, and abuse of dominant position by enterprises and regulates combinations (acquisition, acquiring of control, and M&A), which cause or are likely to cause an appreciable adverse effect on competition within India. The Act also provided for the Competition Appellate Tribunal which was replaced by Company Law Appellate Tribunal (NCLAT) in 2017.

Third-Party Payment

Google and Apple don't allow third-party payment as it will affect the revenue they earn from their cut in the app store and in-app sales. This revenue accounts for about 15% of their total revenues.

Predatory Practices of E-Commerce Giants

- ❖ **Deep Discounting and Predatory Pricing-** They stifle competition by bearing short-term losses to attract consumers. This has forced many small shops to shut down.
- ❖ **Preferential treatment to select sellers-** Despite their claim of being just a platform for sellers, E-commerce giants favor a few sellers over lakhs of others.
- ❖ **Promotion of their own brands:** E-commerce giants promote their own products by manipulating the search results of its platform.
- ❖ **Counterfeit Product-** A survey conducted in 2018 had shown that nearly 1 in 5 Indian consumers had received a counterfeit product from an e-commerce platform in the first half of 2018

Harmonization between the country's regulatory framework on competition, consumer protection, and FDI is the need of the hour. **Regulation of the sector should be done by CCI, to balance both producer and consumer interests.**

The National Anti-Profiteering Authority (NAA)

- ❖ GST Council has decided to subsume its anti-profiteering authority NAA with the CCI after its tenure ends in November 2022.
- ❖ Experts have termed the upcoming merger as an uneasy alliance as the mandate of NAA is completely antithetical to the role of CCI. While CCI ensures fair discovery of prices NAA's role is to ensure that tax benefits and input credits are passed onto the end consumers.
- ❖ Further, NAA orders are presently entangled in many court cases and at the same time have huge pendency of cases before themselves. All this will add a burden on the CCI as a competition watchdog observer.
- ❖ CCI is also facing a backlog with a single bench having the responsibility for adjudicating all matters. Therefore, before any merger, there is a need of establishing ground rules and infrastructural capabilities of CCI.

they lack market capitalization like Google they are not fined. This sends a wrong signal and CCI must look again at the issue from a broader perspective, as such one-sided moves had earlier disrupted the telecom sector when new players were allowed to disrupt the ecosystem at the expense of incumbents.

- ✓ **The Retrospective Error:** The penalties imposed are retrospective in nature when no such regulation concerning operating systems, their usage, app stores, etc existed. So it is like punishing an operator for a period when no regulatory guideline was in place.
- ✓ **Lessons not learned:** CCI should have looked into the well-developed regulatory systems in the telecom sector. They don't allow dual pricing i.e. an app available to subscribers for free cannot be charged to others when published on the web. Similar guidelines are available for social media platforms.

Conclusion

CCI's decision was though in line with a similar decision made in South Korea in 2021 and will force Google to change its discriminatory practices. But since the issue of anti-competitive practices in the Android ecosystem has been flagged by CCI, the government should expeditiously put in place a set of guidelines governing the entire app world. Else, such issues would keep on vitiating the competitive landscape and stifle innovation.

PEPPER IT WITH

NCLAT, BIS, Intent Flow Payment Methodology vs Collect Flow Technology, E-Commerce rules

Internationalisation of Rupee

News Excerpt

Recently, the RBI deputy governor highlighted the advantages and risks associated with the Internationalisation of the Indian Rupee.

Understanding the Internationalisation of the Rupee

- An international currency is a currency that is freely available to non-residents, essentially to settle cross-border transactions.
- Mostly advanced economies' currencies enjoy such status and it confers substantial economic privileges to those countries. For example, the Dollar carries not only hegemonic powers but also immune the US from any Balance of Payment crisis as it can pay for its external deficits with its currency.
- Therefore, an internationalized rupee will be used for settling transactions in both the current account as well as capital account. Presently, India only has current account convertibility. The **SS Tarapore Committee** recommended full capital account convertibility.

Understanding Current and Capital Accounts

Every country keeps a record of all economic transactions made between the residents and non-residents for a specific time.

This is known as the Balance of Payment (BoP). BoP is sub-classified into two parts which are:

Current Account: It includes a transaction of Goods and Services, Income from primary sources such as wages, dividends, and interest, and Income from secondary sources such as remittances, gifts, and donations.

Capital Account: It can also be considered a financial account as it includes Foreign Direct Investment (FDI), Foreign Portfolio Investment (FPI), External Commercial Borrowings (ECBs), NRI investment in the bank, insurance, and other schemes, and foreign exchange reserves of the RBI.

Steps taken towards internationalisation of the Rupee

- Masala Bonds which allowed for external commercial borrowings in Rupees.
- Recently RBI has allowed domestic traders to settle their import and export bills in Indian Rupee. Asian Clearing Union is also developing an arrangement under which importers of each country will have a choice to pay in domestic currency.

Advantages of Internationalisation of the Rupee

- ✓ **Reduction of Currency volatility and vulnerability from external shocks:** As the rupee becomes significant its bargaining power would improve and this will shield it from the

tightening of monetary policies in the US and prevent the free fall of the value of the Indian rupee.

- ✓ **Reduced currency risk for Indian businesses:** Use of Rupee in cross-border transactions mitigates currency risk for Indian business. Protection from currency volatility not only reduces cost of doing business, it also enables better growth of business, improving the chances for Indian business to grow globally.
- ✓ **Reduced need of holding of high Forex reserves:** Maintaining high level of reserves to tide over external shocks, however, involves opportunity cost. The opportunity cost of holding reserves is the foregone investment because resources have been used to purchase reserves instead of increasing domestic capital.
- ✓ **Will enable India circumvent unilateral sanctions imposed by western powers:** Countries like USA imposes sanctions without UN approval and then forces other countries to follow it. This erodes sovereignty of countries like India. More international trade in rupee will reduce this risk.

Design of Indian Currency

Design and changes in the Indian rupee have to be approved by the RBI's Central Board (Under Section 25 of the RBI Act 1934) and the central government. Changes in the design of coins are the prerogative of the central government. RBI's Department of Currency Management looks after the design of banknotes. If the design of a currency note has to change, the Department works on the design and submits it to RBI, which recommends it to the central government. The government gives the final approval. Notes issued by the department so far include:

- ❖ **Ashoka Pillar Banknotes:** The first banknote issued in independent India was the Re 1 note issued in 1949 they had the symbol of the Lion Capital of the Ashoka Pillar at Sarnath in the watermark window.
- ❖ **Mahatma Gandhi (MG) Series,** 1996. 2005 and 2016.

Challenges in the Internationalisation of the Rupee

- **Increase Vulnerabilities:** India is a capital-deficient country, and hence needs foreign capital to fund its growth. If the rupee gets internationalized non residents would hold rupee balances and acquire more Indian assets and thereby increasing exposure and vulnerabilities.
- **Increase Volatilities:** Non-resident holdings of Rupees could exacerbate the pass-through of external stimulus to domestic financial markets. Any global risk-off phase could lead non-residents to convert their Rupee holdings and move out of India.

Way-Forward

- ✚ To move ahead with the Rupee's Internationalisation there is a need to improve macroeconomic fundamentals as the risk associated with an internationalized rupee are unavoidable but are manageable when the fundamentals of the Indian economy are sound and the financial sector is healthy. Compromising on growth by playing it safe is not an optimal choice.
- ✚ There is also a need to develop an efficient swap and foreign exchange market.
- ✚ There is a need to open up and go for liberalized settlements in the rupee for various financial instruments both in India and overseas markets.

PEPPER IT WITH

Liberlised Remittance Scheme, The Mundell-Fleming Trilemma, Taper Tantrum, NEER vs REER, Special Drawing Rights, Tobin Tax

Central Bank Digital Currency

News Excerpt

The Reserve Bank of India had rolled out India's first digital rupee pilot project for the wholesale segment and will soon be launching it for retail users as well.

Pre-Connect

Evolution of Digital Currency

- David Chaum in the year 1983 imagined the concept of Digital Cash based on the cryptographic principles of privacy and security.

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- With the development of Blockchain technology, Bitcoins were developed which eliminated the need for a trusted third party and allowed decentralized payments which are cryptographically signed and secured to validate payments.
- Central banks worldwide have closely monitored the developments in virtual and cryptocurrency for many years before it becomes very volatile and threatened economic stability.

Digital or Crypto Currency in India

- Initially, RBI placed a Ban on Cryptocurrency, but it was revoked in 2020 by Supreme Court as it did not pass the test of proportionality.
- The government of India has formed two committees on Cryptocurrency, one under Dinesh Sharma and another under Subhash Garg, both suggesting to ban cryptocurrency.
- Under the Cryptocurrency and Regulation of Official Digital Currency Bill, 2021, the government was ostensibly planning to ban all private cryptocurrencies. However, the government made it clear that if RBI launches a blockchain-based digital currency it will be permitted.
- In Union Budget 2022, the government announced a 30% Capital Gain Tax on income from virtual digital assets including cryptocurrency and Non-Fungible Tokens. It also proposed 1% TDS on the purchase of Bitcoin.

Central Bank Digital Currency (CBDC)

The need to move to the CBDC emerges from the threats of Private Cryptocurrencies such as:

- ✓ They can lead to money laundering and terror financing.
- ✓ They are prone to frauds and to extreme price volatility, given their highly speculative nature.
- ✓ Holders cannot access central banks as a lender of last resort creating a significant transaction risk.
- ✓ They are backed by non-cash-equivalent assets.
- ✓ A threat to a sovereign currency and a central bank's ability to control and dictate monetary policy.

Advantages of CBDC:

These factors pushed Central Banks toward the development of their own. In May 2020, the People's Bank of China started trials to issue its paper fiat currency in digital format (**Digital renminbi**).

CBDC offers several advantages such as:

- **Flexibility:** They can be effectively designed for specific purposes. They can aid in the better implementation of regulatory and policy restrictions. Payments can be restricted by value, related to the number of transactions, and can be linked to specific goods.
- **Tracking:** CBDC transactions can be tracked, unlike cash which leaves no audit trail. However, the government should also ensure that such tracking doesn't infringe on the privacy of an individual.
- **Cross-border payment settlement:** In a cross-border settlement, differential law, processes, due diligence methods, and even time zone variations feed into delays and higher costs.
- **Domestic Cost and Safety-** It will bring down the cost of printing and transporting physical currency. At the same time, it will reduce the scope of counterfeiting.

Globally, multiple countries are exploring CBDC. Ten countries have launched CBDC, the Bahamas (**Sand Dollar**) was the first to release it in 2020 and recently Jamaica also followed the suit.

E-Rupee

- ✚ It is RBI's CBDC which has sovereign backing and is released in accordance with monetary policy.
- ✚ It is a **legal tender**.
- ✚ It is freely convertible against the physical currency which means the digital currency can be exchanged for cash equivalent to paper notes. Unlike UPI, a customer doesn't need a bank account to transact using e-rupees.
- ✚ The infrastructure of CBDCs is based on Distributed Ledger Technology.
- ✚ They are divided into two categories
 - **CBDC-W:** CBDC-Wholesale is for restricted access to select financial institutions. It is intended for the settlement of interbank transfers and related wholesale transactions. It

has the potential to transform settlement systems for financial transactions and make them more efficient and secure.

- **CBDC-R:** CBDC-Retail is primarily meant for retail transactions. It can provide access to safe money for payment and settlement as it is a direct liability of the Central Bank.
- ✚ There are two models for the issuance and management of CBDCs- Under Direct Model- RBI is responsible for managing all aspects of the CBDC system viz. issuance, account-keeping, and transaction verification. Under the Indirect Model- the central bank issues CBDC to consumers indirectly through intermediaries and any claim by consumers is managed by the intermediary as the central bank only handles wholesale payments to intermediaries.
- ✚ CBDC-R is structured as token-based i.e. like a bearer instrument like banknotes, meaning whosoever holds the tokens at a given point in time would be presumed to own them. CBDC-W is structured as an account-based system in which maintenance of records of balances and transactions of all holders of the CBDC is kept to indicate the ownership of the monetary balances. In a token-based CBDC, the person receiving a token will verify that his ownership of the token is genuine, whereas, in an account-based CBDC, an intermediary verifies the identity of an account holder.

E-Rupee as a Game Changer

- It can impart increased efficiency to government schemes like MNREGA and others, through the Public Finance Management System.
- If offline payment using CBDC gets materialized then it can help in bridging the connectivity gap as experienced in the existing retail-payment systems in remote and Tier 3+ locations.
- For small-value retail payments, it can enable faster checkouts.
- It will also provide resilience to the existing payment system by providing another layer.
- Both domestic and cross-border remittances will see faster transmission and settlement of funds between two parties.

PEPPER IT WITH

Distributed ledger technology, UPI 2.0, National Payment Corporation of India, E-Rupi, KYC Norms, AML/CFT

Challenges

- CBDC ecosystems will face the risk of both cyber-attacks and cyber fraud.
- Privacy is going to be a big issue as people may resort to cash use as it provides anonymity. Further, the data set generated using the CBDC needs clear policy guidelines as it is prone to misuse.
- The presence of a digital divide and financial illiteracy in India is going to be a big challenge. As per data from NFHS-5 only 48.7% of rural males and 24.6% of rural females have ever used the internet.
- Certain unknowns still exist from the adoption, performance, and scalability perspectives.

Way Forward

- RBI should ensure transparency especially when it comes to tech so that people understand the underlying technologies and can trust the same.
- RBI must address the demand side infrastructure and knowledge gap to increase its acceptance and widen its base.
- With the CBDC being “unknown” to all the stakeholders, the lessons derived from the pilot projects will be key. It will help in firming up the numerous variables. This may necessitate a longer roadmap than envisaged towards implementation.

Increase in Minimum Support Price (MSP)

News Excerpt

Cabinet Committee on Economic Affairs (CCEA) have approved the increase in the MSP for all mandated rabi crops for marketing season 2023-24.

Pre-Connect

Understanding MSP

- MSP is the rate at which government purchases crops from farmers. **MSP is announced before each crop sowing season.**

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- MSP is provided for a total of 22 crops which include:
 - **14 Kharif season** (Grown in summer/monsoon seasons) crops- Paddy, Jowar, Bajra, Maize, Ragi, Arhar, Moong, Urad, Groundnut-In-Shell, Soyabean, Sunflower, Sesamum, Nigerseed and Cotton.
 - **6 Rabi season** (Grown in winter season) crops- Wheat, Barley, Gram, Masur(Lentil), Rapeseed/Mustard, Safflower.
 - **3 Commercial Crops**- Jute, Copra (coconut), and Sugarcane (**For Sugarcane, the mechanism is different**).
 - The **MSPs of toria and de-husked coconut** are fixed based on the MSPs of rapeseed/mustard and copra, respectively.
- MSP is computed by **Agriculture Ministry's Commission for Agricultural Costs & Prices (CACP)**. It is based on the following formula- **$A2+FL \times 1.5$ times minimum** wherein
 - **A2**: These are the actual costs directly incurred by the farmer on seeds, fertilizers, pesticides, hired labor, depreciation on farm buildings & machinery, interest on working capital, diesel/electricity for tractor/ pump sets, etc.
 - **FL**: Includes the imputed cost of unpaid family labor.
- National commission on farmers head by M.S Swaminathan recommended 50% profit but using a **different 'C2 formula'**. **C2 factors in rentals and interest forgone** on owned land and fixed capital assets on top of A2+FL.
- There are several factors CACP considers before recommending MSP such as **market price, supply and demand situation for the commodity, implications for consumers, environment, and terms of trade between agriculture and non-agriculture sectors**.

Reason for Hike in MSP

- **Lower production and procurement** for the Central pool
- A sharp **increase** in the retail and wholesale prices of wheat and wheat flour.
- In line with the decision made under Union Budget 2018-19 to fix MSP at a level of at least 1.5 times of All-India weighted average cost of production.
- **Real rural wages** have been de-grown since January 2022, especially for non-agricultural workers.
- **Consumption spending** in rural India decelerated in the current financial year due to slower government spending and the dislocation of livelihoods due to the pandemic

Hike- Wrong Signal

- ✓ **Promoting Water Intensive Crop**- Rising MSPs of water-intensive crops result in the depletion of the water table and also cause water conflicts over river basins. While less water-consuming crops like millets don't attract any MSP.
- ✓ **Lax Implementation**: According to the Shanta Kumar Committee pointed toward the fact that only 6% of the farmers benefited from MSP.
- ✓ **Threaten Nutritional Security**: Implementation of MSP is better for crops like rice and wheat and not so much for nutrition rich crops like nutri-cereals.
- ✓ **Missing Domestic Market Consideration**: The sole focus of the government is to use the MSP regime to fulfill the requirements of National Food Security Act (NFSA) making it effectively a procurement price rather than an MSP. It tends to ignore domestic supply-demand considerations.
- ✓ **Middleman domination**: MSP-based procurement is heavily dependent on commission agents and APMC officials as result it hinders accessibility of smaller farmers.

Way-Forward

- There is a need to focus on **coarse grain** so that a market is created for them like that of Wheat and Paddy. This will not only **promote nutritional security** but also make Indian agriculture climate resilience.
- There is also a need to **invest more in allied activities** like livestock, horticulture, fisheries and sericulture sector.

PEPPER IT WITH

Shanta Kumar Committee, WTO and food subsidies, E-NAM, Gramin Agricultural Markets, Agri Export Policy 2018

- There is a need for a suitable transition to agricultural pricing policy, whereby partial agricultural pricing should be **state-supported and partially market-driven**.

Failure in Inflation Targeting

News Excerpt

The **Monetary Policy Committee (MPC)** of the Reserve Bank of India (RBI) will soon submit its response to the Government of India about the high rate of inflation in the country.

Pre-Connect

Understanding Monetary Policy (MP)

- MP is a macroeconomic policy designed by the Central Bank of a country. It aims to **manage the money supply and interest rates**.
- MP shapes several variables including **consumption, savings, investment, and capital formation among others**.
- RBI since 2016, is following the Inflation target regime under its monetary policy regime. For this, it has a Monetary Planning committee (MPC).
- MPC, Consists of six members-
 - Three from the RBI Side** (RBI Governor as Ex-Officio Chairman, Dy. Governor responsible for Monetary Policy, and One Person nominated by the RBI central board).
 - Three from Government Side** (Selected by Search-cum-Selection Committee headed by Cabinet Secretary)
- They decided **on Repo Rate (Also known as, Policy Rate or Benchmark Rate)** by majority vote. In case of tie, RBI governor has second casting vote.
- The inflation target is **set by the Union government** in consultation with the RBI governor.
- To target inflation benchmark is **Consumer Price Index (combined)**.



Limitation of Monetary Policy

In India, the use of Monetary Policy to target inflation and boost economic growth is impacted by several reasons:

- ❖ **Banking Issues:** A huge level of Non-performing assets (NPA) impacts the transmission of monetary policy. Financial frauds in both Public, as well as Private sector banks, restrict capital formation and impact the trust of depositors. Banks takes 6-12 month to transfer policy-cut benefits to the end customers.
- ❖ **Culture of the Indian Economy:** In western economies, there is a culture of consumerism hence their saving rate is low. But in India, it is diametrically opposite, there is a culture of saving for rainy days. Therefore, Banks don't depend on Repo as a major source of its fund. Further, In India, formal lending is also low, in rural areas informal moneylenders circulate black money and charge high-interest rates to their borrowers.
- ❖ Lack of **ease in doing business** and crucial infrastructure, coupled with heavy dependence on monsoon and high energy imports creates a structural imbalance in the Indian economy.
- ❖ A **high fiscal deficit** and a new trend of populist measures in Indian polity create further trouble for economic policy.
- ❖ **Unable to address supply side issues:** Monetary Policy is effective in managing only the demand-side issues. However, it is unable to address any supply-side constraints (like food inflation because of high import price).

Report to the Government in case of failure of monetary policy

- If the target is not within the range (**within + and – 6 percent band**) for **3 consecutive quarters**, then MPC must send report to the government about the same with remedies.
- Under the RBI Act, 1934, MPC is required to provide the following information to the government:
 - **Reasons for the failure to achieve the inflation target.**
 - **Remedial actions needed to be taken.**
 - **An estimate of the time within which the inflation target shall be achieved under the timely implementation of the proposed remedial actions.**

RBI's Failure: The retail inflation based on CPI(Combined) has remained above 6 per cent since January 2022. This made RBI liable to submit report to the Government.

Challenges RBI facing on Monetary Policy Front

- ✓ **Global Inflation:** The trend of global inflation has forced central banks across the globe to resort to hawkish monetary policy. It had led to massive capital outflows in India.
- ✓ **Oil price rise:** Ukraine War has severely affected the oil supply and crude oil prices. This is driving a rise in the Current Account Deficit (CAD) for India as India is heavily dependent on oil imports.
- ✓ **Rupee Depreciation:** As the US dollar gets strengthened, the Indian rupee is witnessing a depreciation. This has brought imported inflation in India.
- ✓ **Trade Deficit and Current Account Deficit:** India has been witnessing a double whammy of rising Trade deficit and Current account deficit. Both of them are depleting India's forex reserves.
- ✓ **Growth Issue:** There exists a risk to economic growth. As US Federal Reserve tightens its monetary policy risk of a global economic recession looks almost certain.

Conclusion

It is RBI's responsibility to moderate demand to better align with supply, and it cannot shy away from that. In the current milieu, that would require eternal vigilance and prompt, decisive action even if it leads to some overtightening. Further, Geopolitics is increasingly spilling over into domestic economies and like all other countries, India must continue to press the reforms accelerator harder, functioning within the constraints and opportunities the global economy throws up.

PEPPER IT WITH
CPI vs WPI inflation,
Current Account
Deficit (CAD), Forex
Reserves of India

RBI Report on Municipal Finances

The Reserve Bank of India (RBI) has highlighted several lacunae in the working of municipal corporations in its Report on Municipal Finances, compiling and analyzing budgetary data for 201 Municipal Corporations (MCs) across all States

Issues highlighted by the RBI are:

- ❖ No improvement despite the constitutionalization of Local governance in India. As a result, the **quality of essential services remained poor.**
- ❖ Most municipalities do not use their audited financial statements for balance sheet and cash flow management, **resulting in significant inefficiencies**
- ❖ Property tax collections and devolution of taxes and grants from upper tiers of government point toward a **lack of financial autonomy.**
- ❖ Most municipalities rely on borrowings from banks and financial institutions and loans from centre/ state governments as **a result their capital expenditure is minimal.**
- ❖ Municipal Revenue in India hover around 1% of GDP for over a decade. Whereas in Brazil and South Africa it is 7.4% and 6% of the GDP.
- ❖ State Finance Commission **has not been effective in ensuring rule-based devolution of funds to Local governments.**

Reforms Suggested by RBI

- ❖ Municipalities need to **adopt sound and transparent accounting practices** and explore different financing mechanisms to augment their resources.
- ❖ There is a need to **increase the greater flow of financial resources** to local governments.
- ❖ There is a need for a **separate financial law for municipalities.**
- ❖ Centre and the States may share **one-sixth of their GST (Goods and Services Tax)**

Sovereign Green Bond

News Excerpt

Recently, the Government of India has approved the final Sovereign Green Bonds Framework of India. They will be issued for mobilizing resources for green projects.

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Understanding Sovereign Green Bond (SGB)

- A bond is an instrument to raise debt.
- Since 2007, a market for bonds specifically self-labelled or designated as 'green' has emerged. They are exclusively used to finance or re-finance "green" projects, assets, or business activities.
- When these bonds carry guarantees related to the repayment of principal and payment of interest to the government, they are called **sovereign green bonds**.

Headline vs Core Inflation

- ❖ **Headline Inflation:** This is the measure of the total inflation within an economy which is presented in the form of Consumer Price Index or Wholesale Price Index.
- ❖ **Core Inflation:** Headline inflation MINUS inflation in food & energy articles.

- A project is classified "green" based on four key principles. These include

- **Encouraging energy efficiency in resource utilization.**
- **Reducing carbon emissions and greenhouse gases.**
- **Promoting climate resilience.**
- **Improving natural ecosystems and biodiversity, especially in accordance with SDG (Sustainable Development Goals).**

- SGB is in form of dated security. They **will have a tenor and interest rate**. Money raised through SGB is part of overall government borrowing.
- They **may carry lower interest rates than regular government borrowings**.

Battery Swapping

- ❖ It is the procedure that involves exchanging discharged batteries for charged ones.
- ❖ It provides flexibility in charging batteries and keeps the vehicle in operational mode with negligible downtime.
- ❖ It is generally used for smaller vehicles with smaller batteries that are easier to swap, compared to large vehicles such solutions are yet to be developed.
- ❖ NITI Aayog had released a draft on battery swapping in which such swapping will fall under the **Battery-as-a-Service (BaaS) business model. It calls for the Bureau of Energy Efficiency (BEE) to be the Central Nodal Agency responsible for the rollout and implementation of this policy.**

- They carry several benefits such as:
 - They show the intent of the government on the climate front and provide funds to achieve sustainable development.
 - According to **International Energy Agency**, there is a shortage of funding required to reach net zero (around 4 trillion US dollars) emissions in emerging and developing economies. These can help in kickstarting cash flow for the process.
 - It will help in creating a vibrant ecosystem of raising funds for the environment from international investors.
- In 2007, the European Investment Bank issued a **Climate Awareness Bond**, the world's first green bond. **The first sovereign green bonds were issued by Poland and France** as recently as early 2017.
- In end-2019, the share of sovereign issuers in total outstanding GSS bonds was only 4.2 percent, but it increased to 7.5 percent by end-June 2022.

Sovereign Green Bonds Framework

- It is in line with India's commitments under **"Panchamrit"** made during COP 26.
- It will strengthen India's commitment to its Nationally Determined Contribution (NDCs) targets.

PEPPER IT WITH

Carbon Trading, Performance Linked Incentive, Sovereign Gold Bond, Masala Bond, Maharaja Bond

- A new **Green Finance Working Committee (GFWC)** will be constituted to validate key decisions on the issuance of Sovereign Green Bonds.
- **All fossil fuel-related projects have been kept out of the framework**, along with biomass-based renewable energy projects that rely on feedstock from protected areas.

Digital Bank Units

News Excerpt

In line with the decision taken in the Union Budget 2022-23, the PM of India launched dedicated **75 Digital Banking Units (DBU) across 75 districts in the nation.**



Pre-Connect

Digital Bank

- In 2021, NITI Aayog suggested setting up **full-stack digital banks** which will fall **under the Banking Regulation Act 1949**.
- The concept of digital-only banks was mentioned by the finance minister during her **Budget 2022** speech.
- They will be subject to **prudential and liquidity norms** on par with existing commercial banks.
- **They won't have any physical branches** and will rely on the internet for delivering banking services. They will help in the **financial inclusion of rural areas**.

Digital Bank Units (DBUs)

- DBUs **are specialized branches** for delivering **digital banking products and services**. They will be paperless and act as **digital financial literacy centers**.
- They will be housing minimum digital infrastructure for delivering **digital banking products and services in both self-service and assisted modes**.
- Their main objective is to improve the availability of digital infrastructure for banking services. **They will also help accelerate and widen the reach of digital banking services**.
- They will ensure that the benefits of digital banking reach every nook and corner of the country.
- DBUs offer several benefits such as
 - They will give customers **cost-effective and convenient access** and enhanced digital experience of products and services, with most services being available all year round.
 - It will also **assist those who are not tech-savvy** to adopt digital banking.
 - It is another important step in the country's **banking industry journey, from being physical to phygital to digital-first to digital only**.

Digital Public Infrastructure (DPI)

- ❖ DPI comprises foundational population-scale technology systems on which the digital economy operates, **such as identity systems, payment systems, data exchanges, and social registries**.
- ❖ These foundational digital systems can increase resilience and have indeed often been catalysed at a time of crisis. They strengthen a country's ability to address complex and cross-sectoral challenges.
- ❖ A good DPI has following features:
 - **Trust-** Data privacy and security are among the biggest risks for users if DPI is not designed with adequate safeguards. A good DPI is based on 'Security-by-design' and 'privacy-by-design' principles. It ensures accountability by building institutional home for example-UIDAI is the institutional home of the Aadhaar system.
 - **Universal access and inclusion-** access to digital connectivity as well as digital literacy is fundamental to the adoption of DPI. It will ensure that digitisation does not deepen existing regional and socioeconomic divides.
 - **Open Technologies-** A good DPI has ability to collaboratively build solutions on top of core technology infrastructure and reuse & repurpose digital building blocks to create new solutions. This opens the possibility for individuals, startups, non-profits, and others to contribute to population-scale digital solutions.

- DBUs will offer multiple services such as the opening of all types of account, a **Digital kit for customers** which include credit & debit card, internet, and mobile banking, **Digital Kit for the merchant** which include UPI QR Code, POS, etc. It will also provide for end-to-end digital processing of loans and Government sponsored schemes covered under the National Portal.
- **All domestic scheduled commercial banks other than regional rural banks, payments banks, and local area banks can set up DBUs.** As of now, each of the 29 States and eight Union Territories has got at least one DBU.

Financial Fraud-A Road Block

- Digital payments and online banking are sectors that have witnessed a tremendous boost with consumers preferring to transact online given the ease that it offers.
- **But India has witnessed a massive surge in banking and cyber frauds where both consumers and banks have been affected.**
- As per RBI data, in the financial year 2021-2022, it amounted for Rs 128 crore though there is a decline in the amount vis-à-vis the previous year. Therefore, Government has to ensure cyber security before it ushers Indian Banks into a digital era.

PEPPER IT WITH

PM Jan Dhan Yojana, NPCI, UPI, DBT, India Stack

INTERNATIONAL RELATIONS

G-20 Summit

News Excerpt

The 17th annual summit of G-20 was recently held in Bali, Indonesia. India will now assume the G20 presidency and the 18th summit will be held in India in 2023.

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Pre-Connect

About G20

- G-20 was formed in 1999 in the backdrop of the financial crisis that hit East Asia and Southeast Asia (Asian Tiger Economy) in particular. It was formed to promote international financial stability.
- It was formed as a group of 20 emerging market economies and developed countries to promote dialogue related to global economic governance.
- G-20 has been seen as a more representative and egalitarian grouping of global leadership and was particularly useful in steering the global economy after the global financing crisis and banking collapse of 2008.
- Since 2008 G20 summit has become an annual event. The chairmanship of G-20 is rotational, with one nation annually getting the Chair. The G-20 has no formal voting criteria.
- Together, the G20 countries include 60% of the world's population, 80% of the global GDP, and 75% of global trade



India and G20

- At G-20, India focuses on
 - Early conclusion of the UN Convention on International Terrorism.
 - Free movement of labor and capital amongst the states to bolster the global economy.
 - Calls for stronger action against black money.
 - Calls for the right to resort to capital control measures if capital flows become volatile
 - Concerns about having the US dollar as a reserve global currency and exploring widening of the SDR basket and adding more currencies to reduce vulnerabilities
 - Poverty eradication and Inclusive development.

India and G-20 Presidency

- India will be hosting the next G-20 summit as it gets the Presidency of G-20. For the next summit, the theme would be Vasudhaiva Kutumbakam or one earth, one family, one future.
- The G20 presidency could provide an opportunity for India to assume the mantle of a peace-maker on behalf of the Global South. Especially, in the current global scenario in which only India has a consistent and objective view of the developments while maintaining good relations with the belligerents and their supporters.
- India's G20 presidency is an unprecedented opportunity to shape the global narrative in favor of reducing the carbon footprint and encouraging green energy and digitalization as significant components of transformational changes.
- India's G20 presidency should be used to pursue its thought leadership role and the broader goal of reducing polarization, inclusively channelize resources, and firming up optics in favor of developmental priorities.

Outcomes of the Summit

- ✓ Countries condemned Russia's action in Ukraine and demanded its unconditional withdrawal.

- ✓ Agreed to pace interest rate rise carefully to avoid spillovers of the volatility to the currency values.
- ✓ Decided to coordinate action to address food security challenges and applauded the **Black Sea grains initiative**.
- ✓ Decided to continue the efforts to achieve the temperature goal from the 2015 Paris Agreement on climate change.
- ✓ Decided to strengthen collaboration to develop digital skills and digital literacy to harness the positive impacts of digital transformation, especially for women, girls, and people in vulnerable situations.
- ✓ Reaffirmed their commitment to strengthen global health governance, with the leading and coordination role of WHO and other international organizations. They welcomed the establishment of the Pandemic Fund hosted by the World bank.

G20 and Digital Public Infrastructure (DPI)

DPI are foundational digital systems, can increase resilience and have indeed often been catalysed at a time of crisis. Representing nearly 60 percent of the world's population, the G20 can be a strong advocate for DPI as necessary for strengthening country, regional, and global resilience in an age of recurrent crises. To achieve good DPI G20 member can:

- ❖ Committing to open data access
- ❖ Encourage inclusive private and public collaboration
- ❖ Increase public sector support and funding for joint DPI
- ❖ Set the global norms and standards to protect people

The G20 can play a pivotal role in stewarding inclusive approaches to digital transformation, directing international development cooperation, and strengthening multilateralism. DPI can champion standards and protocols for free, inclusive, innovative, and open DPI to transform the lives of the people and for the larger global good.

Challenges for G-20

- The Russia-Ukraine conflict has not only resulted in geopolitical uncertainty but also resulted in global inflation.
- The double whammy of war and recovery from the pandemic has resulted in the slowdown of Major global economies. Major economies are witnessing a sharp slowdown and persistently high inflation at historic highs in several countries.
- The world economy is struggling with geopolitical rifts ranging from the US-China rivalry to instability in Europe.

Troika

At the G20, the member holding the rotatory presidency every year, works together with its predecessor and successor, together known as Troika, to ensure continuity of the agenda. Currently Italy, Indonesia, and India are the Troika countries. When India assumes the presidency on December 1, it will be part of the Troika with its predecessor Indonesia and successor Brazil.

Way Forward

- ✚ The impact of Covid-19 has not weaned out and governments across the world had to find ways to help the vulnerable without increasing debt levels and inflation. For this, they should monitor external risks carefully.
- ✚ G-20 should act collectively to prevent further fragmentation and develop a strong, sustainable, balanced, and inclusive recovery.
- ✚ G-20 needs to push for a more open, stable, and transparent rule-based trade that can address the global shortage of goods.
- ✚ G-20 should work closely to develop a shock-resilient global value chain that would help in protecting against future shocks.

PEPPER IT WITH

G-7, D-10, East Asia Summit, QUAD, I2U2

India-ASEAN Relations

News Excerpt

The 19th ASEAN-India Summit was recently held in Cambodia. India was represented by the Vice-President of India.

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Pre-Connect**About ASEAN**

- The Association of Southeast Asian Nations (ASEAN) was established in 1967 with the signing of the **Bangkok Declaration**, founding members were Indonesia, Malaysia, the Philippines, Singapore, and Thailand.
- With the addition of Cambodia on 30 April 1999, ASEAN became a 10-member state body.
- ASEAN member states work together to promote political, economic, and cultural growth and solidarity.
- ASEAN represents \$3 trillion in the combined gross domestic product (GDP) with 661.8 million population in 2020. It is considered the world's fifth-largest economy.
- ASEAN chairmanship rotates annually, based on the alphabetical order of the English names of Member States.

**India's Engagement with ASEAN**

- India's engagement with ASEAN started under the leadership of Ex-PM PV Narshima Rao who launched the Look East Policy (LEP) in 1991 with the major objective of establishing economic cooperation with the ASEAN.
- Later in 2014, India launched the Act East Policy (AEP) which also made ASEAN a central point. The only difference is that AEP other than an economic perspective also added a strategic perspective to the engagement.
- India-ASEAN partnership started with the Sectoral Dialogue Partner in 1992 and culminated in a Free Trade Agreement in Goods and Services in 2014 (in 2009 FTA in goods was signed. Later in 2014 it included services and investment)
- India also conceived BIMSTEC and Mekong Ganga Cooperation as sub-regional groupings to reach out to the ASEAN.

ASEAN Centrality

ASEAN centrality is a concept of regional security and economic processes focused on ASEAN member nations. The idea is that as Chinese and U.S. competitiveness in the area intensifies and alliances are made between ASEAN nations and the two aforementioned superpowers, ASEAN nations need to stand together in order to not lose power through assimilation. India supports the idea of Asian Centrality. It has been a central theme in India's Indo-Pacific policy and outreach.

Areas of Cooperation

India-ASEAN partnership encompasses a wide set of issues ranging from connectivity to climate change, security to space, education to ecology, and technology to trade. Various facets of such cooperation include:

- ✓ India has a Comprehensive Economic Cooperation Agreement (CECA) with various ASEAN nations. ASEAN is India's 4th largest trading partner. Between April 2021-February 2022 India and ASEAN commodity trade stood at 98.39 billion. India's main trading partners include Indonesia, Singapore, Malaysia, Vietnam, and Thailand.
- ✓ Through various mechanisms like ASEAN-India Cooperation Fund, ASEAN-India S&T Development Fund, and ASEAN-India Green Fund, India provides financial assistance to ASEAN.
- ✓ Connectivity is also a key between the two national projects like India-Myanmar-Thailand Trilateral (IMT) Highway and the Kaladan Multimodal Project shows India's commitment towards ASEAN connectivity. Other than that India has proposed a Maritime Transportation Agreement with ASEAN and it is also planning for a Railway link between New Delhi (India) to Hanoi (Vietnam).
- ✓ India and most ASEAN countries have joint Naval and Military exercises. In 2023 for the first time, ASEAN-India Maritime Exercise will be organized. Within ASEAN Vietnam and Singapore are two close allies of India.

Significance of ASEAN for India

- ASEAN nations are important for both economic and security reasons.
- ASEAN connectivity ensures the economic growth of the Northeastern states.
- ASEAN can help India in countering China's presence in the region.
- ASEAN supports rules-based security architecture in the Indo-Pacific which is in line with India's interest in the region.
- ASEAN can help India in countering insurgency and terrorism in the Northeast.

Key Highlights

- ✚ India asserted that its relationship with ASEAN forms the central pillar of India's Act East policy.
- ✚ India asserted that ASEAN centrality is central to India's policy of Indo-Pacific.
- ✚ Both sides released a joint statement announcing the elevation of the existing Strategic Partnership to a Comprehensive Strategic Partnership.
- ✚ A review of the ASEAN-India Trade in Goods Agreement (AITIGA) to make it more user-friendly, simple, and trade-facilitative.
- ✚ India reaffirmed its support to ASEAN-led mechanisms including the ASEAN-India Summit, the East Asia Summit, the Post-Ministerial Conference with India (PMC+1), the ASEAN Regional Forum (ARF), the ASEAN Defense Ministers' Meeting-Plus (ADMM-Plus), the Expanded ASEAN Maritime Forum (EAMF).

Challenges

- > Major Power Rivalry
 - For a long, China as a primary economic partner and the US as the primary security guarantor have been at the heart of the ASEAN balance.
 - In recent times, this balance is falling apart and the Russia-Ukraine war has further aggravated this tension.
 - This sharpening of major power rivalry is threatening the underlying stability on which rested the regional growth and prosperity over the last several decades.
 - The geopolitical tensions are also producing geoeconomic consequences where issues of trade and technology cooperation as well as supply chain resilience are at stake
- > Divided ASEAN
 - ASEAN remains a divided organization internally on how to manage emerging challenges such as the US-China contestation, dealing with the military junta in Myanmar, and China's aggression in the South China Sea.
 - ASEAN will lose its relevance if it continues to be a divided house, unable to forge consensus on critical regional and global issues.
 - ASEAN centrality will have no meaning with a fractured region unable to come to terms with the changing realities around its periphery.
- > China Factor
 - China's massive economic footprint in the region gives China a distinct advantage. Other powers have not been able to come up with a viable strategy.
 - ASEAN members have not been able to push back given China's role as the primary trading partner of the region with bilateral trade of around \$880 billion.
 - Under pressure with global supply chains being restructured, China has also announced negotiations on ASEAN-China Free Trade Area "Version 3.0."

Conclusion

India will have to up its game significantly to remain relevant in the region which is critical to the future stability and prosperity of the Indo-Pacific. Trade and connectivity will be critical to enhance its profile in the ASEAN region. But there should also be a concerted attempt by India to develop strong bilateral partnerships with like-minded partners within ASEAN. This is the age of minilaterals and India should not be shy of exploring them even in Southeast Asia as ASEAN will continue to struggle with its internal cohesion for the foreseeable future.

PEPPER IT WITH

Act East Policy,
RCEP, South China
Sea Dispute and
India's Stand

India-Australia Ties

News Excerpt

Recently, India's External Affairs Minister visited Australia, marking his second visit in 2022 after the recent Quad Foreign Ministers' meeting.

Pre-Connect

Foundation of India-Australia Relations

- India-Australia relations can be divided into three phases:
 - Early Phase: India had its Trade Office in Sydney in 1941, later in 1944 it opened its mission which was converted to the High Commission in 1947, however, close US-Australia ties and India's ideological differences didn't allow much progress in the ties.
 - Cold War Period: The cold phase between the two countries continued due to the ideological differences
 - Post-Cold War: With the end of the cold war, India-Australia relations improved as India moved beyond ideology and focused on interest in its foreign policy. Australia-India council was established in 1992 along with the joint working group on coal.
- In 2009, India and Australia signed a Strategic Partnership Agreement including a Joint Declaration on Security Cooperation.
- Bilateral mechanisms between India and Australia '2+2' Foreign Secretaries, Joint Trade & Commerce Ministerial Commission, Australia-India Education Council, and Joint Working Groups on different issues, etc.
- In 2017, Australia released a White Paper on Foreign Policy which sees India in the front rank of Australia's international partnerships.
- Australia supports India's candidature in an expanded UN Security Council. Both India and Australia are members of the Commonwealth, IORA, ASEAN Regional Forum, and the Asia Pacific Partnership on Climate and Clean Development, and have participated in the East Asia Summits. India and Australia are a member of the Quad (Quadrilateral Dialogue- India, Australia, Japan, and the US)
- Both countries have also been cooperating as members of the Five Interested Parties (FIP) in the WTO context. Australia is an important player in APEC and supports India's membership in the organization. In 2008, Australia became an Observer in SAARC.
- India-Australia signed Civil Nuclear Cooperation in 2014 which came into force on 13 November 2015.

New Economic Strategy- Australia

Rising profile of both India and Australia in the Indo-Pacific led to the New Economic Strategy by Australia which accepted India as a rapidly growing economy. Policy aims to take the bilateral trade to 45 billion dollar in 20 years from 15 billion dollar in 2020. The core areas of cooperation under the strategy include education, agribusiness, resources, and tourism and energy, health, financial services, infrastructure, sport, science and innovation. It also underlines the fact that Indian diaspora needs to play an important role in economic relationship.

India-Australia Trade Relations

- India-Australia Joint Ministerial Commission (JMC) was established in 1989 to enable interaction at a Government and business level on a range of trade and investment-related issues.
- India and Australia are important trading partners. Australia is the 17th largest trading partner of India and India is Australia's 9th largest trading partner.
- India's main exports to Australia includes Refined Petroleum, medicaments, Railway vehicles including hover-trains, Pearls & Gems, Jewellery, made up textile articles, while India's major imports are coal, copper ores & concentrate, Gold, vegetables, wool & other animal hair, fruits and nuts, lentils and education related services.
- Both countries are also discussing a Comprehensive Economic Cooperation Agreement (CECA).

- India and Australia are partners in the trilateral Supply Chain Resilience Initiative (SCRI) arrangement along with Japan which seeks to enhance the resilience of supply chains in the Indo-Pacific Region.

Major Challenges in India-Australia Relations

- ✓ The two have divergent views on the Russia-Ukraine war. India's stand on buying Russian energy has created differences in bilateral discourse and the functioning of QUAD.
- ✓ Despite the deeper economic partnership, India and Australia still don't have any Free Trade Agreement
- ✓ Uranium supply is also an issue as despite India's request Australia still refrains from sending India's Uranium supply under Civilian Nuclear transfers.
- ✓ Racist attacks on Indians in Australia have been a major issue.

Way-Forward

India and Australia are new players of the Asian century and going forward India need to look at various fronts such as

- 🚩 Merchandise Export to Australia is the weakest link in the relationship. To improve it, Indian companies should invest in market research, create brand value and focus on innovation.
- 🚩 Both countries need a bilateral security declaration
- 🚩 Australia can also help India in diversifying its energy import basket.
- 🚩 Collaboration in research and Innovation can help in augmenting Startup-India and Make-in-India programs.

India-Australia Defence Ties

- ❖ Australia and India have maintained a positive defence relationship. This is underpinned by our 2006 Memorandum on Defence Cooperation and the 2009 Joint Declaration on Security Co-operation.
- ❖ In June 2020, Australia and India decided to upgrade their Secretaries 2+2 dialogue (Defence and Foreign Affairs) to the Ministerial level.
- ❖ Australia participated in the MALABAR naval exercise in October 2020, joining India, the United States and Japan. The exercise brought together four regional defence partners and democracies, demonstrating a collective resolve to support an open and prosperous Indo-Pacific.
- ❖ AUSINDEX is the bilateral Naval Exercise between the two countries. India Air Force Participated in the Exercise Pitch Black in Darwin in 2018.
- ❖ Australia and India concluded the Mutual Logistic Support Arrangement (MLSA) in 2020 during the virtual summit between the countries. The agreement facilitates more sophisticated operational cooperation, enabling increasingly complex military engagement, and greater combined responsiveness to regional humanitarian disasters. The Defence Science and Technology Implementing Arrangement (DSTIA) facilitates interaction between both countries defence research organisations.
- ❖ Australian and Indian militaries have become increasingly interoperable through the growing number of shared platforms, thereby increasing opportunities for joint training. Australia and India build links between defence forces through regular personnel and training exchanges.

PEPPER IT WITH

AUKUS, QUAD Dialogue, India Australia -ETCA

President Xi Jinping

News Excerpt

Recently, the 20th five-yearly Congress of the Chinese Communist Party (CCP) was concluded. President Xi Jinping created history by becoming the first leader of the ruling Communist Party after party founder Mao Zedong to get re-elected for an unprecedented third term in power with the prospect of ruling China for life. He was also elected as the Core leader of the CPC, only the 4th President to achieve this feat. As a core leader, he can now navigate China on the path of his choice.

China under Xi

- Xi Jinping's China has shed the previous policy of binding time and has become more assertive and aggressive. He made no bones about the fact that an essential element of his dream of national rejuvenation is creating a military that wins wars.

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- China is emerging as a pole of global destabilization, China has both maritime and territorial conflict with the majority of its neighbors.
- China is turning inwards and becoming even more conservative under Xi. Xi had elevated security to the top of his policy agenda as he intends to keep China on a perpetual 'high alert'.
- China's contestations with the United States of America and the West are rising, this is also reflected in the domination of China in the US National Security Strategy year after year.
- Xi has heightened domestic nationalism to stave off the challenges that have emerged from his ill-conceived policy choices.
- Xi has been to persist with policies regardless of the blowback, whether it is concerning its economy, Taiwan, the South China Sea, zero-Covid, or the Indian border.
- Under Xi, the global perception of China and its leadership has also undergone a dramatic negative transformation.

Implications for India

- For India, the Xi era began with turbulence in India-China relations, especially along the disputed borders. From Doklam to the recent Galwan valley India is at loggerheads with assertive China. Border challenge will now move beyond the Himalayan border and will move into South Asia and Indian Ocean Region (IOR), where Chinese diplomacy and resources are being liberally used to undermine India.
- Pakistan is a base for China to project power in inner Asia and a territory to prevent the Chinese Malacca Dilemma. It also acts as a balancer for India. Therefore, ties will deepen under Xi and he will use Pakistan to pin down the Indian military to a continental orientation, rather than embrace its oceanic future.
- The Chinese have a long-term view of India, the only country in Asia with the heft and history to match China. However as China rose in economic and military power vis-à-vis India, China no longer feels obliged to maintain the confidence-building measures (CBMs) of the 1990s. It is now focussing on the US and as a result, will view the west at its allies from the same prism.

PEPPER IT WITH

BRI and Maritime Silk Road, India-China LAC, India-China Border talks

Iran Protest

News Excerpt

Iranians are at the forefront of the demonstrations over the death of a young girl Mahsa Amini who had been arrested by the morality police for wearing an 'improper' hijab in violation of Iranian law.

Pre-Connect

Iranians and Protest for More Autonomy

Since the Iranian revolution of 1979, there were numerous protests demanding more freedom. Some of the prominent ones were:

- In 2009, Iran witnessed a Green Movement, borne out of an election rigging in which hardline conservative Mahmoud Ahmedinejad won.
- Amid Arab Spring (2011-2012), a day of rage protest was organized against the Islamic regime in Iran.
- In 2017, an economic crisis marked by high inflation lead to another round of protests that rocked the country
- November month of the year 2019 is known as bloody November because of the tough crackdown by the regime in which many people died who were protesting against fuel prices.

Present anti-hijab protests in Iran are significant for several geopolitical reasons such as:

- Iran is at loggerheads with western countries over the nuclear issue. It had not allowed IAEA inspection sighting US withdrawal from JCPOA.
- Iran is accused of supplying the deadly Kamakazee drones to Russia in its recent conflict with Ukraine.

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- Iran's arch-rival Saudi Arabia has started liberalizing rules around the purdah system. Iran accused Saudi media of fuelling violence and protest in Iran.
- Iran's JCPOA sympathizers viz. European Union, Germany, and other nations are demanding the imposition of sanctions on Iran over the issue in the Human Rights Council.

India's Response

India termed the matter as an internal issue of Iran (Unlike Iran, who continues to meddle in India's Kashmir policy) and there are several reasons for this stand:

- ✓ **Non-alignment factor:** India and Iran have traditional ties and both countries engage in several areas such as trade, transport, transit, energy, and strategic issues. India's ties with Iran are based on non-alignment and it allows India to balance its strong relations with Iran's enemies US, Saudi Arabia, and Israel.
- ✓ **Connectivity Factor:** For India, Connectivity through Iran is a priority. India has done a huge investment in Chabahar port and International North-South Transport Corridor (INSTC). Iran allows India to circumvent Pakistan, to connect to Afghanistan and Central Asia.
- ✓ **Oil Factor:** The onset of the Russia-Ukraine conflict threatened India's energy security. India though had made clear that it will look over its interest when it comes to energy, however, India knows its options are limited with the OPEC+ production cut. Against this backdrop, Iranian oil is sweeter, and cheaper, and was one of India's major suppliers until US sanctions loomed over India under the Trump Administration. Therefore, Iran is a strong backup issue

Iran: India's Catch 22 Dilemma

India has a catch-22 problem with Iran. Each issue of bilateral cooperation comes with a new set of problems in other bilateral relations. Several examples show the same, these include:

- ❖ **Chabahar Inability:** India in 2016, decided to develop and operate two terminals and five berths to handle cargo at the port. It was also decided that India will develop the rail route from Chabahar to Zahedan to facilitate cargo transport to Afghanistan. However, the reality is India has developed only one berth till now and Iran went ahead and developed the railway line to Zahedan without Indian help. The problem is not the intent between the two countries, but India's ties with the US, and now through I2U2 with other anti-Iran countries restrict its ability in the region. India for sure understands this will hurt its strategic interest in the country given China is pacing up its investment in Iran.
- ❖ **Oil Game:** India has called the bluff of the US sanctions on oil imports from countries that US sanctioned, with the recent surge of Russian energy imports. However, oil remains a cause of concern and Iranian oil could solve the issue but such import can rupture ties with India's other suppliers, Saudi Arabia, Iraq, and now Russia.
- ❖ **Trade Quagmire:** For increasing trade with Iran, the only route is an improvement of connectivity and an increase in the intake of oil. This is because the rupee-rial mechanism would only work if both India and Iran have goods to export to each other. Thus, pushing

Conclusion

For India, the protests in Iran will be seen as an internal matter for Iran, and although many women's groups have expressed solidarity with Iranian women, the stand of the government of India is unlikely to change. With Iran's nuclear and military resources and its ability to resist sanctions, it is also highly unlikely that this protest will turn to external intervention. But in the longer run, it is good, if Iran adapts and evolves with the changing times and for that eventually, any change will have to come from within Iran.

PEPPER IT WITH
INSTC, JCPOA, IAEA,
Zaranj-Delaram
Highway

ENVIRONMENT

UNFCCC's Conference of Parties-27

News Excerpt

At the Sharm el-Sheikh Climate Change Conference (COP 27), countries came together to take action towards achieving the world's collective climate goals as agreed under the Paris Agreement and the Convention. The conference took place from 6-20 November 2022 in Sharm el-Sheikh, Egypt.

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II										
III										
IV										
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Climate finance

About climate finance:

- Climate finance refers to local, national or transnational financing-drawn from public, private and alternative sources of financing- that seeks to support mitigation and adaptation actions that will address climate change.
- Climate finance is needed for mitigation, because large-scale investments are required to significantly reduce emissions.
- Climate finance is equally important for adaptation, as significant financial resources are needed to adapt to the adverse effects and reduce the impacts of a changing climate.
- It is important for all governments and stakeholders to understand and assess the financial needs of developing countries, as well as to understand how these financial resources can be mobilized.

Financial mechanism

To facilitate the provision of climate finance, the UNFCCC established a financial mechanism to provide financial resources to developing country Parties. The financial mechanism also serves the Kyoto Protocol and the Paris Agreement.

- The Convention states that the operation of the financial mechanism can be entrusted to one or more existing international entities.
- The Global Environment Facility (GEF) has served as an operating entity of the financial mechanism since the Convention's entry into force in 1994.
- At COP 16, in 2010, Parties established the **Green Climate Fund (GCF)** and in 2011 also designated it as an operating entity of the financial mechanism.
- Parties have established two special funds-the **Special Climate Change Fund (SCCF)** and the **Least Developed Countries Fund (LDCF)**, both managed by the GEF-and the **Adaptation Fund (AF)** established under the Kyoto Protocol in 2001.

Finance at COP 27

- ✓ **Loss and damage fund:** The UN climate summit has decided to establish fund for loss and damage, which was proposed by G77 and China (India is a part of this group), least developed countries and small island states.
- ✓ **Carbon tax border:** The Carbon Border Adjustment Mechanism is a plan from the European Union (EU) to tax carbon-intensive products **which was opposed by the BASIC group**, comprising India, China, Brazil and South Africa at COP 27.

Key Concerns

- **Growing gap:** There is a growing gap between the needs of developing countries parties and support provided and mobilized for their efforts to implement nationally determined contribution.
- **Mitigation action:** The goal of developed country Parties to mobilize jointly USD 100 billion per year by 2020 has not yet been met.
- **Finance flows:** The global climate finances flow are small relative to the needs of developing countries, and may lead to the cost of failure to meet climate stabilization targets.
- **Accessing climate finance:** There are various ongoing challenges faced by many developing country Parties in accessing climate finance for mitigation measures.

Suggestions at COP 27

- ✚ **Investment in Renewable energy:** About USD 4 trillion per year needs to be invested in renewable energy up until 2030 to be able to reach net zero emissions by 2050,18 and that, furthermore, a global transformation to a low-carbon economy is expected to require investment of at least USD 4-6 trillion per year.

- ✚ **Need of Transformation:** Delivering such funding will require a transformation of the financial system and its structures and processes, engaging governments, central banks, commercial banks, institutional investors and other financial actors.
- ✚ **Accelerated mitigation action:** There is need for accelerated financial support for developing countries from developed countries and other sources is critical to enhancing mitigation action and addressing inequities in access to finance.
- ✚ **Role of developed countries:** Urges developed country Parties to provide enhanced support, including through financial resources, technology transfer and capacity-building, to assist developing country Parties with respect to both mitigation and adaptation.
- ✚ **Need for reforms:** The shareholders of multilateral development banks and international financial institutions to reform multilateral development bank practices and priorities, align and scale up funding, ensure simplified access and mobilize climate finance from various sources.
- ✚ **Multilateral development banks:** It needs to contribute to significantly increasing climate ambition using the breadth of their policy and financial instruments for greater results, including on private capital mobilization, and to ensure higher financial efficiency and maximize use of existing concessional and risk capital vehicles to drive innovation and accelerate impact.
- ✚ **Replenishment:** It urges developed country Parties to provide resources for the second replenishment of the Green Climate Fund while demonstrating progression over previous replenishments and in line with the programming capacity of the Fund.

Climate technology

About climate technology:

- Technologies use to address climate change are known as climate technologies.
- It helps to reduce GHGs emission and scaling up renewable energy's generation.
- To adapt to the adverse effects of climate change, climate technologies help in drought-resistant crops, early warning systems and sea walls.
- There are also 'soft' climate technologies, such as energy-efficient practices or training for using equipment.

Key institutions and technology mechanism

In 2010 the COP established the Technology Mechanism with the objective of accelerating and enhancing climate technology development and transfer. It consists of two complementary bodies that work together, - the Technology Executive Committee (TEC) and the Climate Technology Centre and Network (CTCN). The mechanism will also serve the Paris Agreement.

- ✓ **TEC:** It is the Technology Mechanism's policy arm and analyses policy issues and provides recommendations to support countries in enhancing climate technology efforts.
- ✓ **CTCN:** It is the mechanism's implementation arm and it supports countries to enhance the implementation of climate technology projects and programmes. It has three core services:
 - Providing technical assistance to developing countries.
 - Creating access to knowledge on climate technologies.
 - Fostering collaboration among climate technology stakeholders.

Action for climate empowerment (ACE) and gender

About ACE

- COP27 and CMA4 (Parties to the Paris Agreement) adopted a four-year ACE action plan under the Glasgow work programme, which sets out short-term, clear and time-bound activities in the four priority areas of the work programme.
- It is the term adopted by the UN Framework Convention on Climate Change to denote work under Article 6 of the Convention and Article 12 of the Paris Agreement.
- The over-arching goal of ACE is to empower all members of society to engage in climate action, through the six ACE elements.

Need for participation

- **Advantage of local knowledge:** Women can play a critical role in response to climate change due to their local knowledge of and leadership in e.g. sustainable resource management and/or leading sustainable practices at the household and community level.

- **Participation at political level:** Women's participation at the political level needs to be increase as it will result in greater responsiveness to citizen's needs, increase cooperation across party and ethnic lines and will deliver a more sustainable development.
- **Participation at local level:** Women's inclusion at the leadership level has led to improved outcomes of climate related projects and policies.
- **Increase in inequalities:** If Climate policies or projects are implemented without women's meaningful participation it can increase existing inequalities and decrease effectiveness.



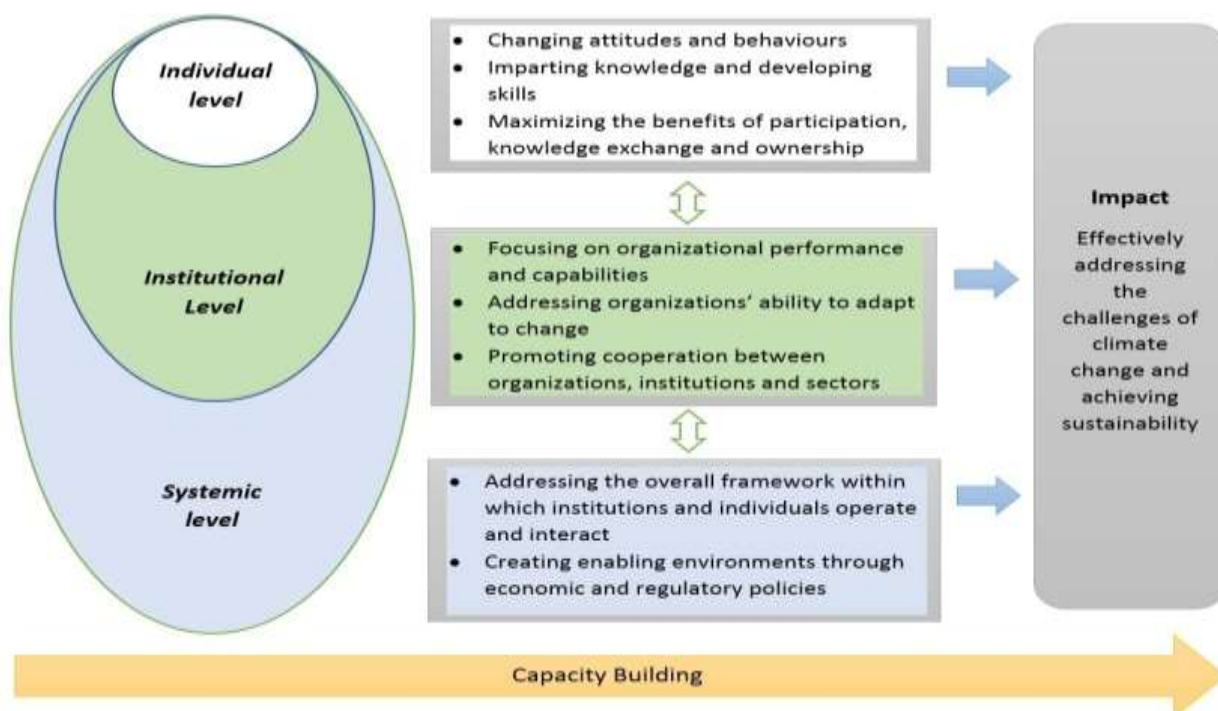
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ACTION FOR CLIMATE
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Capacity building

About capacity building

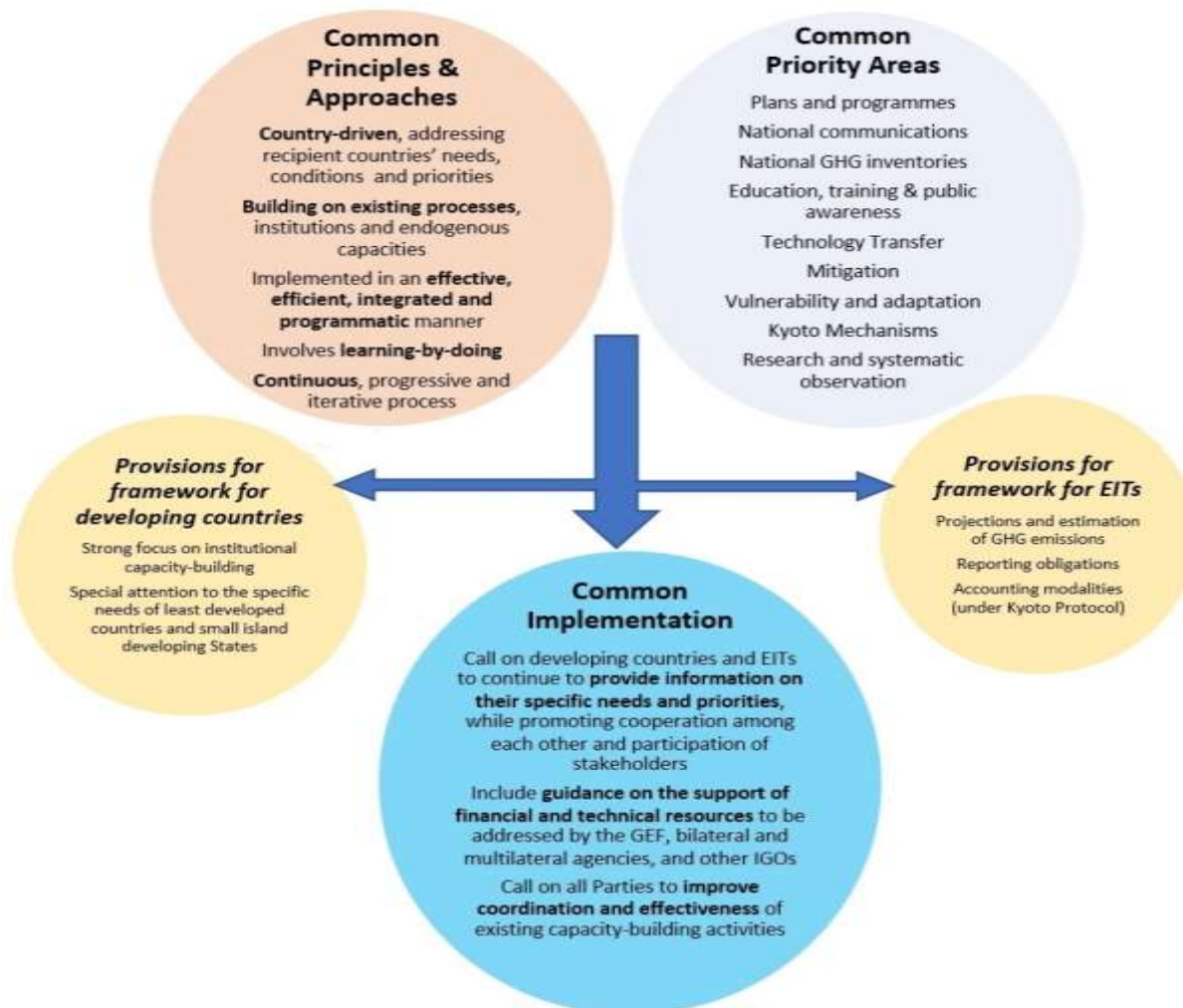
- Establishing climate-friendly patterns of sustainable development depends on a broad range of approaches:
 - Identifying, planning and implementing adaptation and mitigation actions
 - Facilitating technology development, dissemination and deployment Enabling access to climate finance
 - Developing relevant aspects of education, training and public awareness, and
 - Communication of information.



- Not all developing countries have sufficient capacities to deal with many of the challenges brought by climate change.
- The importance of building the capacity of these countries to effectively address climate change has long been recognized by negotiating Parties, through the Earth Summit (1992), its Kyoto Protocol (1997) and most recently the Paris Agreement (2015).

Initiatives of capacity building

- ✓ **Youth4Capacity:** Strengthening the capacities of young people while recognizing their crucial role as capacity-builders in achieving ambitious climate action.



- ✓ **CAPACITY Fellowship Programme:** The Capacity Award Programme to Advance Capabilities and Institutional Training in one Year (CAPACITY) Fellowship Programme contributes to building capacity for addressing climate change in Small Islands Developing States (SIDS) and Least Developed Countries (LDCs), through the development of local professional expertise.

Conclusion

- ✓ Thus, COP 27 Highlights the importance of cooperation on technology development and transfer and innovation in implementing the joint work programme activities and decides that the main challenges identified therein should be considered under the global stocktake.

GM Crops

News Excerpt

The Environment Ministry's Genetic Engineering Appraisal Committee (GEAC) cleared the proposal for the commercial cultivation of genetically modified (GM) mustard.

Pre-Connect

About GEAC

- It comes under the ministry of environment, forest and climate change (MoEFCC).
- It is responsible for appraisal of proposals relating to release of genetically engineered (GE) organisms and products into the environment including experimental field trials.

International conventions related to GM crops

- The **Convention on Biological Diversity** (CBD) is concerned with the conservation and sustainable use of ecosystems and addresses the environmental effects of GMOs.

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- The **Cartagena Protocol on Biosafety** was adopted by the CBD which regulates trans-boundary movements of genetically modified plants.
- The **International Plant Protection Convention** (IPPC) works for the conservation of plant diversity and the protection of natural resources and has raised various concerns related to GMO's.

Laws related to GM crops in India

Acts and rules that regulate GM crops in India include:

- Environment Protection Act, 1986 (EPA)
- Biological Diversity Act, 2002
- Plant Quarantine Order, 2003
- GM policy under Foreign Trade Policy
- Food Safety and Standards Act, 2006
- Drugs and Cosmetics Rule (8th Amendment), 1988

About GM crops

- ✓ A genetically modified organism (GMO) is any living organism whose genetic material has been modified to include certain desirable techniques.
- ✓ In crops, genetic modification involves the manipulation of DNA instead of using controlled pollination.
- ✓ To genetically modify a crop, the gene of interest is identified and isolated from the host organism. It is then incorporated into the DNA of the crop to be grown.
- ✓ In India farmers started cultivating Bt cotton, a pest-resistant, genetically modified version of cotton.
- ✓ GM mustard or Dhara Mustard Hybrid (DMH-11) was developed by a team of scientists at Delhi University which uses a system of genes from soil bacterium that makes mustard-generally a self-pollinating plant-better suited to hybridisation.

Analytica

Advantages of GM crops

- **Hidden hunger:** Increased nutritional value in crops can help us to fight micronutrient deficiency (Hidden hunger).
- **Increased productivity:** Disease resistant plant can increase the productivity of farmers which can further contribute to increase in farmers income and food security.
- **Greater tolerance:** It would lead to control use of weed and further greater resistant to insects can help in reduction of pesticides.
- **Climate change:** Ability to thrive on harsh climates such as drought or heat waves would increase the farmers security and would lead to diversification of crops.

Challenges

- ✚ **Risk of out-crossing:** Genes from GMO foods pass into wild plants and other crops.
- ✚ **Loss of Bio-diversity:** Increase in GM crops would lead to reduction of other crops, affecting the biodiversity.
- ✚ **Health related issue:** GM food can increase risk to human health leading to increase in new forms of diseases.
- ✚ **Presence of third bar gene:** It makes GM mustard plants tolerant to the spraying of Glufosinate ammonium, a chemical used for killing weeds. Thus causing displacement of manual labour engaged in weeding by promoting use of chemical herbicides.
- ✚ **Affecting honey bee:** GM mustard threatens or undermines the population of honey bees as mustard flowers are a source of nectar for honey bees and many other pollinator insects.
- ✚ **Maturity time:** There can be increase or decrease in maturity time of GM crops leading to various environmental concerns.

BT cotton

- ❖ It has been genetically modified by the insertion of one or more genes from a common soil bacterium, *Bacillus thuringiensis*.
- ❖ They are pest resistant crop & widely grown in India.

BT Brinjal

- ❖ "Bt brinjal," a genetically engineered variety of eggplant, provides effective protection against the devastating eggplant fruit and shoot borer (FSB) without the application of pesticides.
- ❖ **It is under field trials in India.**

PEPPER IT WITH

CRISPR-CAS9, genome editing, CITES, The WTO **Agreement on the Application of Sanitary and Phytosanitary Measures** (SPS Agreement)

Conclusion

Despite current uncertainties over GM crops, it has the potential to address various socio-economic and environmental challenges. Thus, more research and strong policies are needed to realise its full potential.

Rejuvenation of Indian rivers

News Excerpt

The Sukapaika River originated from, the Mahanadi, near Ayatpur village is set to be rejuvenated by the efforts of state governments following directions of National green tribunal (NGT).

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Pre-connect

About Sukapaika River: It is one of the several distributaries of the mighty Mahanadi River in Odisha. It branches away from the Mahanadi at Ayatpur village in Cuttack district and flows for about 40 kilometres (km) before re-joining its parent river at Tarapur.

Challenges for river rejuvenation in India

- **Urbanization:** Unplanned and haphazard developmental activities are reducing rivers to nallas and sewers. For instance, river Assi in Varanasi is almost no more.
- **Encroachment:** It reduces the width of rivers and rivulets. Like the riverbed of Manawar Tawi has been extensively encroached. Most of the encroachment has taken place in the peripheries of largely populated areas of the town.
- **Industrial activities:** Due to untreated sewage and chemical waste the rivers are reduced to waste site. For instance, river Varuna has become the waste site.
- **River bed mining:** Due to rapid river bed mining activities, leading to consequent flattening of river bed. Like sand mining continues rapidly on the riverbed of the Bharathapuzha, despite numerous prohibitions and regulations. Water tables have dropped dramatically, and now faces scarcity of water.
- **Hydropower projects:** Increase in hydropower projects has affected the natural flow of rivers and impacts the rheophilic species, who are acquainted to flowing rivers. Like The Nathpa Jhakri Hydroelectric Project, a river diversion project, on Satluj river has changed flow regime on river bed and river bank ecology.
- **Climate change:** The impact has led to receding of glaciers in Himalayas which may cause the sudden disappearance of rivers.

PEPPER IT WITH

Himalayan river rejuvenation project, Industrial developments on Mahanadi rivers, Namami Gange project

Analytica

Steps taken for rejuvenation of rivers in India

- ✓ **The Atal Mission for Rejuvenation and Urban Transformation (AMRUT):** Under this programme steps have been taken for management of sewerage and septage projects.
- ✓ **The Swachh Bharat Mission (Urban) 2.0:** Under this programme steps have been taken for waste water/used water management, including setting up of STPs and faecal sludge treatment plants (FSTP).
- ✓ **Namami Gange Programme:** It is an Integrated Conservation Mission, approved as 'Flagship Programme' to accomplish the twin objectives of effective abatement of pollution, conservation and rejuvenation of National River Ganga.

Conclusion:

Though government is taking steps to rejuvenate lost rivers, however, their focus is on major river systems in India. Thus, to have healthy river ecosystem, the need is to rejuvenate the small rivers in order to derive maximum potential.

Various steps that can be taken are:

- Development of river fronts
- Creation of eco-parks
- Bringing awareness among masses
- Various forms of ecological restoration
- Treatment of catchment areas

UNICEF Report

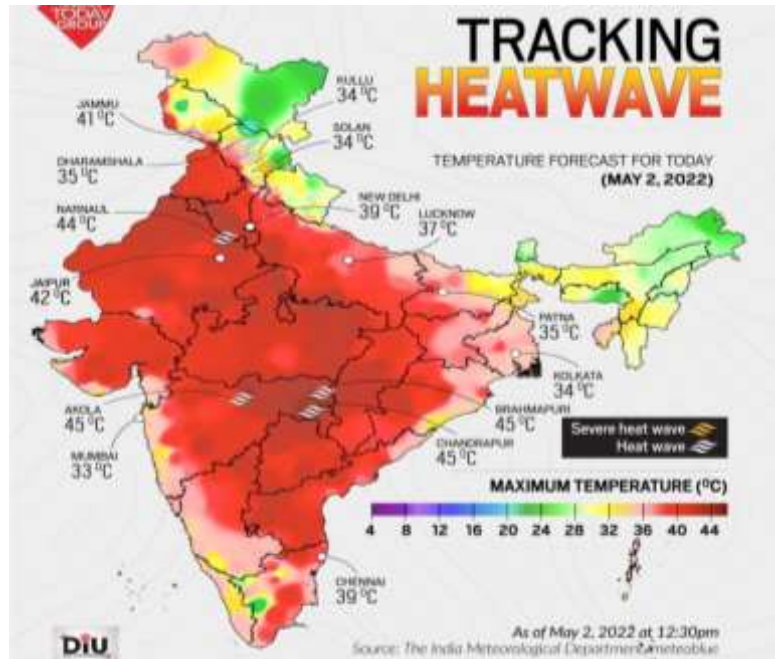
News Excerpt

Nearly all the world's children will be exposed to more frequent and severe heat waves by 2050, according to a new United Nations Children's Fund (UNICEF) report "the Coldest Year of the Rest of Their Lives".

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Pre-Connect❖ **Favourable conditions for heat waves:**

- Transportation / Prevalence of hot dry air over a region (There should be a region of warm dry air and appropriate flow pattern for transporting hot air over the region).
- Absence of moisture in the upper atmosphere (As the presence of moisture restricts the temperature rise).
- The sky should be practically cloudless (To allow maximum insulation over the region).
- Large amplitude anti-cyclonic flow over the area.
- Heat waves generally develop over Northwest India and spread gradually eastwards & southwards but not westwards (since the prevailing winds during the season are westerly to north-westerly).
- But on some occasions, heat wave may also develop over any region in situ under the favourable conditions.

❖ **Reasons for occurrence of heat waves:**

- ✓ Development of urban heat islands
- ✓ Global warming
- ✓ Extreme local weather events
- ✓ Increasing desertification

❖ **Analytica**❖ **Key findings of the report**

- Currently, around 559 million children are exposed to at least four to five hazardous heat waves annually.
- The number will quadruple to over two billion by 2050 — up from 24 per cent of children in 2020. This amounts to an increase of about 1.5 billion children.
- “Virtually every child on earth” will face severe heat waves even under a low greenhouse gas emission scenario — with an estimated 1.7 degrees Celsius of warming in 2050.
- One in four children lives in areas where the average heat wave event lasts 4.7 days or longer as of 2020. This percentage will rise to over three in four children under a low-emission scenario by 2050.

Global adaptation initiative country index

- ❖ It is developed by university of Notre Dames
- ❖ The index measures of climate readiness, which consists of economic, governance and social components.

Children climate risk index

- ❖ It provides the comprehensive view of children's exposure and vulnerability to the impacts of climate change.
- ❖ It ranks countries based on children's exposure to climate and environmental shocks, such as cyclones and heatwaves, as well as their vulnerability to those shocks, based on their access to essential services.

- At “2.4 degrees of warming, 94 per cent of children will be exposed with only small areas of southern America, central Africa, Australasia and Asia not exposed to high heatwave duration.”

Risks associated with heat waves

- Heat wave risks to health include — heat stroke, heat stress, allergy, chronic respiratory conditions, asthma, mosquito-borne disease, cardiovascular disease, under-nutrition and diarrhoea.
- High temperatures are linked to increased mental health problems in children and adolescents, including post-traumatic stress disorder and depression.
- Extreme heat affects children’s education and future livelihoods like poor health and decrement in attendance.

Mitigation measures

The report said the countries must:

- Protecting children from climate devastation by encouraging social services
- Preparing children to live in a climate-changed world
- Prioritising children and youth in climate finance and resources
- Preventing a climate catastrophe by reducing greenhouse gas emissions.

PEPPER IT WITH

Paris agreement, UNFCC reports, Kyoto protocol, UNEP Heat Index

Emission gap report 2022

News Excerpt

The UNEP released report, titled ‘Emissions Gap Report 2022: The Closing Window — Climate Crisis Calls for Rapid Transformation of Societies’, has found that in India and six other top emitters, emissions have rebounded and increased after the pandemic.



Pre-Connect

The United Nations Environment Programme (UNEP) is the global authority that sets the environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the UN system and serves as an authoritative advocate for the global environment.

Key findings of the report

- For most major emitters, including China, India, the Russian Federation, Brazil and Indonesia, GHG emissions (excluding land use and forestry sectors) rebounded in 2021, exceeding pre-pandemic 2019 levels.
- The G20 countries have just started to work on meeting their new targets, and collectively, are expected to fall short of their promises for 2030.
- Unconditional and conditional NDCs are estimated to reduce global emissions in 2030 by five and 10 per cent respectively, compared with emissions based on policies currently in place.
- To get on a least-cost pathway to limiting global warming to 2°C or 1.5°C, these percentages must reach 30 per cent and 45 per cent respectively.

India's Initiatives

❖ Bharat stage (BS) emission standards

It is to regulate the output of air pollutants from internal combustion engine and spark-ignition engine equipment, including motor vehicles.

❖ UJALA (Unnat Jyoti by Affordable LEDs for All) scheme

It is also known as the LED-based Domestic Efficient Lighting Programme (DELP), to promote energy efficiency in all households.

❖ International Solar Alliance (ISA)

It is a treaty based inter-governmental organization working to create a global market system to tap the benefits of solar power and promote clean energy applications.

❖ National Action Plan on Climate Change (NAPCC)

It outlines a national strategy that aims to enable the country to adapt to climate change and enhance the ecological sustainability of India’s development path.

❖ The Ethanol Blending Programme (EBP)

It seeks to achieve blending of Ethanol with motor spirit with a view to reducing pollution

- Updated pledges since COP26 in Glasgow take less than one per cent off projected 2030 greenhouse gas emissions; 45 per cent is needed for limiting global warming to 1.5°C
- The full implementation of unconditional NDCs and additional net-zero emissions commitments point to only a 1.8°C increase. However, it is not currently credible based on the discrepancy between current emissions, short-term NDC targets and long-term net-zero targets.

Recommendations

- Introduce carbon pricing, such as taxes or cap-and-trade systems.
- Create markets for low-carbon technology, through shifting financial flows, stimulating innovation and helping to set standards.
- To advance the transformation, all sectors need to avoid lock in of new fossil fuel-intensive infrastructure, advance zero-carbon technology and apply it, and pursue behavioural changes.
- Setting up the foundations of a net-zero future: one that will allow us to bring down temperature overshoots and deliver many other social and environmental benefits, like clean air, green jobs and universal energy access.

PEPPER IT WITH

COP26 Glasgow outcomes, NDC's, Paris agreement, UNEP

Carbon market

News Excerpt

The Government of India is taking steps to establish a carbon credit market to help the country meet its nationally determined contributions (NDC).

Pre-Connect

About Carbon Markets

- **Carbon markets:** It aims to reduce greenhouse gas emissions enabling the trading of emission units (carbon credits), which are certificates representing emission reductions.
- **Carbon credit market:** It is a market-driven solution that reduces atmospheric greenhouse gases, preserves the land, and generates income for tribal nations, communities and members.
- **Carbon credit:** It represents ownership of the equivalent of one metric ton of carbon dioxide that can be traded, sold or retired.
- **Carbon offset:** It represents a real reduction of carbon dioxide in the atmosphere and results in the generation of a carbon credit.

Issues with Carbon markets

- ✓ **Problem of homogeneity:** Carbon markets presume that there is a linear relation between emission and climate change, making carbon credit homogenous and independent of when and where carbon dioxide is emitted. However, the relation is non-linear.
- ✓ **Problem with justice:** Global climate markets raise critical questions about justice since they tend to benefit the countries that are most industrialized (or industrializing), not those most in need. Thus the clean development mechanism has not served the purpose of sustainable development goals.
- ✓ **Problem of carbon credit trading:** Some projects can create revenues that fund fossil fuel production, greenhouse gases of particularly high value can be emitted just to generate credits, and "leakage" or shift of emissions between regions can have severe impacts.
- ✓ **Problem of Information:** Knowledge and information problems with carbon markets, include transaction costs as well as the institutional capacity of approvers and auditors of credits and projects.

About NDC's

- **Nationally Determined Contribution**, is a climate action plan to cut emissions and adapt to climate impacts. Each Party to the Paris Agreement is required to establish an NDC and update it every five years.
- **The Paris Agreement** is a legally binding international treaty on climate change where it aims to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.

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Climate justice:

Climate Justice recognizes the disproportionate impacts of climate change on low-income communities and communities of colour around the world, the people and places least responsible for the problem.

The Six pillars of climate justice are:

- Social, racial and environmental justice.
- Climate education and engagement.
- Indigenous climate action.
- Just transition.
- Community resilience and adaptation.
- Natural climate solution.

Importance of Carbon credit markets

- ✓ **Energy transition:** Enabling carbon market at the domestic level will help organisations in the country trade in their carbon credits effectively. Thus, will speed up the energy transition objectives of the country for climate change mitigation.
- ✓ **Decreasing the dependency on fossil fuels:** Carbon markets will open up new avenues for organisations that are engaged in developing, trading and consulting carbon credits, while stunting the growth of fossil-fuel generation capacities.
- ✓ **Increasing economic aspects:** Carbon credits will help developing countries like India carry out economic activities, while keeping the country's carbon goals in perspective.
- ✓ **Innovations:** Carbon credits offer a way to reward the industries and other sectors that have developed practices involving technological innovations to reduce emissions and achieve climate targets.
- ✓ **Net zero targets:** Carbon markets will play a key role in the drive towards decarbonisation, encouraging the reduction of emissions through various schemes in the short term with an ultimate goal of achieving Net Zero in the long term.

India's targets:

- India submitted its updated NDCs under the Paris Agreement to the United Nations Framework Convention on Climate Change (UNFCCC) in which it stressed that it is a step ahead in achieving the long-term goal of Net Zero in 2070.
- India is working on expanding its supply chain in the solar manufacturing division.


Initiatives taken by India


Production linked incentive scheme (PLI):

The necessary steps have been taken towards diversification of the supply chain by introducing PLI scheme for the manufacturing of polysilicon cells into modules.

PEPPER IT WITH

Doha amendment, Energy conservation (amendment) bill 2022, types of greenhouse gases

-  **Kyoto protocol:** In India, the clean development mechanism under the Kyoto Protocol provided a primary carbon market for the players. The secondary carbon market is covered by the perform-achieve-trade scheme (which falls under the energy efficiency category) and the renewable energy certificate.

-  **Voluntary carbon markets:** India is on the path to establishing a carbon market at the national level beginning with the voluntary carbon market and then moving on to a compliance-based market.

Invasive species in Mudumalai Tiger Reserve

News Excerpt

An invasive species, *Senna spectabilis*, an exotic tree, has taken over between 800 and 1,200 hectares of the buffer zones of the Mudumalai Tiger Reserve.

Pre-Connect

Invasive species

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- An invasive species is an organism that is not indigenous, or native, to a particular area. Invasive species can cause great economic and environmental harm to the new area.
- *Senna spectabilis*, along with *Lantana camara*, is among five major invasive weeds that had taken over vast swathes of the Nilgiris.
- Eucalyptus and pine, though exotic, do not spread as quickly as the other species and are considered easier to manage.

Convention on biodiversity (CBD): The Convention on Biological Diversity (CBD) is the international legal instrument for "the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources".

International agreements on CBD

- **The Nagoya Protocol:** It is an international agreement that acts as a legally binding instrument to set regulations on access and benefit sharing (ABS) in biological diversity.
- **The Cartagena Protocol on Biosafety to the Convention on Biological Diversity:** It is an international agreement which aims to ensure the safe handling, transport and use of living modified organisms (LMOs) resulting from modern biotechnology that may have adverse effects on biological diversity, taking also into account risks to human health.

About Mudumalai tiger reserve

- It is at the tri-junction of three states, viz, Karnataka, Kerala and Tamil Nadu
- It has a common boundary with Wyanad Wildlife Sanctuary (Kerala) on the West, Bandipur Tiger Reserve (Karnataka) on the North, and the Nilgiris North Division on the South and East and Gudalur Forest Division on the South West.
- Flagship species are Tiger and Asian Elephant.

Analytica

Impact of invasive species on ecosystem

- ✓ **Habitat alteration:** Invasive species can create negative impacts on areas they invade. Thus, it alters the habitat and may lead to widespread loss of the habitat. Like, *Lantana camara* affects the pasturelands, tea and coffee plantations, and maize and sugarcane crops amongst others.
- ✓ **Reducing biodiversity:** According to IUCN the invasive species are second most threat for the extinction of species. Perhaps, they have been the most significant contributor in reducing the biodiversity. Like, *Lantana camara*, a tropical American shrub, has invaded more than 40 percent of India's tiger range. The Shivalik hills, Central India, and Southern Western Ghats are the worst hit.
- ✓ **Predation:** The tadpoles of the Indian bullfrog, an invasive frog species that has spread to six of eight human-inhabited islands in the Andamans, rapidly predated upon tadpoles of native frog species that are found only in the Andaman archipelago. Thus predation affects the native species and alters wildlife.
- ✓ **Competing with native species:** The Canadian horseweed reached Kashmir about 70 years ago. It is resistant to diseases and common herbicides. The species has affected the ecological niche and competed with other native species for resources. Thus, spreading all across the region.
- ✓ **Herbivory:** Non native herbivores overgraze vegetation and affects the survival capacity for native species.

Advantages of invasive species

- It can become feeding ground for various species
- It can restore the lost ecosystem

Prominent cases of Invasive Species in India

- ❖ In the Western Ghats, *lantana* (*Lantana camara*), a Central and South America shrub that was introduced to India in 1809 as a garden ornamental, has spread extensively.
- ❖ In Karnataka's Biligiri Rangaswamy Temple Tiger Reserve, Soliga farmers have suffered from reduced production of *amla*, which acted as a source of supplementary income.
- ❖ In the Banni grasslands of Kutch, the Forest Department's introduction of *prosopis* since the 1960s – to ostensibly counter desertification – has transformed both landscape and livelihoods.

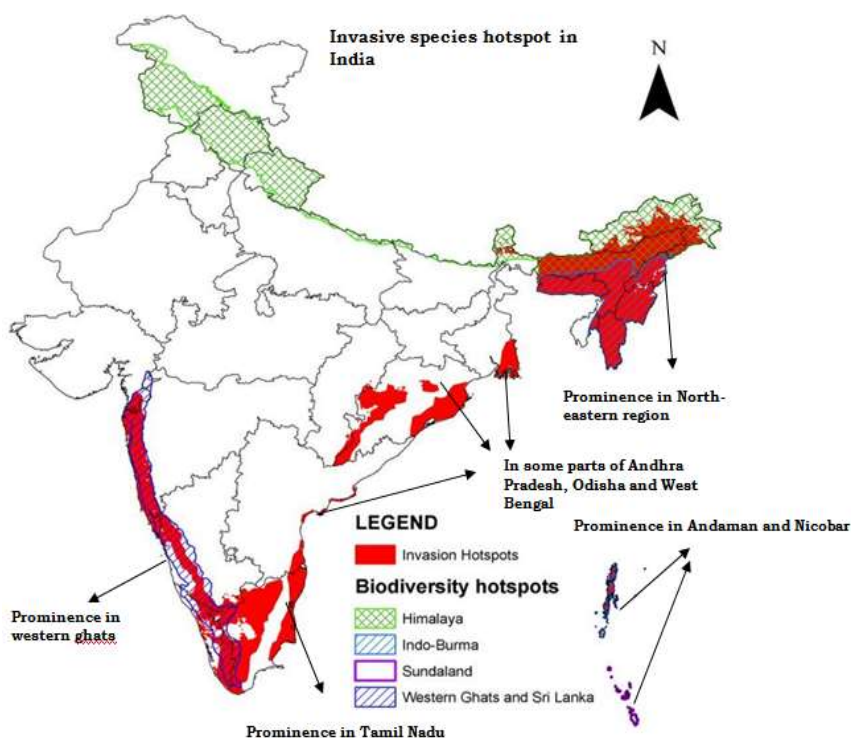
- Zebra mussels can help filter toxins from lakes

Challenges associated with invasive species in India

- **Socio-economic and environmental damage:** Invasive alien species, which can spread and sustain without human assistance outside their natural distribution, are causing environmental and economic damage to the nation.
- **Lack of legal oversight:** There are no legal framework exists to hold any person or organisation accountable for unintended impacts caused by these species once they escape human control.
- **Lack of coordination:** The National Biodiversity Authority (NBA) and ENVIS Centre on Floral Diversity, both operating under the Ministry of Environment, Forest and Climate Change have database overlaps. Thus, these discrepancies sites absence of a standardised framework.
- **Policy roadblock and lack of awareness:** The lack of awareness among public and governments have led to the major hindrance for specific policy framework.
- **Invasive plant species preferred over native:** Consumers prefer having alien ornamentals in their gardens or using abundant aliens for income generation purposes. Thus, resistance from the highly profitable alien ornamental industry and heavy dependence of people on natural resources has led to species invasion in wild.
- **Absence of dedicated bio-security infrastructure:** Under The Plant Quarantine Order, 2003, the list of quarantine plants does not have many plant invasive species listed, even those which are recognised by other government and research agencies in the country.

Zoological survey of India

- ❖ The Zoological Survey of India (ZSI) has compiled a list of alien invasive animal species, totalling 157.
- ❖ Among the alien invasive marine species, the genus Ascidia accounts for the maximum number of species (31), followed by Arthropods (26), Annelids (16), Cnidarian (11), Bryzoans (6), Molluscs (5), Ctenophora (3), and Entoprocta (1).



International conventions on invasive species

- **The Convention on Biological Diversity:** It states that "each contracting Party shall, as far as possible and as appropriate, prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species".
- **IUCN:** It suggests that it is essential that invasive species be incorporated into climate change policies. This includes bio-security measures and rapid response measures.
- **Aichi biodiversity targets:** It aims that Invasive alien species and pathways are identified and prioritized. The priority species are controlled or eradicated and measures are in place to manage pathways to prevent their introduction and establishment.

PEPPER IT WITH

Difference between alien invasive species and alien species, national biodiversity strategies and action plan.

Conclusion

Though India is a rich legacy in environmental protection law, however, there are various challenges to address. The formation of a National Invasive Species Strategy and Action Plan can be an effective start to mitigate the ongoing issues on invasive species and to protect the ecological niche.

Rhino Horn

News Excerpt

According to the recent study, the horns of rhinoceroses may have become smaller over time due to the impact of hunting. The research approach is through analysing artwork and photographs of the animal spanning more than five centuries.

Pre-Connect

About Rhino

- There are five species of rhino which are Sumatran Rhino, Black Rhino, Javan Rhino, Greater one horned rhino, and White Rhino.
- The Great one horned rhino is found in India and Nepal. It is confined to the tall grasslands and forests in the foothills of the Himalayas.
- **Conservation status is vulnerable.**

Current status of Rhino in India

- The Indian Rhinoceros (*Rhinoceros unicornis*), is primarily found in the north-eastern parts of India.
- Formerly the animal dwelled along the Gangetic plains but now more than 70% of the Indian Rhino population is mainly confined to Assam.
- Kaziranga National Park, being the largest protected site and home for Indian Rhino in Assam.
- Now Assam counts for 2645 Rhinos, with Kaziranga National Park holding highest number of the animal followed by Manas National Park, Pobitora Wildlife Sanctuary and Orang National Park.

Key findings of the study

- There is evidence for declining horn length over time across species, perhaps related to selective pressure of hunting, and indicating a utility for image-based approaches in understanding societal perceptions of large vertebrates and trait evolution.
- The rate of decline in horn length was highest in the critically-endangered Sumatran rhino and lowest in the white rhino of Africa, which is the most commonly found species both in the wild and in captivity.
- The observation follows patterns seen in other animals, such as tusk size in elephants and horn length in wild sheep, which have been driven down by directional selection due to trophy hunting.
- During the age of European imperialism (between the 16th and 20th centuries), rhinos were commonly portrayed as hunting trophies, but since the mid-20th century, they have been increasingly portrayed in a conservation context, reflecting a change in emphasis from a more to less consumptive relationship between humans and rhinos.

Analytica

Threats to Rhino

- ✓ Poaching for horns
- ✓ Habitat loss and degradation
- ✓ Climate change
- ✓ Fragmented population

Impacts of poaching on biodiversity

- **Loss of population:** In combination with the threat of habitat loss and man wildlife conflicts, many of these populations can become locally extinct. Thus, animal populations in the wild face the threat of possible extinction.

- **Impact on food chain:** Many of the species which are killed are apex predators or keystone species, due to which there is drastic change numbers of organisms below them in the food chain, which ultimately creates an imbalance in the ecosystem.
- **Increase in cases of zoonotic disease:** The recent incidences of SARS, Ebola fever, Swine flu and COVID 19 are examples of zoonotic diseases. Thus, the major reasons for increase in incidences of zoonotic diseases is increasing invasion of animal habitats by people, poaching activities and trade of animals.
- **Decline in wildlife tourism:** Areas that are famous for wildlife tourism face a negative impact due to poaching.

International conservation efforts on Rhino

- ✚ **CITES:** The five rhinoceros species are all categorized in Appendix I. Thus, the species that are or may be affected by trade are included in Appendix I of CITES for protection.
- ✚ **Ramsar convention:** The general importance of the Ramsar Convention for rhinoceroses lies in the protection of their habitat. Thus, for the Indian or greater one-horned rhinoceros the Ramsar Convention carries a significant value, due its exclusive habitation of wetlands.
- ✚ **The World heritage convention:** The Committee in 2015 directed at India which expresses its concern about the high risk of the extinction of the Indian rhino in the Manas Wildlife Sanctuary and encourages India to increase its efforts to combat poaching.
- ✚ **The Convention on Biological Diversity (CBD):** CBD lay down certain obligations for Contracting Parties like the obligation to create protected areas or the obligation to restore degraded ecosystems, which are likely to benefit the rhinoceros.

India's efforts on conservation of Rhino

- **Indian Rhino Vision 2020 (IRV2020):** The program established in 2005 for the purpose of increasing the rhino population in Assam to 3,000 by establishing populations in seven protected areas.
- **The New Delhi Declaration on Asian Rhinos 2019:** The five rhino range nations signed this declaration for the conservation and protection of the species at the Second Asian Rhino Range Countries meeting.
- **National rhino conservation strategy:** To conserve one-horned Rhino a conservation strategy was developed.

PEPPER IT WITH

Manas national park, Orang National Park, Conservation on migratory species (CMS)

Conclusion

Rhinoceros species worldwide are threatened with extinction and their perspectives for survival are dim. With community efforts and strong regulation policies can protect the Rhinos.

Mangrove alliance for Climate

News Excerpt

At the 27th Session of Conference of Parties (COP27), this year's UN climate summit, the Mangrove Alliance for Climate (MAC) was launched with India as a partner.

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Pre-Connect

About MAC

- An initiative led by the United Arab Emirates (UAE) and Indonesia, the Mangrove Alliance for Climate (MAC) includes India, Sri Lanka, Australia, Japan, and Spain.
- It seeks to educate and spread awareness worldwide on the role of mangroves in curbing global warming and its potential as a solution for climate change.
- The intergovernmental alliance works on a voluntary basis which means that there are no real checks and balances to hold members accountable.
- The parties will decide their own commitments and deadlines regarding planting and restoring mangroves.
- The members will share expertise and support each other in researching, managing and protecting coastal areas.

- Between 2010 and 2020, around 600 sq km of mangroves were lost of which more than 62% was due to direct human impacts, according to the Global Mangrove Alliance.

About Mangroves

- Mangrove forests consists of trees and shrub that live in intertidal water in coastal areas and host diverse marine life.
- They grow in areas with low-oxygen soil, where slow-moving waters allow fine sediments to accumulate.
- They only grow at tropical and subtropical latitudes near the equator because they cannot withstand freezing temperatures.
- They can be recognized by their dense tangle of prop roots that make the trees appear to be standing on stilts above the water.

Distribution

- South Asia houses some of the most extensive areas of mangroves globally, while Indonesia hosts one-fifth of the overall amount.
- India holds around 3 percent of South Asia's mangrove population. Besides the Sundarbans in West Bengal, the Andamans region, the Kachchh and Jamnagar areas in Gujarat too have substantial mangrove cover.



Analytica

Significance of mangroves

- ✓ **Food web:** They support a rich food web, with molluscs and algae-filled substrate acting as a breeding ground for small fish, mud crabs and shrimps, thus providing a livelihood to local artisanal fishers.
- ✓ **Carbon sink:** They act as effective carbon stores, holding up to four times the amount of carbon as other forested ecosystems.
- ✓ **Protection from extreme weathers:** Mangroves provide natural infrastructure and protection to nearby populated areas by preventing erosion and absorbing storm surge impacts during extreme weather events such as cyclones.
- ✓ **Binds soil:** Their dense roots help bind and build soils.
- ✓ **Protects from coastal erosion:** Their above-ground roots slow down water flows and encourage sediment deposits that reduce coastal erosion.
- ✓ **Improves water quality:** The complex mangrove root systems filter nitrates, phosphates and other pollutants from the water, improving the water quality flowing from rivers and streams into the estuarine and ocean environment.

International efforts

- ❖ **UNESCO:** The inclusion of mangroves in Biosphere reserve, World heritage sites and geo-parks contributes to improving the knowledge, management and conservation of mangrove ecosystems throughout the world.
- ❖ **World wide fund:** It teamed up with Conservation International, the International Union for the Conservation of Nature (IUCN), and The Nature Conservancy to form the Global Mangrove Alliance. It's an initiative to reverse the loss of critically important mangrove habitats worldwide.

Major threats to mangroves

- **Aquaculture and agriculture expansion:** A large number of the mangroves in India were destroyed due to aquaculture and agriculture expansion.

- **Reduction of fresh water and tidal water flows:** Dam and barricade construction, embankment construction and siltation of river mouth obstructs fresh water into mangrove swamps.
- **Invasive species:** Most mangrove regions in India are suffering from invasive species which disrupt the ecological balance and dynamics of the mangrove ecosystem. For example, in Tamil Nadu and Andhra Pradesh, the rapid invasion of *Prosopis* species.
- **Climate change:** Due to sea level rise mangroves tend to move landward, but human encroachment prevents this and consequently, the width of the mangroves decreases.
- **Cutting of mangroves for timber, fuel and charcoal:** Because of high calorific value of mangrove wood and high strength, people are destroying mangroves for firewood, charcoal and timber collection.
- **Other factors:** infrastructure projects — industrial expansion and building of roads and railways, and natural processes — shifting coastlines, coastal erosion and storms, have resulted in a significant decrease in mangrove habitats.

Governments efforts

- ✚ **Conservation and Management of Mangroves and Coral Reefs:** Under this programme, annual Management Action Plan (MAP) for conservation and management of mangroves are formulated and implemented in all the coastal States and Union Territories.
- ✚ **Integrated Coastal Zone management Project (ICZM):** The Ministry piloted an ICZM Project in Coastal stretches of 3 states namely Gujarat, Odisha and West Bengal, with objective of Conservation and Protection of Coastal resources which included plantation of mangroves as one of the major activities.
- ✚ **The Forest Survey of India (FSI):** It assessed Mangrove Cover of the country in three density classes i.e.-very Dense, Moderately Dense and Open Mangrove Cover on biennial basis and publishes the findings in the India State of Forest Report (ISFR).
- ✚ **Regulation:** They are implemented through Coastal Regulation Zone (CRZ) Notification (2019) under the Environment (Protection) Act, 1986; the Wild Life (Protection) Act, 1972; the Indian Forest Act, 1927; the Biological Diversity Act, 2002; and rules under these acts as amended from time to time.

PEPPER IT WITH

Global forest resource assessment, Forest survey of India, Ramsar convention, Marine ecosystem.

Green washing

News Excerpt

Recently UN Secretary general warned against the practice of Green Washing and asserted that the UN has zero tolerance for Net Zero Green Washing.

Pre-Connect

About Green washing

- It refers to misleading the general public into believing that companies, sovereigns or civic administrators are doing more for the environment than they actually are.
- This may involve making a product or policy seem more environmentally friendly or less damaging than it is in reality.
- The term was coined by environmentalist Jay Westerveld in 1986.
- The phenomenon came into practice as consumers and regulators, owing to greater awareness and environmental consciousness, increasingly sought to explore planet-friendly, recyclable and sustainable 'green' products.

Different terminologies

- ❖ **Green markets:** It is when companies sell environmentally and socially conscious products or services. **Green marketing is generally practical, honest, and transparent.**
- ❖ **Green energy:** The generation of energy through renewable sources with no harmful effects to environment.
- ❖ **Clean energy:** It is energy gained from sources that do release air pollutants but not greenhouse gas, but affects the environment.

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Concerns

- **Among governments and firms:** There is a growing tendency among firms and governments to mark all kinds of activities as climate-friendly, where many of these claims are unverifiable, misleading, or dubious.
- **False image projection:** Eco-friendly product claims help in boosting the image of the entity, which help them to garner benefits. However, they do nothing to fight climate change.
- **Developed countries:** They are often accused of green washing their normal business investments in developing countries, or their bilateral aid, by highlighting climate co-benefits of the financial flows.
- **Pseudo progress:** Green washing presents a false picture of the progress being made on the climate change front, thereby rewarding entities for irresponsible behaviour.
- **Challenges in regulation:** The processes and products that can potentially cut emissions are so many that it is practically impossible to monitor and verify all. Thus, there is lack of regulation and standardisation in most of these spaces.

Case study

The Volkswagen scandal, in which the German car company was found to have been cheating in emissions testing of its supposedly green diesel vehicles, was a case of greenwashing. Several other multinational corporations, including oil giants like Shell and BP, and Coca Cola have faced accusations of greenwashing.

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Impacts of green washing on carbon markets

- **Informal markets & Third-party certification:** There are now credits available for all kinds of activities — for growing trees, for planting a certain kind of crop, for installing energy-efficient equipment in office buildings. The credits are often certified by unofficial third-party companies and sold to others. Thus transactions, particularly in informal, bilateral or voluntary markets, have been flagged for lack of integrity and double counting.
- **Formal markets:** Countries like India or Brazil had accumulated huge carbon credits under the Kyoto Protocol and wanted these to be transitioned to the new market being set up under the Paris Agreement. However, developed countries questioned the integrity of credits and claimed that they did not accurately represent reductions in emissions. Carbon offsets from forests are one of the most controversial.

Way Forward

The expert group formed by UN secretary general suggests that:

- ✚ The corporations pursuing net zero targets must not be allowed to make fresh investments in fossil fuels.
- ✚ The corporation must be asked to present short-term emission reduction goals on the path to achieving net zero, and must bring an end to all activities that lead to deforestation.
- ✚ The corporations should not use offset mechanisms at the start of their journey to net-zero status.
- ✚ There should be creation of regulatory structures and standards.
- ✚ All state and non-state actors must ensure a 'just transition' such that livelihoods are not affected.
- ✚ The committee also recommends a transition from voluntary disclosures (pertaining to net emissions) to regulatory norms.

PEPPER IT WITH

Kyoto protocol, Paris agreement, Eco-labels and sustainable development goals

Bio diversity and Galapagos Island

News Excerpt

Cold ocean currents have sheltered the Galápagos Islands from global warming, according to a recent study published in the journal PLOS Climate.

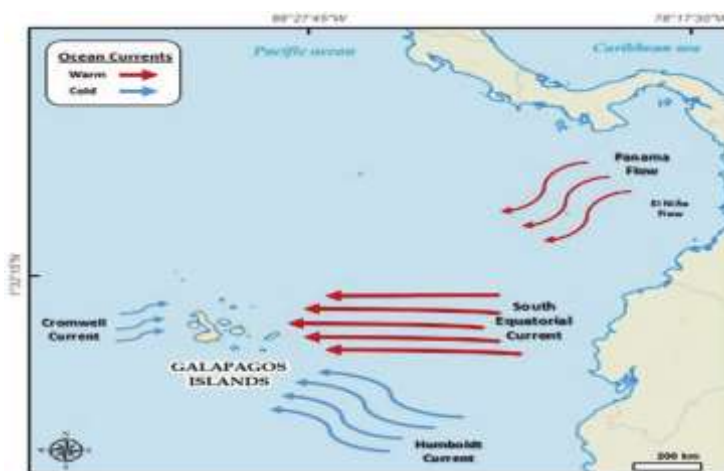
Pre-Connect

About Galapagos Archipelago

- **Location:** The Galápagos Islands are a chain of islands, or archipelago, in the eastern Pacific Ocean, near the equator. They are part of the country of Ecuador, in South America.

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- **Topography:** Repeated volcanic eruptions helped to form the rugged mountain landscape of the Galápagos Islands.
- **Wild life:** The Galápagos are best known for their diverse array of plant and animal species. Many species are endemic, which means they are not found anywhere else in the world.
 - The Galápagos penguin (*Spheniscus mendiculus*) is the only penguin species to live in the Northern Hemisphere.
- **Climate:** The Galápagos Islands are located near the equator, yet they receive cool ocean currents. This makes for a strange mix of tropical and temperate climates.
- **Significance**
 - A swift circulation of cold, nutrient-rich water flows from west to east in Pacific Ocean, which reaches the Galápagos Islands. This nutrient-rich water triggers photosynthesis and leads to an explosion of food for a wide variety of animals.
 - The cold ocean current creates a cooler, more stable environment for coral reefs and marine life and birds that often live much closer to the poles.
 - It is described by the UNESCO World Heritage Convention as a “living museum and showcase of evolution.”
 - Flora and fauna of the Galápagos could assist reseed failing ecosystems and maintain the region's fisheries.
 - Corals do not bleach and die in these waters off the west coast of Ecuador. So, the marine food chain does not suffer, unlike in the warm waters nearby.



Key findings of the study

- The islands are protected from an otherwise warming Pacific Ocean by a cold, eastward equatorial ocean current. And this current has been gaining strength for decades.
- The temperatures in waters along the west coast of the Galápagos have dropped by 0.5 degrees Celsius since the early 1990s.
- El Niño poses a threat to the island group. It shuts down the cold current every couple of years, causing penguin populations to collapse.

Ocean currents

- ✓ Ocean currents are the continuous, predictable, directional movement of seawater driven by gravity, wind (Coriolis Effect), and water density.
- ✓ Ocean water moves in two directions: horizontally and vertically.
- ✓ Horizontal movements are referred to as currents, while vertical changes are called upwellings or down-welling.
- ✓ This abiotic system is responsible for the transfer of heat, variations in biodiversity, and Earth's climate system.

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Threats to biodiversity conservation

- **Habitat fragmentation:** Ecosystem conversion and ecosystem degradation contribute to habitat fragmentation. Habitat loss from exploitation of resources, agricultural conversion, and urbanization contribute to the loss of biodiversity. Like the Western Ghats in India has lost about 35.3 percent of the total forest over the last nine decades.
- **Exotic species introduction:** Exotic species are typically introduced into ecosystems without their co-evolved predators and parasites, which enables an alien invader to out-compete native species with similar ecological requirements. Like Introduction of Water Hyacinth caused large scale death and scarcity of freshwater fishes in West Bengal.

- **Bio-magnification:** Many species are vulnerable to the indirect effects of pollution through the concentration of toxic chemicals in top predators of food chains and disruption of predator-prey interactions. Like to control insect pests and curb the spreading of such diseases, Dichloro Diphenyl Trichloroethane (DDT) was introduced in India.
- **Corridors and connectivity:** Maintaining the connectivity of the landscape could offset their impacts on biodiversity. The corridor concept proposes that refuges connected by corridors will have higher immigration rates than isolated patches of natural habitat. This can offset extinction by promoting gene flow and preventing inbreeding.
- **Human wildlife conflict:** It refers to the interaction between humans and wild animals, which results in a negative impact on people, animals, resources, and habitats. In India, human wildlife conflicts involving tigers, elephants, etc, are quite common. These animals, are already threatened or endangered, are often killed in retaliation or to 'prevent' future conflicts.

Mitigation measures for biodiversity conservation

- **Strong legislation:** Legislation that protects natural habitats by outlawing development, harvesting of natural resources, or other human exploitation has a huge impact on maintaining natural biodiversity.
- **Limiting invasive species:** Strong bio-security policies are required to counter intentional or accidental introduction of invasive species.
- **Habitat restoration:** Restoration of habitat through in-situ or ex-situ conservation methods.
- **IUCN:** According to the IUCN, any Environmental Impact Assessment (EIA) for any project should also consider the impact it will have on World Heritage Sites like Galgopas Island. This will help in decision-making for preservation and conservation.

Conclusion

The devastating effect of global warming is evident and can certainly affect the ocean currents, which can pose greater threats to all the ecosystem. Thus, the need of an hour is to create a strong mechanism and stricter regulations on these major resources. As climate change is reality.

Ground Water use in India

News Excerpt

The Ministry of Water Resources recently published a report that gives a situation of India's groundwater.

Pre-connect

About groundwater mechanism

- Ground water is the water that seeps through rocks and soil and is stored below the ground. The rocks in which ground water is stored are called aquifers.
- Aquifers are typically made up of gravel, sand, sandstone or limestone. Water moves through these rocks because they have large connected spaces that make them permeable. The area where water fills the aquifer is called the saturated zone.
- The depth from the surface at which ground water is found is called the water table.
- The water table can be as shallow as a foot below the ground or it can be a few hundred meters deep.
- Heavy rains can cause the water table to rise and conversely, continuous extraction of ground water can cause the level to fall.
- The underground (hydrogeological) setting of ground water defines the potential of this resource and its vulnerability to irreversible degradation.

Report assessment of ground water in India

- The main source of replenishable ground water resources is recharge from rainfall, which contributes to nearly 61 % of the total annual ground water recharge. India receives about 119 cm.
- The Total Annual Extractable Ground Water Resource of the country has been assessed as 398 bcm. However, in 2022 it is 239 bcm, the largest user being irrigation sector.

- The percentage of ground water extraction with respect to Annual Extractable Ground Water Recharge for the country is 60 %.
- Out of total recharge worthy area of the country, 17 % are 'Over-Exploited', 3% are 'Critical', 12% are 'Semi-Critical', 66% are 'Safe' and 2% are 'Saline' category assessment units.
- Out of Total Annual Extractable Resources of the country, 12 % are under 'Over-Exploited', 3 % are under 'Critical', 12 % are under 'Semi-Critical', 73 % are under 'Safe' category assessment units.
- Regions with the most blocks with critical groundwater levels are in Punjab, Haryana, Delhi and western Uttar Pradesh, where, despite replenishable systems, indiscriminate groundwater withdrawal has depressed the water table.
- Other endangered blocks are in Rajasthan and Gujarat, where due to an arid climate, groundwater recharge itself is limited.
- The parts of Karnataka, Tamil Nadu, Telangana and Andhra Pradesh, where due to inherent characteristics of crystalline water-storing aquifers, groundwater availability is low.

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Challenges with ground water in India

- ✓ **Irrigation through ground water:** The dependence of irrigation on ground water increased with the Green Revolution, which depended on intensive use of inputs such as water and fertilizers. Incentives such as credit for irrigation equipment and subsidies for electricity supply has led to a sharp fall in water tables.
- ✓ **Ground water contamination:** The commonly observed contaminants include arsenic, fluoride, nitrate and iron, which are geogenic in nature. Other contaminants include bacteria, phosphates and heavy metals which are a result of human activities including domestic sewage, agricultural practices and industrial effluents.
- ✓ **Estimation of ground water resources:** The data base management and estimation of ground water resources are indicative and not representative. Thus, it is far behind from the clearer understanding of ground water resources.
- ✓ **Agricultural crop pricing and water intensive crops:** The primary cause of over-exploitation has been the rising demand for ground water from agriculture. The cropping pattern and cropping intensity are taken independent of the ground water availability in most areas. Also, the Minimum Support Prices (MSPs) creates highly skewed incentive structure for the water intensive crops.

Steps taken for groundwater management in India

- **Jal Shakti Abhiyan:** The campaign launched "catch the rain-where it falls and where it falls" was an initiative to conserve water through rain water harvesting.
- **Central ground water authority:** It was constituted under environmental protection act, 1986, to regulate and control groundwater development.
- **Atal Bhujal yojana:** A central sector scheme with the objective of sustainable management of ground water.
- **Per drop more crop:** It is centrally Sponsored Scheme on Micro Irrigation with the objective to enhance water use efficiency in the agriculture sector by promoting appropriate technological interventions like drip & sprinkler irrigation technologies and encourage the farmers to use water saving and conservation technologies.
- **National project on aquifer management (NAQUIM):** It envisages mapping of aquifers, development and sustainable management of the groundwater resource.

Recommendations of report on ground water assessments

- ✚ **Water balance studies:** For holistic water resources management studies need to be taken into consideration for determining the Base flow and lateral flow components in the Water Balance equation and understanding the areas representing different hydrogeological set up of India (Southern hard rock terrain, Deccan Basaltic terrain, Indo-Gangetic and Brahmaputra alluvial plains, etc.)
- ✚ **Use of recycled water:** A draft National Water Policy has recommended a shift in usage from water-guzzling crops and prioritising recycled over freshwater for industrial purposes.
- ✚ **Temporal availability of ground water resources:** The assessment of temporal availability of ground water resources on the basis of available water columns can be attempted by

considering the water levels measured frequently using Digital Water Level Recorders (DWLRs).

✚ **Aquifer-stream interactions:** Aquifer-stream interactions are required to understand the contribution of ground water to streams and the requirement of environmental flows for sustainability of water resources and surrounding ecosystem.

✚ **Ground water modelling and predictive simulation:** The concept of Ground water modelling must be included where predictive simulation can be done. This would give an idea of the future availability of Ground water resources with respect to the changing climate and extraction patterns.

✚ **Recharge assessment:** The water level data is erroneous; recharge assessment may be made based on rainfall infiltration factor method.

PEPPER IT WITH

Rainfall pattern in India, agricultural distress, Hard-rock aquifers of peninsular India, Alluvial aquifers of the Indo-Gangetic plains

Glyphosate

News Excerpt

Recently, the government has restricted the sale of glyphosate as it has increased cultivation of "illegal" herbicide-tolerant GM cotton.

Pre-connect

About Glyphosate:

- It is an herbicide used to kill weeds, i.e., an undesirable plant that compete with crops for nutrients, water and sunlight.
- It is a broad-spectrum herbicide that can control a wide range of weeds, whether broadleaf or grassy.
- It is also non-selective, killing most plants.
- When applied to their leaves, it inhibits the production of a protein '5-enolpyruvylshikimate-3-phosphate synthase (EPSPS)'.

Glyphosate in India

- There are nine glyphosate-based formulations containing different concentrations of the chemical registered for use under the Insecticides Act, 1968.
- These are approved largely for weed control in tea gardens and non-crop areas such as railway tracks or playgrounds.
- Farmers also apply glyphosate on irrigation channels and bunds to clear these weeds, making it easier for water to flow and to walk through them.
- Weeds growing on bunds are hosts for fungi, such as those causing sheath blight disease in rice.
- It can be used in tea or rubber plantations, but not in fields where the crops and weeds are at almost the same level.

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Reasons for restriction of glyphosate by the government

- ✓ **Increase in application:** With the advent of genetic modification (GM) or transgenic technology, Glyphosate application has been increased.
- ✓ **GM crop tolerance:** It has involved incorporating a 'cp4-epsps' gene, isolated from a soil bacterium *Agrobacterium tumefaciens*, into crop plants such as cotton, maize and soyabean. This alien gene codes for a protein that does not allow glyphosate to bind with the EPSPS enzyme. Thus, GM crop can "tolerate" the spraying of the herbicide, which then kills only the weeds.

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DMH-11

The Genetic Engineering Appraisal Committee (GEAC) has recommended the "environmental release" of the **transgenic hybrid mustard DMH-11** for seed production and commercial cultivation.

About DMH-11 in India

- ❖ The original version containing a single insect pest-resistant gene was released in 2002 and an improved double-gene product in 2006.
- ❖ It incorporates three alien bacterial genes that enable hybridisation.

- ✓ **Illegal sales:** There has been sale of an additional 5 million packets of “illegal” GM cotton seeds as these seeds harbour both insect-resistance and HT traits, coming from the two Bt genes and the glyphosate-tolerant ‘cp4-epsps’ gene.

International organizations on Glyphosate

- **World health organizations:** The International Agency for Research on Cancer (IARC), classified glyphosate as “probably carcinogenic to humans”. However, this was based on evidence for cancer in experimental animals from “pure” glyphosate, as opposed to that in humans from real-world exposures through diluted formulations.
- **The US Environmental Protection Agency:** It suggested that there are “no risks of concern to human health from current uses of glyphosate” and “no evidence” of it causing cancer.
- **The European Chemicals Agency:** It suggested that “classifying glyphosate as a carcinogenic, mutagenic (causing DNA changes) or reprotoxic substance is not justified”.

PEPPER IT WITH

GEAC, BT cotton, BT brinjal, about genetically modified crops.

SCIENCE & TECHNOLOGY

Barium in Exoplanets

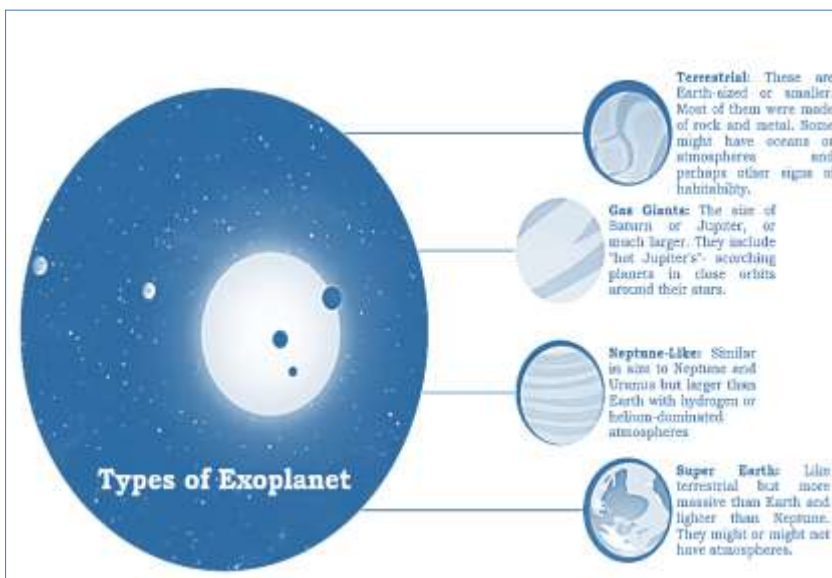
News Excerpt

Recently, Researchers detect barium in the atmospheres of 2 exoplanets namely WASP-76 b and WASP-121 b. The presence of heavy metals indicates about exotic atmospheres of these planets.

Pre-Connect

Understanding Exoplanets

- An exoplanet is any planet beyond our solar system.
- They were first discovered in the 1990s and since then more than 4000 exoplanets were identified using a variety of detection methods.
- Generally, they orbit other stars, however in some cases when they are free-floating or orbiting the galactic center and are untethered to any star, they are known as rogue planets.



- Exoplanets are made up of elements similar to those of the planets in our solar system, but their mixes of those elements may differ.
- **It is difficult to detect exoplanets using a telescope, therefore most exoplanets are found through various indirect methods such as the transit method, Dopler Shift, and Gravitational Microlensing (the Wobble method).**

Key Findings

- Barium Presence was found on two exoplanets. They are similar to Jupiter in size but differ in the orbital period which is shorter than Jupiter.
- The barium was detected using **European Southern Observatory's Very Large Telescope** located in the Atacama Desert (Chile).
- Very High surface temperatures of these exoplanets astronomers believe point towards the iron rain.
- Other than Barium traces of other elements like cobalt and strontium were also found.

Outcomes

- ✓ The presence of Barium is extraordinary in the sense that is 2.5 times heavier than Iron. Thus its fall points towards the presence of very high gravity on the planet.
- ✓ Such physical dynamics helps Scientist in figuring out the composition of these distant planets. Through such analysis, scientists can find out whether there exists another identical Earth.

Barium

- ❖ It is a soft, silvery metal that rapidly tarnishes in the air and reacts with water.
- ❖ It is not an extensively used element.
- ❖ Mostly it is used in drilling fluids for oil and gas wells. It is also used in paint and glassmaking.
- ❖ It occurs only in combination with other elements.
- ❖ The major ores are barite (barium sulfate) and witherite (barium carbonate).

PEPPER IT WITH

HD 82139b- Exoplanet,
European south
observatory,
Gravitational Lensing

NavIC Expansion

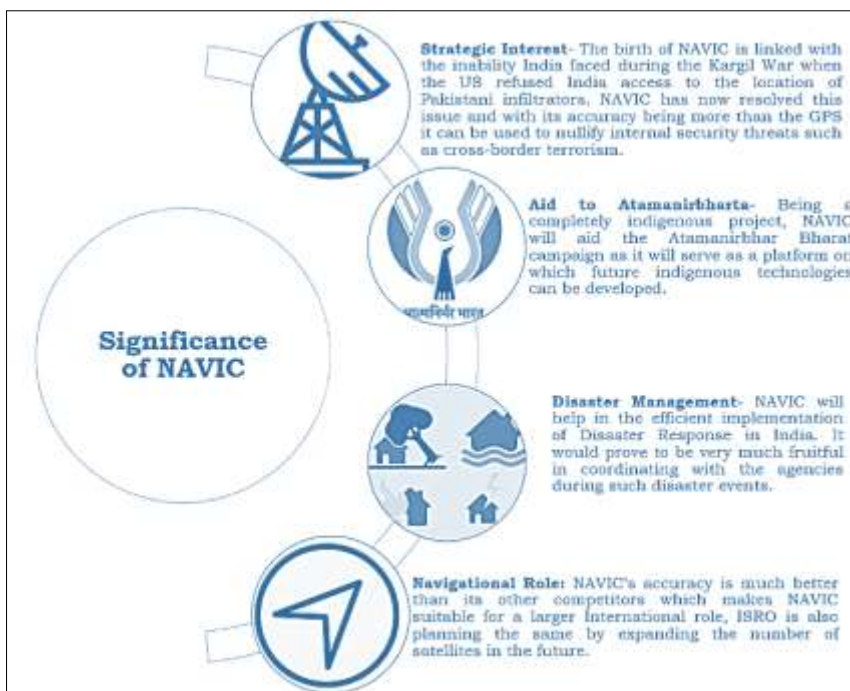
News Excerpt

ISRO is trying to boost NAVIC for widening the user base of the location system for more stringent safety and security standards.

Pre-Connect

About NavIC:

- Navigation with the Indian Constellation (NavIC) is India's own satellite navigation system like the GPS (Global Positioning System) of the USA.
- It is based on the Indian Regional Navigation Satellite System (IRNSS) which is a constellation of seven satellites (3 Geostationary and 4 Geosynchronous) that provide accurate position information service to users in India as well as the region extending up to 1500 km from its boundary.
- It has been in operation since 2018 and has a tremendous advantage over its major competitor GPS on the parameter of precision and uptime of the system.
- This precision can be attributed to the use of two bands instead of one as in the case of GPS.
- It uses two bands L5 and S-Band which improves accuracy by enabling the receivers on the satellites to correct any atmospheric errors.
- It provides two services- Standard Positioning Service (SPS) which is provided to all the users and Restricted Service (RS) for strategic users, which is an encrypted service provided only to authorized users.
- In 2020, It was also recognized by **International Maritime Organisation** as a part of the **World-Wide Radio Navigation System (WWRNS) for operation in the Indian Ocean.**
- It placed India in the elite group of 6 countries that have their own indigenously developed navigation system.



Need for NavIC

- ❖ India realized the importance of a satellite-based radio navigation system during the Kargil war in 1999 when the US denied India the use of its satellites to track Pakistani infiltrators.
- ❖ An indigenously developed navigation system will not only protect India from depending on others at the time of crisis but also aids in the economic development of the country.
- ❖ The data generated using indigenous NavIC cannot be misused by foreign companies.

Expansion of NavIC

- The government of India is pushing mobile manufacturers to make devices compatible with NavIC. For this Qualcomm has already developed mobile chipsets which are compatible with NavIC.
- The government had made NavIC-based vehicle trackers mandatory for all commercial vehicles. In accordance with the Nirbhaya Case verdict. It is beneficial for women, children, elderly citizen and larger public safety.

- ISRO is planning to launch 5 more satellites which will have improved bands and will replace defunct satellites.
- New bands will add new functionality like a track of satellite health (L2 band) and improve accuracy for aircraft precision (L2) among other things, and near and far-range weather observation (S-Band).
- To deepen NavIC strategic depth ISRO will be providing long code so that signals are not breached or spoofed or made non-available.
- ISRO will also make it more user-friendly so that it widens the user base.

Applications

- ✓ Terrestrial, Aerial and Marine Navigation
- ✓ Disaster Management
- ✓ Vehicle tracking and fleet management
- ✓ Integration with mobile phones
- ✓ Precise Timing
- ✓ Mapping and Geodetic data capture
- ✓ Terrestrial navigation aid for hikers and travellers
- ✓ Visual and voice navigation for drivers

PEPPER IT WITH
GPS, GLONASS, BeiDou,
Galileo, QZSS,
Atmanirbhar Bharat

Organic Fertilizer

News Excerpt

Organic fertilizers are a must to bring the next green revolution and thus with the right policy interventions, India can become the hub of organic fertilizer production.

Organic Fertiliser

- Organic Fertilisers are made from multiple organic sources such as organic compost, cattle manures, and domestic sewage.
- These are two types-
 - **Bio-Fertiliser**- They are the micro-organisms that aid in increasing the productivity of the soil. They are generally attached to solid or liquid carriers.
 - **Organic Manure**: These are partially decomposed organic matter for example compost or vermicompost which provides nutrients to the soil and improves yield.
- Organic Fertilizer performs the balancing

Government Initiatives for Boosting Organic Farming

- ❖ Sustainable Alternative Towards Affordable Transportation (SATAT) scheme: The scheme is based on four pillars:
 - Utilisation of waste generated in India.
 - Reduce India's energy import dependence.
 - Reduction of emissions and pollution from organic waste
 - Job Creation
- ❖ Paramparagat Krishi Vikas Yojana: It is part of National Mission of Sustainable Agriculture (NMSA). The Schemes promotes organic farming using cluster based approach and Participatory Guarantee System (PGS) certification.

Advantages of Organic Fertilisers



For Plant and Soil: It improves soil structure which increases soil's ability to hold onto water and nutrients. Since carbon is present as a part of its chemical makeup microbes thrive. It improves cation capacity exchange and neutralizes toxins. It improves root growth, and germination, and reduces stress and premature deterioration.



Pocket Friendly: It lowers the input, operating, and maintenance costs. It also led to higher yields thus maximizing production with better profits and returns. It increases the production of all crops to about 20-40% and reduces the overall cost of production to about 25-30% within 3-5 years.



Eco-Friendly: Within 3-5 years of using organic fertilizers, it reduces the use of herbicides and insecticides to about 40-50%, rehabilitates marginal lands, and restores about 10-30% of all land to full production. It is free from weed seeds, plant pathogens & nematode cysts.

act between soil health and production potential, thus it helps to reduce dependence on chemical inputs.

- It lowers the leaching losses by promoting higher water retention and also provides micro-nutrients in adequate and sufficient quantities.

Potential of Organic Fertiliser in India

- Municipal Solid Waste (MSW): On average India produces 150,000 tonnes per day of municipal solid waste out of which it is estimated that organic waste hovers around 65000 tonnes per day.
- If it is diverted to the biogas industry it can help in reducing the import of fossils and fertilisers.
- Biogas Effluents- Effluent of biogas known as digestate has a huge potential in the generation of electricity and can also act as fuel for vehicles. Digestate can help in aiding India's second green revolution.
- The rising popularity of Organic Farming- Organic farming produce demand is growing in India. It is seeing an average growth of near about 17% per year.

Organic Farming	
Pros	Cons
<ul style="list-style-type: none"> • Improvement in health levels • Avoidance of soil pollution • Less groundwater pollution • Protection of insects • More sustainable • Organic garbage can be composted and reused • Organic food may taste better • Better nutrition values on average • Saving money if you grow your own organic plants • No use of GMOs (genetically modified organisms) • Better for our climate • Better for the health of farmers • More original form of farming • Pollination may be easier 	<ul style="list-style-type: none"> • Significant costs at the beginning • May not be suitable for growing on a large scale • Pest issues • Products may be too expensive for poor people • Regulatory standards may be hard to meet • High certification costs • Small farmers may go out of business • Organic farming can be time-consuming • Organic farming needs plenty of knowledge • Unpleasant smell • High variance in yield and quality

PEPPER IT WITH

Rashtriya Krishi Vikas Yojana- Remunerative Approaches for Agriculture and Allied Sector Rejuvenation (RKVY-RAFTAAR), National Mission on Sustainable Agriculture, Sub-mission on AgroForestry

Limitations

- ✓ Organic farming is monitored strictly to get certified.
- ✓ There is no separate market for organic produce, farmers must create their market to sell their produce at a higher rate- Expensive food items.
- ✓ Organic farming in larger fields is not practical hence yield is low.
- ✓ The problem of insufficient knowledge and skills is there in India at least.
- ✓ The penetration of organic fertilizers is low.

End of Mars Orbiter Mission (MoM)

News Excerpt

Recently, ISRO announced that Mars Orbiter Craft has attained end-of-life as it has lost its communication which rendering it non-recoverable. MOM was originally designed as a technology demonstrator for 6-month but it lived for about 8 years in the Martian orbit.

Pre-Connect

About MOM

- MOM was launched in 2013 using Polar Satellite Launch Vehicle (PSLV C-25) from the Satish Dhawan Space Centre, Andhra Pradesh. China termed it as Pride of Asia.
- The spacecraft had a color camera, a thermal infrared sensor, an ultraviolet spectrometer to study deuterium and hydrogen in Mars's upper atmosphere, a mass spectrometer to study neutral particles in the Martian exosphere, and a sensor for methane.
- **After the completion of 300 days of interplanetary journey, it was inserted into the Martian orbit on September 24, 2014.**

Reasons for the End of MOM

- There was no propellant left in the orbiter and its batteries had also drained out as the solar panels could not charge them due to prolonged eclipses, therefore, the desired altitude pointing could not be achieved for sustained power generation.

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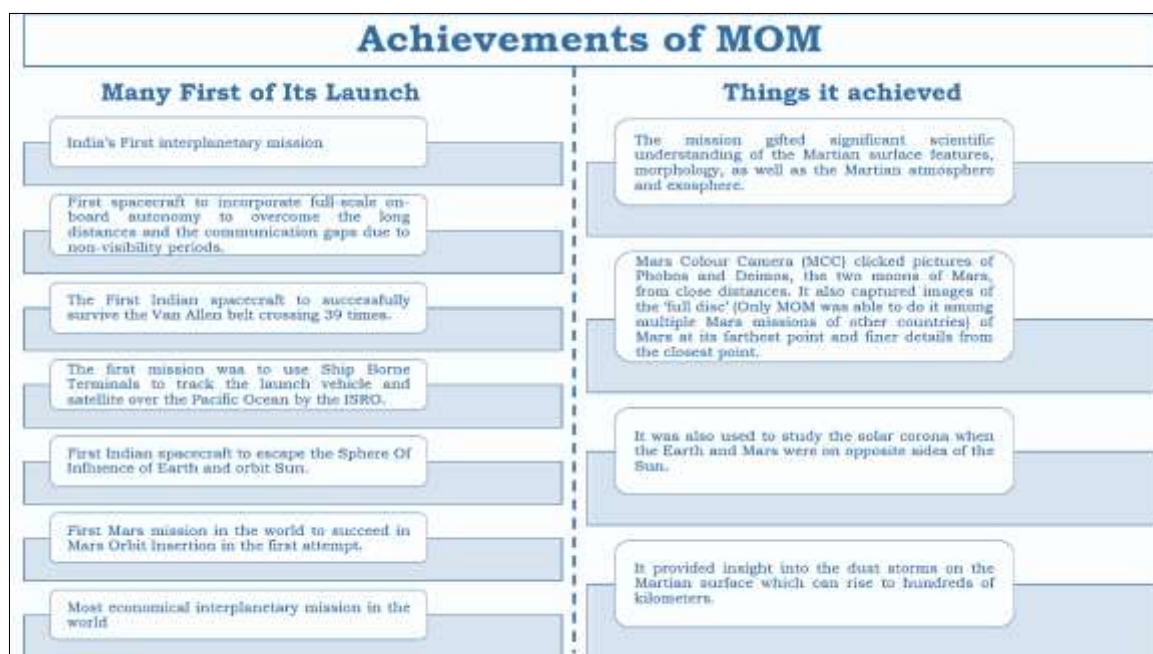
- While ISRO is still trying to figure out whether it has run out of power or it is a communication problem caused by the change of direction of the antenna.

Future Mars Mission

- ✓ ISRO released 'The Announcement of Opportunity (AO) for the future Mars Orbiter Mission (MOM-2) in 2016 but it is still on the drawing board, and it will be taken up after the Chandrayaan-3 mission.

PEPPER IT WITH

Chandrayaan 3 mission,
Gaganyaan, Aditya L1,
Perseverance Rover mission



- ✓ India's space agency's current priorities are 'Gaganyaan', 'Chandrayaan-3', and 'Aditya - L1' projects.

Launch Vehicle Mark (LVM) 3

News Excerpt

ISRO's heaviest rocket Launch Vehicle Mark 3 had successfully placed 36 satellites of UK-based one web into orbits.

Pre-Connect

ISRO Launch Vehicles

- **Satellite Launch Vehicle (SLV):** It was India's first experimental satellite launch vehicle which was successfully launched in 1980. It was a four-stage solid-fuel vehicle that was used to launch Rohini Satellites. It was capable of placing 40 kg class payloads in Low Earth Orbit (LEO).
- **The Augmented Satellite Launch Vehicle (ASLV):** It was a five-stage, all-solid propellant vehicle that was designed to augment the payload capacity to 150 kg for Low Earth Orbits (LEO).
- **Polar Satellite Launch Vehicle (PSLV):** It is the third generation launch vehicle of India and the first vehicle that was equipped with a liquid stage. Since 1994, from its first launch PSLV emerged as a reliable and versatile workhorse launch vehicle, consistently delivering various satellites into low earth orbits, from Chandrayaan to Mars Orbiter Mission to NavIC.
- **Geosynchronous Satellite Launch Vehicle Mark II:** GSV (Mark II) was developed to launch communication satellites in geo-transfer orbit using the cryogenic third stage. Initially, the Russian cryogenic stages were used, and later cryogenic stage was indigenously developed. It can take 10,000 kg of satellites to lower the earth's orbits.
- **Geosynchronous Satellite Launch Vehicle Mk III:** GSV (Mark III) is a three-stage vehicle with two solid strap-on motors, one liquid core stage, and a high-thrust cryogenic upper stage. It is a heavy lift launch vehicle of ISRO for achieving a 4000 kg spacecraft launching

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capability to GTO (Geosynchronous Transfer Orbit) in a cost-effective manner. It was renamed LMV 3.

- **Small Satellite Launch Vehicle (SSLV):** It is a 3-stage Launch Vehicle configured with three Solid Propulsion Stages and a liquid propulsion-based Velocity Trimming Module (VTM) as a terminal stage. SSLV is capable of launching a 500kg satellite in a 500 km planar orbit.

About LMV 3-M2 Mission

- It is the biggest commercial mission of New Space India Limited (NSIL).
- It is the first multi-satellite mission of LVM 3 with the heaviest payload (near about 6 tonnes while it was designed to carry only 4 tonnes) in the LEO orbit.

Conclusion

- ✓ With this launch, LVM3 has made its entry into the global commercial launch service market.
- ✓ Currently, India accounts only for 2 percent of the market despite being one of the foremost space-faring countries. Thus India has to make strides to enlarge its commercial space sector services in the future.

Orbital Plane

Orbital planes are 1200 km above the earth and are inclined near polar. OneWeb constellation operates in an LEO Polar Orbit Satellite. Those are arranged in 12 rings with 49 satellites in each plane. Each satellite completes a full trip around the earth every 109 minutes. Since, The earth is rotating underneath satellites, so they will always be flying over new locations on the ground.

PEPPER IT WITH

NSIL, ESA, Privatisation of Space Sector in India

Pillars of Creation: JWT

News Excerpt

NASA released detailed images of the Pillars of creation taken by the James Webb Telescope recently. These Pillars of creation are part of the Eagle Nebula which is located some 6500 light years from the earth in the constellation Serpens.



Pre-Connect

About James Webb Telescope

- A successor of the Hubble Telescope it was developed by an international collaboration between NASA, ESA, and the Canadian Space Agency.
- It is the largest and most **powerful infrared space telescope** which can see backward in time as it will examine every phase of cosmic history from the big bang to the evolution of the solar system.
- It will compare and understand how galaxies assemble over billions of years.
- It will also look at the origin from where stars and planetary systems are born.
- It will observe the atmospheres beyond our solar system.

Lagrange Point

- ❖ These are points which marks the point where gravitational forces of two celestial bodies cancel each other.
- ❖ Objects in these places are relatively stable and require minimal external energy or fuel to keep themselves at that point.
- ❖ James Web Telescope is presently placed in the L2 Lagrange point between orbital plane of Sun-Earth.

About Pillars of Creation

- The Pillars creation are a small part of the Eagle Nebula, a part of space where dense gas and dust birth new stars.
- Pillars of Creation were first made famous when NASA's Hubble Space Telescope captured an image of them in 1995.
- The Hubble Space Telescope photographed the Pillars of Creation twice, once in 1995 and the next in April 2015.
- According to NASA, these pillars resemble buttes in the desert.
- These pillars appear like rock formations – three towers of interstellar gas and dust which are more permeable than they look.

- They are essentially very dense clouds of molecular hydrogen gas and dust that have survived longer than their surroundings while hot newborn stars in the vicinity throw ultraviolet light in their direction.

About Photo evaporation

- ✓ The process by which high-energy radiation like ultraviolet light causes changes in substances it hits is called photo evaporation.
- ✓ This phenomenon causes the pillars to erode slowly, exposing small globules of even denser gas buried within them.
- ✓ These globules are called evaporating gaseous globules (EGGs) and the stars eventually emerge from the EGGs.

PEPPER IT WITH

James webb telescope, Hubble Space Telescope, constellation serpens, Messier 16

Significance of the images being captured

- The images taken by the James Webb Space Telescope will help researchers revamp models of star formation by identifying far more precise counts of newly formed stars, along with the quantities of gas and dust in the region.
- This can potentially simplify the understanding of how stars form and burst out of clouds of dust and gas.

DNA Test

News Excerpt

Recently, Supreme Court has raised concerns over the increasing use of DNA tests to prove cases in the court.

Pre-Connect

Understanding DNA

- Deoxyribonucleic acid (DNA) is a molecule that contains the biological instructions that make each species unique. It is passed from adult organisms to their offspring during reproduction.
- In Humans, DNA is found the nucleus and in some small amounts in cell structures known as mitochondria.
- It is made of chemical building blocks called nucleotides. These building blocks are made of three parts: a phosphate group, a sugar group, and one of four types of nitrogen bases (adenine (A), thymine (T), guanine (G), and cytosine (C)).
- The order, or sequence, of nitrogen bases, determines what biological instructions are contained in a strand of DNA. For example color of the eye.
- The complete DNA genome, for a human, contains about 3 billion bases and about 20,000 genes on 23 pairs of chromosomes.
- Organisms inherit half of their nuclear DNA from the male parent and half from the female parent (all mitochondrial DNA).

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DNA Double Helix

- ❖ It is used to describe DNA's winding a two-stranded chemical structure (looks like a twisted ladder). It gives DNA the power to pass along biological instructions with great precision.
- ❖ Each "rung" of the ladder is made up of two nitrogen bases, paired together by hydrogen bonds. They have a highly specific nature of this type of chemical pairing, base A always pairs with base T, and likewise C with G.
- ❖ When a cell prepares to divide, the DNA helix splits down the middle and becomes two single strands. These single strands serve as templates for building two new, double-stranded DNA molecules, each a replica of the original DNA molecule.

Autosomal DNA Technique

Autosomal DNA tests are a way of looking at the code that exists inside of all of a human cells. They reveal a world of genetic information that can be used medically to discover ethnic makeup of any individual. These tests have become popular to find relatives and ancestors. It can be helpful for diagnosing particular genetic diseases or predispositions for diseases.

- Each DNA sequence that contains instructions to make a protein is known as a gene. Genes only make up about 1 percent of the DNA sequence.
- DNA's instructions are used to make proteins in a two-step process. First, enzymes read the information in a DNA molecule and transcribe it into an intermediary molecule called messenger ribonucleic acid, or mRNA.

DNA Testing

- Also, known as Genetic Testing, it is used to track the changes in the genes, chromosomes, or proteins in a human body. For a test, samples like blood, skin, hair, tissue, or amniotic fluid are taken.
- Different types of DNA tests include looking at:
 - Genes
 - Chromosomes
 - Protein
- Genetic testing can detect some conditions which include:
 - Down syndrome
 - Huntington's disease
 - Cystic fibrosis
 - Sickle cell disease
 - Phenylketonuria
 - Colon (colorectal) cancer
 - Breast cancer
- DNA tests are categorized into:
 - **Single gene testing**- Single gene tests look for changes in only one gene.
 - **Panel testing**- A panel genetic test looks for changes in many genes in one test.
 - **Large-scale genetic or genome testing**- These tests analyze the bulk of an individual's DNA to find genetic variations. It can be further categorized into Exome sequencing and Genome sequencing.

DNA Test in Legal cases

Globally use of DNA test in concluding criminal and civil cases are much greater than India. Presently, there is no DNA regulation law in India. However new **Criminal Procedure Identification Act** allows for the collection of biological sample. Further **Section 53 of the Code of Criminal Procedure, 1973** authorizes a police officer for getting the assistance of a medical practitioner in good faith for the investigation. A request for DNA test can also be made under **Section 112 of the Indian Evidence Act**.

PEPPER IT WITH

DNA Technology (Use and Application) Regulation Bill, 2019, Genome sequencing, DNA vs RNA.

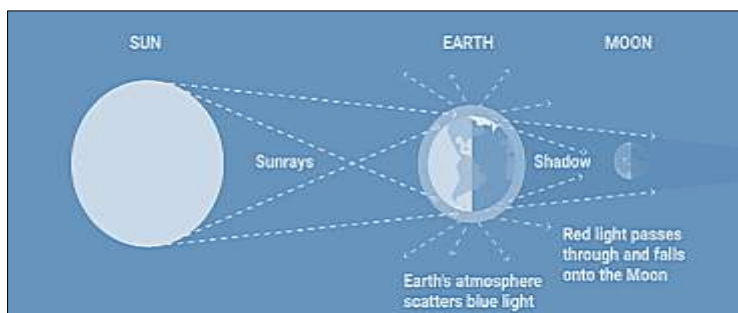
Beaver Blood Moon

News Excerpt

Beaver blood moon offers the world's last total lunar eclipse until 2025 and this event will mark the second blood moon this year. The next one is not expected until March 14, 2025.

Pre-Connect

- Blood Moon is not a scientific term, though in recent times it is being widely used to refer to a total lunar eclipse because a fully eclipsed Moon often takes on a reddish color.
- The same phenomenon that makes our sky blue and our sunsets red, causes the Moon to turn red during a lunar eclipse. It is called Rayleigh scattering.
- Beaver moon is a moniker for November's full moon adopted by the Old Farmer's Almanac supposedly from Algonquian languages once spoken by Native Americans in the New England territory.



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About the Total Lunar Eclipse

- A total lunar eclipse occurs when the Earth casts its shadow completely over a full moon.
- A total lunar eclipse is sometimes called a Blood Moon, because of the reddish tinge the Full Moon takes on when fully eclipsed.
- The degree of redness depends on atmospheric conditions that vary with levels of air pollution, dust storms, wildfire smoke, and even volcanic ash.
- It is only possible when the orbits of the Earth, moon, and sun align so that the moon is directly behind Earth relative to the sun.
- It can only occur during a full moon.

The Rarity of The Total Lunar Eclipses

- ✓ Total lunar eclipses occur on average about once every year and a half, but the interval varies - NASA.
- ✓ This event will mark the second blood moon this year, following one in mid-May.

PEPPER IT WITH
Solar Eclipse, Annular
vs total eclipses.

Significance

- For over a century, solar eclipses helped scientists decipher the Sun's structure and explosive events, find evidence for the theory of general relativity, and discover a new element, among other things.
- Total solar eclipses are important for scientific purposes because they allow scientists to see a part of the Sun's atmosphere – known as the corona – that's too faint to see except when the bright light of the Sun is blocked.
- Total solar eclipses provide an opportunity to study Earth's atmosphere under uncommon conditions.

Mission Prarambh

News Excerpt

Skyroot's Vikram-S will be India's first privately developed rocket which was launched into space under the 'Prarambh' Mission.

About Vikram-S

- The Vikram-S is a single-stage suborbital (Sub-orbital launch vehicles are those launch vehicles that travel slower than orbital vehicles and as a result, they reach the earth orbit but don't remain there for long) launch vehicle.
- It will carry three customer payloads and help test and validate technologies in the Vikram series space launch vehicles.
- The name of the launch vehicles of Skyroot is kept 'Vikram' as a mark to pay tribute to the founder of the Indian Indian space program Dr. Vikram Sarabhai.
- The company is designing three Vikram rockets that will use various solid and cryogenic fuels to carry between 290 kg and 560 kg payloads to sun-synchronous polar orbits.

About IN-SPACE

- The government approved the creation of a new organization named IN-SPACE to ensure greater private participation in India's space activities.
- IN-SPACE is supposed to be a facilitator, and also a regulator.
- It will act as an interface between ISRO and private parties and assess how best to utilize India's Space resources and increase space-based activities.

Contribution of Mission Prarambh

- ✓ There are around 50 startups that have already registered and begun work and they cover a gamut of activities – from services to building rockets and satellites.
- ✓ India's workhorse PSLV can carry up to 1,750kg to such an orbit while the newly developed small satellite launch vehicle meant for carrying smaller commercial satellites can carry up to 300 kg to sun-synchronous orbit.
- ✓ ISRO's Small Satellite Launch Vehicles are also likely to be manufactured and operated by private players soon.

PEPPER IT WITH
NSIL, ISA, Indian space
association, MTCR,
skyroot company, ANTRIX.

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Advantages of Privatization of Space Sector

User-Demand Aggregators

- Private Sector in Space tech will be focused on the general consumer and user needs as they are user-demand aggregators. This allows ISRO to focus on more strategic projects related to the country's security and development.

Capacity Building

- Rocket launches form a lucrative market that is still untapped by India. Since the rocket launch is under the control of the MTCR regime (of which India is a member) foreign players must look to India as an attractive location for their launches. Participation by the Pvt sector will help in capacity building as well as aid the government sector.

Scaling up the Space Economy

- Private Participation will help the space industry to grow and fill in the communication infrastructure deficit. This will allow for the scaling up of India's space economy.

New and Better Services

- Involvement of the Private Sector will provide for healthy competition and as a result, users will get better services ranging from weather and disaster prediction to real-time tracking and monitoring using accurate data from satellites. It will also bolster satellite communication leading to connectivity in the hinterland as well. Space tourism will also get a serious boost.

Solving the Space

- New Technologies can be developed which will address contagious issues like space debris more pragmatically and cost-effectively.

Development effect on multiple sectors

- The Space Sector is an integration of the aerospace, IT hardware, and telecom sectors. Therefore, An investment in this arena would foster positive carryover effects to other sectors as well.

SECURITY ISSUES

Delhi Declaration

News Excerpt

The United Nations Security Council's Counter-Terrorism Committee (UNCTC) unanimously adopted the Delhi Declaration, calling on all member-states to ensure zero tolerance towards terrorism. The meet was focused on the aspects of terror financing and denying access to modern technology (like drone technology) to terror organizations.



Pre-Connect

Understanding Terrorism

- Terrorism is those offenses that were conducted to intimidate a population or to compel a government to do or abstain from an act and it causes
 - Death or serious bodily injury
 - Serious Damage to public or private property.
 - Major Economic loss

The United Nations Security Council's Counter-Terrorism Committee (UNCTC)

- It was established after the 9/11 attack, through the Security Council resolution number 1373 in September 2001.
- It includes all the 15 UNSC members including the P5 (Permanent 5).
- It monitors the implementation of resolution 1373 by measuring efforts taken by countries towards the enhancement of their counter-terror ability.
- This includes freezing all avenues of terror finance and earning sources, denying safe haven, and sharing information and good practices.

India's Suggestion

India enlisted 5 consideration points for the CTC which include:

- ✓ Effective and sustained efforts to counter terror financing.
- ✓ Normative efforts of the UN need to be coordinated with collaborations with other fora like the Financial Action Task Force (FATF).
- ✓ To make sure that the Security Council's sanctions regime is not rendered ineffective because of political reasons.
- ✓ International cooperation and concerted actions against terrorists and their sponsors including the dismantlement of terrorist safe havens, etc. are critical imperatives.
- ✓ Recognition of Terrorism's nexus with the transnational organized crime syndicates which are involved in the activities like arms and illicit drug trafficking is already established.

Institutional Architecture of Counter-terrorism in India

- ❖ At the apex level is the National Security Council (NSC) headed by the Prime Minister.
- ❖ NSC receives inputs from the Joint Intelligence Committee (JIC) which is headed by NSA and has the chiefs of R&AW and IB as its members.
- ❖ Multiple Intelligence agencies ranging from CBI to DRI and ED along with Income tax intelligence, Special branch of State provide their inputs from time to time.

UN Counter Terror Initiatives

- ❖ The United Nations Office of Counter-Terrorism (UNOCT) leads and coordinates UN's counter-terrorism initiatives.
- ❖ UN Counter-Terrorism Centre (UNCCT) promotes international cooperation and supports the Member States in implementing the Global Counter-Terrorism Strategy.
- ❖ The Terrorism Prevention Branch (TPB) of the United Nations Office on Drugs and Crime (UNODC) plays a significant role in countering Narco Terrorism.

UN and Counter-Terrorism

There are three critical issues on the counterterrorism front, which the UN needs to navigate both externally and internally:

- The Technology Front: - Technological platforms which are used for civilian purposes are also being co-opted by militant groups such as drones, cryptocurrency, Twitter, and Telegram.

Terrorists are also using end-to-end encryption to advance their agenda. This requires a realistic discussion between tech companies, States, and citizens.

- Big power competition:- Rivalry between the US and China is hurting global efforts against terrorism. While China blocks the blacklisting of Pakistan-based terror groups at the UN, the US shields the Uyghur-led militant group from international sanctions.
- Taliban resurgence- The leeway and political space offered to the Taliban is serving as an inspiration to other terror groups. It will also have long-term repercussions for the politics of countering terror.

The UN cannot navigate these challenges until it evolves its counter-terror policies by bringing several changes such as:

- ✚ Prevent the mixing of power politics and geopolitics.
- ✚ Prevent misuse of Technology
- ✚ Give a definitive definition of terrorism
- ✚ Criminalize all types of terrorism
- ✚ Speed-up action against terrorist
- ✚ Deal effectively with terror financing.

PEPPER IT WITH

NIA, FATF, Christchurch
Call to Action1267
Sanctions Committee

Tactical Transport Aircraft

News Excerpt

Prime Minister laid the foundation stone for the C-295 transport aircraft manufacturing facility in Vadodara to be set up by Airbus Defence and Space and Tata Advanced Systems Limited (TASL).

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About C295

- C-295MW is a transport aircraft of 5-10 tonne capacity that will replace the ageing Avro aircraft of IAF.
- It can also operate on short unprepared airstrips as it is capable of Short Take-off and Landing (STOL).
- It has a flight endurance of up to 11 hours and can carry out multi-role operations under all weather conditions.
- It can routinely operate day as well as night combat missions from desert to maritime environments.
- It can carry more cargo than its competitors with direct off-loading through the rear ramp.
- Airbus will deliver the first 16 aircraft in 'fly-away' condition from its final assembly line in Seville, Spain within four years. The subsequent 40 aircraft will be manufactured by Tata Advanced Systems Ltd (TASL) in India as part of an industrial partnership between the two companies.

India's Civil Aviation Sector

India is both a manufacturing hub and a major market of civil aviation. India imports near about manufactured parts and engineering services worth USD 650 million every year and has the potential to become a major manufacturer of transport planes. It is estimated that in the coming 10-15 years, India will need about 2000 more passenger and cargo aircraft. Another major growing area is MRO (Maintenance, Repair and Operations) for which India can emerge as the regional hub.

Significance for India

- **Boost to Aerospace ecosystem:** The project will give a boost to the aerospace ecosystem in India wherein several MSMEs spread over the country will be involved in the manufacturing parts of the aircraft.
- **Boost to export:** After the completion of the delivery of 56 aircraft to the IAF, Airbus Defence and Space will be allowed to sell the aircraft manufactured in India to civil operators and export to countries that are cleared by the Government of India.
- **Boost to the economy and inter-country relationships:** After completion of the delivery of 56 aircraft to IAF, M/s Airbus Defence & Space will be allowed to sell the aircraft manufactured in India to civil operators and export to countries that are cleared by the Government of India.

- **Generation of employment:** The C-295 project is expected to create more than 15,000 skilled direct and indirect jobs across the aerospace ecosystem. The TATA Consortium has identified more than 125 in-country MSME suppliers spread over seven states.
- **Boost to defence sector:** This is the first project of its kind in which a military aircraft will be manufactured in India by a private company.

PEPPER IT WITH
LCH Prachand, DAP-2020, DPSU, iDEX

Theatre Commands

News Excerpt

The government of India had appointed a new Chief of Defence Staff, whose primary challenge will be to materialize the theatre command.

Theatre Command

Meaning of Theatre Command

- Theatre Command or Joint Command is an organizational structure in which the objective is to control all military assets in a theatre of war to achieve military effects.
- Under a Theatre Command resources of all forces are pooled at a single command under a senior military commander.
- At present, the only joint command is in Andaman and Nicobar islands.
- In a theatre command, all deployments i.e army, navy, and air force when happened are done accordingly in a unified manner.

The Kargil Review Committee and the then Group of Ministers besides the Naresh Chandra Committee had called for structural changes in higher defence management. It was the Shekatkar committee, headed by Lt Gen. (retd) D.B. Shekatkar, which had recommended the creation of the post of CDS and theatre commands.

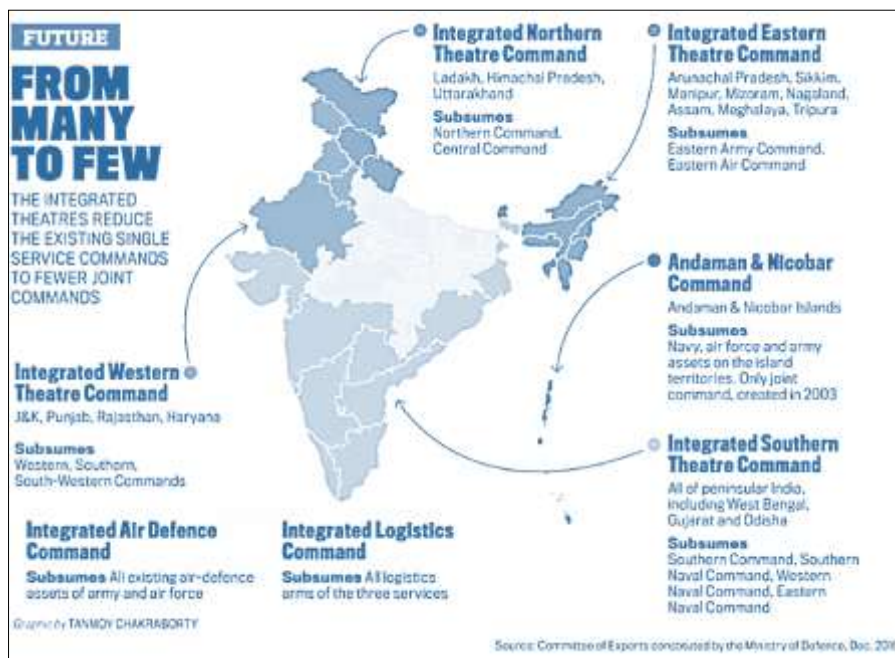
Need of Theatre Command

The nature of warfare is fast changing in modern times. The recent conflicts between Russia-Ukraine and Armenia-Azerbaijan had proved the role technology is poised to play in deciding the result of any warfare. Any war in the future will be fought in jointness rather than in silos. The case is special for India as it faces the threat of a two-front war in which both its adversaries have deep defence partnerships. In such a scenario, India needs to develop a plan in which it can use

all its assets as and when the need arises without any procedural or bureaucratic delays.

Advantages of Theatre Command

- It will help in **better planning and bringing down costs** in the long term as all acquisitions will be a unified one.
- It will provide a unified approach to forces infighting future wars. The need for a unified approach to war fighting was brought out in the deliberations after the 1999 Kargil battle.



- It will place all resources under One leadership which will provide seamless efficacy. The Theatre commander will not be answerable to individual Services.
- It will help in avoiding duplication of resources. It will also strengthen cohesion in the defence of India.

Challenges in the creation of Theatre Command

- ✓ Lack of mutual agreement across branches of armed forces on the theatre model.
- ✓ No consensus on who will provide operational guidance to the theatre commanders.
- ✓ Air power capabilities are a contentious issue and have caused fierce controversies over resources, roles, and missions.
- ✓ Budgetary allocations and the distribution of finances also need to be defined clearly.
- ✓ There is a danger that the distribution of resources might lead to the reduction of combat efficiency.

Theatre Command across the Globe

All major countries like China, Russia, the US, the UK and France work on a theatre command concept. However, most of this theatre is based on its global outlook and part of their expeditionary character. China is the latest entrant to a theatre concept and comes at a time when it has ambitions to play a larger role in the world. China is the uniformity in response, be it in the East or the Ladakh in the north. This is so because China's Western Theatre Command looks after the entire borders with India While other 4 commands cover other respective areas.

Listing of Terror accused

News Excerpt

China blocks India's bid at U.N. to list LeT leader Shahid Mahmood as a global terrorist.

Pre-Connect

About 1267 committee

- The 1267 committee which was set up in 1999 allows any UN member state to propose adding the name of a terrorist or terror group to a consolidated list, maintained by the Committee, that has affiliations to Al Qaeda and ISIS.
- The 1267 Committee is tasked with managing and updating the sanctions lists, as well as monitoring and supporting the implementation of the sanction regimes set out in UNSCR 1267 and subsequent related resolutions, including UNSCR 1333 (2000), and UNSCR 1390 (2002), UNSCR 1988 (2011), and UNSCR 1989 (2011)
- The Monitoring Team assists the Committee with three key obligations outlined by the sanction's regimes:
 - Freezing of financial assets of designated individuals/entities on the Consolidated List
 - Preventing the entry into or transit through a member state's territory by designated individuals
 - Preventing the supply of arms and related material as well as the provision of technical advice or military training to designated individuals or entities

About "placing a hold"

- According to the rules, once a listing is proposed, it will be adopted into the list according to a "no-objections" procedure.
- No objection procedure means that if any member of the Committee, which comprises all members of the UN Security Council, places a hold on the listing or objects outright to it, the listing cannot be adopted.
- The Committee is bound to resolve all such pending issues within six months but can allow extensions, meaning that technically at the end of the six months, the "holding" country has to decide whether to accept the listing or place a permanent objection to it. However, many of the listing proposals have had prolonged waits.
- As a permanent member of the UNSC, China can do this any number of times as its term doesn't run out, and it carries a veto vote.

GK CORRECT										
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I										
II										
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India' stand

- ✓ India has urged for an end to the practice of placing holds and blocks on listing requests and argued that it is most regrettable that genuine and evidence-based listings are being placed on hold.
- ✓ India has slammed China for the series of decisions blocking the UNSC terror listing.
- ✓ India has questioned the committee and said there should be consistency to ensure credibility.
- ✓ India has successfully proposed the listing of several terror entities in the past two decades, including Pakistan-based Jaish-e-Mohammed (JeM) and Lashkar-e-Taiba.
- ✓ India has tried several different ways to build international consensus on cross-border terrorism, and the UNSC terror listings have been one such route.
- ✓ India and the U.S. have built their separate lists of “most wanted” terrorists that document the cases against them, to eventually receive global cooperation on banning them.
- ✓ India has also pursued the Paris-based Financial Action Task Force, where Pakistan was placed on a “grey list” (increased monitoring) but recently it has been removed from the list.
- ✓ India has recently organized a UN counter-terrorism meeting on the 26/11 site countering the use of new and emerging technologies for terrorist purposes where India has requested all countries to cut off all kinds of funds to terrorists and terror activities.
- ✓ India has urged sanctioning some of the world's most dreaded terrorists.

ART AND CULTURE

Mangarh Massacre

News Excerpt

Recently, the Prime Minister visited Mangarh Dham in Banswara district (Rajasthan). Prime Minister also declared the place a National Monument. The place is also known as Jallianwala of Rajasthan as it witnessed the horrific killing of more than 1500 tribals in 1913.

NO. CORRUPT											
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32	33	34	35	36
37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60

Pre-Connect

About Mangarh Massacre

- Bhils were facing troubles from rulers of princely states and the British. By the end of the 19th century, the Bhils living in Rajasthan and Gujarat became bonded laborers.
- After the great famine of 1899-1900, the situation became worse. As a result of this, in 1908 the Bhagat Movement was initiated by Guru Govindgiri, which initiated rejecting bonded labor and fighting for rights started. The growing awareness among the Bhils and their demands for better wages upset the local rulers and the British.
- Mobilized and trained by Govind Guru, the Bhils placed a charter of 33 demands before the British primarily relating to forced labor (in 1910), a high tax imposed on Bhils, and harassment of the guru's followers by the British and rulers of princely states. The Bhils rejected the British's attempt to placate them and refused to leave Mangarh Hill, vowing to declare freedom from British rule.
- The British then asked the Bhils to leave Mangarh Hill before 15 November 1913. British Political Agent RE Hamilton deployed the combined forces of the British, Santrampur, Dungarpur, and Banswara, and a detachment of Mewar force moved towards Mangarh. Machine guns and canons were used by British forces.
- On 17 November 1913, the British Indian Army fired indiscriminately on Bhil protesters and over 1,500 people, including women and children, died in the tragedy.
- Govind Guru was captured, tried, and sentenced to life imprisonment.

Govind Guru

- Govind Guru was a revolutionary leader of the tribals of the region among the Bhil and Garasiya tribal communities, he also, united thousands of tribals with his voice.
- Guru Govindgiri served as a bonded laborer in the princely state of Santrampur. He realized that the socio-economic setup and prevalence of alcohol addiction were to blame for the plight of the Bhils.

Bhil Tribe

Bhils are often known as bow men of Rajasthan or the tribals of Mewars or the Arches. Bhils are mainly divided into two main groups the central or pure bills and eastern or Rajput Bhils. The central Bhils are found in the mountain regions in the Indian states of Madhya Pradesh, Maharashtra, Gujrat, Rajasthan, and Karnataka. Bhils are also found in the north eastern parts of Tripura.

- ❖ **Language:** Bhili, which is an Indo Aryan language
- ❖ **Costumes:** Women wear saree and men wear loose long frock along with pajama. Also, Dhoti and Ghamcha.
- ❖ **Food:** Maize is the main food. Wheat is used in special occasions.
- ❖ **Occupation:** Agriculture and animal husbandry
- ❖ **Religion:** Khandoba, Kanhoba, Bahiroba and Sitalamata are common local dieties.. Tiger God "vaghder" is also worshipped. Bhagat or Gurus peeform rites for Bhils
- ❖ **Culture:** Ghoomar is the most famous dance. Gair is the religious dance drama performed by the men in the month of Sharavana. Sculptured work are beautiful horses, elephants, tigers, deities out of clay.
- ❖ **Society Pattern:** Women are involved in economic activities. They follow polygamy Women can choose her husband even after marriage. Follow paternal Family system
- ❖ **Festivals:** Baneshwar fair, Holi, and Dusshera are the main festival. Also, Dance cultural shoes, magic shows, animal shows are part of their culture. Communal interaction involves folksongs and folklore.

- He played an important role in India's renaissance movement as he was associated with swaraj, swabhasha, and swadeshi (self-rule, self-language, and self-reliance) in the country and was spearheading social reforms in the Rajputana
- He along with Dayanand Saraswati initiated a wave of social reforms in the tribal areas.
- He propagated practices such as vegetarianism and abstinence from alcohol.
- In 1903, the Bhagat movement started and Govind Guru set up his main dhuni on Mangarh Hill. The gathering of tribals around the fire or dhuni to reaffirm their oath was seen by the British as a threat.
- By 1913, the movement had turned into a revolution, in 1917, thousands of tribals gathered on the call of Govind Guru to take action against the suppression being faced by them in the form of forced labor, bonded system, and taxes on farmers during the famine.
- This led to Mangarh Massacre, amid the brutality, the tribals of the area continued singing a magnificent song of freedom. That was the influence of Govind Guru.
- Since 1952 an annual fair is organized in memory of Govind Guru and his disciples. Also, Govind Guru University was established in Godhra, Gujarat in 2015.

Monument of National Importance

National ancient Monuments comes under the Ancient Monument and Archaeological Sites and Remains Act, 1958. Ancient Monument is any structure or monument or any cave, rock sculpture, an inscription that is of historical, or archaeological interest. The Central Government is authorised to maintain, protect and promote the monuments.

PEPPER IT WITH

Santhal Movement Paika Movement, Tirot Singh, National Monument Authority, Adarsh Smarak

Coins with Religious Symbols

News Excerpt

Recent political discourse in the country pointed towards the printing of God and Goddess on the Indian rupee. The practice of using images of God and goddesses is age-old in India. The Kushans, who hailed from the Central Asian region and ruled till the 3rd century AD, were the first to use the image of Goddess Lakshmi on their coins, along with Ardochsho, the Iranic Goddess of wealth.

Coins with a religious depiction in India

Dynasty	Religious symbol
Gupta Dynasty	Images of Garuda, Lord Vishnu's bird mount, or his consort Goddess Lakshmi.
Pallavas	A humped bull represents Nandi, the mount of Lord Shiva and on its reverse is the wheel, which symbolized the chakravartin or universal monarch. But it is also a symbol of Lord Vishnu.
Kushans	Oesho (Shiva), moon deity Mithra and Buddha in their coinage.
French and Dutch	Vishnu and Kali.
Britishers	The Three Swamy Pagoda, which depicts Lord Balaji flanked by Sridevi and Bhudevi on either side Venkatesa (Star/Single Swami Pagoda), Hanuman, Goddess Chamundi and the stylized Lion-Boar motifs of the Viraraya Panam.
Mohammed bin Sam and Hyder Ali	Shiva and Goddess Lakshmi; Siva-Parvathi motif of the Ikkeri Nayakas.
Gurhara Pratihara	Varaha Avatara
Greek Governor and Sakas	Shiva and Vishnu
Panchalas	Agni, Naga, Indra, and Shiva

Kalachuri	Seated Goddess Laxmi
The Chandellas of Jejakabhukti	Hanuman and Laxmi
Yadavas	Hanuman and Laxmi, Hanuman and Garuda, and the attributes conch and disc of Vishnu and boar motif symbolizing Vishnu's incarnation.
Gahadavalas	Laxmi
Chalukya	Shiva Linga, Hanuman, and Garuda and the attributes conch and disc of Vishnu and boar motif symbolizing Vishnu's incarnation.
Kadambas	Chakra which is associated with Vishnu.
Kakatiyas	Hanuman and Garuda and the attributes conch and disc of Vishnu and boar motif symbolizing Vishnu's incarnation.
Vijaynagar Empire	Siva-Parvathi, Lakshmi-Narasimha, Lakshmi- Narayana, Balakrishna, Venkatesha, Rama-Sita-Lakshmana, Hanuman, Garuda, and their attributes such as conch, wheel, gandab heru nda, and Vis hnu- n ama.
Harsha of Kashmir	The Standing king and the Seated goddess.
Chola	The Standing king and the Seated goddess.
Nawabs of Arcot	Vishnu and his two consorts (Three Swami Pagoda),
Mysore Wodeyars	Vishnu and his two consorts (Three Swami Pagoda),
Madurai Nayakas and the Siva-Gangas	Ganesha and Shiva linga
The Travancore Rajas	Conch
Hoyasalas	Goddess Durga

Kashi Tamil Sangamam

News Excerpt

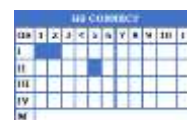
Recently, Prime Minister inaugurated a month-long Kashi Tamil Sangamam at the amphitheater ground of the Banaras Hindu University in Varanasi.

About Kashi Tamil Sangam

- It is a month-long program to celebrate, reaffirm and rediscover the ancient links between Tamil Nadu and Kashi.
- Both Ancinet cities are timeless centers of our culture and civilization. Kashi is the cultural capital of India whereas Tamil Nadu and Tamil culture are the centers of India's antiquity and pride.
- PM also released a book called 'Tirukkural' along with its translation into 13 languages
- More than 2500 delegates from Tamil Nadu will be visiting Kashi.
- The program is in line with the Ek Bharat Shrestha Bharat program.
- The program aims to provide an opportunity for scholars, students, philosophers, traders, artisans, artists, etc. from the two regions to come together, share their knowledge, culture, and best practices, and learn from each other's experiences.

How Sangam of Kashi and Tamil Nadu are connected?

- Both Sanskrit and Tamil are one of the most ancient languages that existed.



- Both are sources of literature and art, are the birthplace and workplace of India's finest acharyas.
- 'Ek Bharat Shreshtha Bharat' is a dream of Mahakavi Bharathiar, a Tamil poet.
- The Kashi Kaam Koteswar Panchayatan Mandir which is a Tamilian temple located on the banks of Harishchandra Ghat, and the two-hundred-year-old Kumaraswamy Matt and Markande Ashram on Kedar Ghat
- Swami Kumargurupar came to Kashi and got Kedareshwar Mandir was constructed in Kashi. Later, his disciples got Kashi Vishwanath temple constructed in Thanjavur on the banks of river Kaveri.
- Manonmaniyam Sundaranar wrote a Tamil State song and the connection of his guru with Kashi.
- The Ramayana and Mahabharata written by Raja ji played important role in connecting the North and the South.
- After his pilgrimage visit to Varanasi, the Pandiyan king Athiveera Rama Pandian built a large temple at Tenkasi in Tamil Nadu.
- The relationship between Kasi and Tamil Nadu can be seen in KasiKandam

Significance

- ✓ Kashi-Tamil Sangamam will become a platform for a source of energy to strengthen national unity
- ✓ The program will strengthen the bonds among the people of India by putting forward our cultural heritage and age-old links between Tamil Nadu and Kashi.
- ✓ It is in link with New Education Policy 2020 where the emphasis is on rediscovering ancient knowledge and integrating them with modern thought, philosophy, academics, technology, entrepreneurship, craftsmanship, etc.
- ✓ Direct interaction between scholars, experts and practitioners of various trades, crafts and professions can lead to new innovations, new craftsmanship, new ways of doing business, innovation in technology etc.
- ✓ The programme is a confluence of rivers, ideology, science or knowledge, every confluence of culture and traditions is celebrated and revered in India.

Sangam Literature

The Period between 3rd century BC TO 3RD century AD is termed as Sangam Literature termed as Sangam literature. But the well known scholar of Tamil literature and history Kamal Zvelebil suggests that the most acceptable period for creation of Sangam poems is between 100 BCE to 250 CE.

Sangam literature has different phases, third phase being the last. All the Sangam literature available to us now belong to the third Sangam period and Post Sangam period.

Some of the work of Sangam literature are: **Thirumurugatrupadai, Viracoliyam, Iraiyanar Ahapporul, Tolkapiam – Porulatikaram, Kalittotai – the first of the Eight Anthologies (Ettutotai).**

PEPPER IT WITH

Vedas, Upanishads Literature during Bhakti movement Literature during India's National movement

CONTEMPORARY ETHICS CASE STUDIES

Conflict Resolution in Case Studies

Conflict Type	Conflict Resolution
Conflict between Legality and Morality	<ul style="list-style-type: none"> For a public servant, it is important to adhere to the law in both letter as well as spirit. Here, make sure that letter doesn't override spirit. For example, if there is a law that to enter a building one must remove her/his shoes then you cannot bar entry of someone who came barefoot. The idea of Morality is fluid i.e., morality differs from one person's perspective to another. Therefore, one must use her/his discretion according to the situation. Generally, Morality and Legality are not in conflict because laws are framed by keeping the moral compass of society at large in mind. However, if in case they are in conflict then as a civil servant you should follow the law. Also, if something is immoral according to you but it is not illegal per se then you cannot act against the issue. For Example, you might consider a live-in relationship immoral, but you cannot act against it as it is not illegal. You cannot go for moral policing
Conflict between personal and professional values	<ul style="list-style-type: none"> Every individual carries some form of biasedness and prejudices. And these prejudices reflect in our subjective thinking. Therefore, for any case study, our approach should be objective Writing an answer in such cases using a common sense approach is not appropriate as in our common sense, our bias will reflect and therefore will cost us marks in the exam. For a civil servant, her/his values and point of view must be aligned with the values of the Government. Therefore, in any case study take decisions that are according to the policy of the government and as per the professional values of the organization.
Conflict between end and means	<ul style="list-style-type: none"> In some situations, it becomes very difficult to follow the right means to achieve the right ends. For example, A large section of society enjoys encounters of criminals and terrorists even if prima facie they appear to be fake. This is because such encounters curb crime or terrorism. But such actions are wrong as only an independent judge can decide if a person is guilty or not and every person has to be presumed innocent till proven guilty. Therefore, as a civil servant, you must focus on means as much as ends. The term "mean" in the government denotes procedures. So don't do or support anything which violates the procedure.
The conflict between prima-facie principles	WD Ross defined six prima-facie principles as Principle of Honesty, Principle of Promise-Keeping, Principle of Non-maleficence, Principle of Beneficence, Principle of Autonomy, Principle of Justice. If in any case study there is a conflict between these principles then choose the best principle according to the situation and justify your answer. Remember there won't be any one correct option. It all depends on your justification
Conflict between Self-interest and Morality	<ul style="list-style-type: none"> Humans by nature are self-centered but the public expects selflessness from civil servants. Therefore, in several case studies, there will be a conflict between self-interest and morality. In such cases, favor morality, nationalism, and idealism.
Conflicts between different Normative Ethical Principles	An ethical dilemma is about choosing between two ethical principles given in a case study. To resolve the dilemma, we use Normative ethics principles. These include Virtue Ethics, Deontology Teleology, and Relational or care Ethics. So, in any case study use of ethical dilemma use these principles according to the demand of the question.

Q. You are a newly appointed tax officer and one day, a businessman comes to your residence to see you. When you saw his visiting card, you recollect that a big tax. the raid has happened to his company and a huge tax evasion case has been detected against him. You don't wish to meet this businessman, but out of courtesy, you invited him into your home to just have a brief meeting. The businessman was very polite and promised that he shall pay the full tax which has been short-paid. He, however, requested you to kindly take a lenient view in his case and impose the minimum fine and penalty in his case. After the businessman leaves, your servant notices that he has left a basket full of sweets and fruits. When he unpacked the basket, he found an envelope under the fruits. When you opened the envelope, you find a huge amount of cash inside.

- (a) What are the different options available to you? Discuss the merit and demerit of each option and suggest the best course of action in this situation.

Q. You are working as an Executive Engineer in the construction cell of a Municipal Corporation and are presently in charge of the construction of a suspension bridge over river Gomti. There are two Junior Engineers under you who have the responsibility of day-to-day inspection of the site and are reporting to you, while you are finally reporting to the Chief Engineer who heads the cell. While the construction is heading toward completion, the Junior Engineers have been regularly reporting that all construction is taking place as per design specifications. However, in one of your surprise inspections, you noticed some serious deviations and lacunae which, in your opinion, are likely to affect the safety of the suspension bridge. Rectification of these lacunae at this stage would require a substantial amount of demolition and rework which will cause a tangible loss to the contractor and will also delay completion.

There is a lot of public pressure on the Corporation to get this construction completed because of heavy traffic congestion in the area. When you brought this matter to the notice of the Chief Engineer, he advised you that in his opinion it is not a very serious lapse and may be ignored. He advised further expediting the project for completion on time as its falls under the constituency of a senior Union Minister. However, you are convinced that this was a serious matter which might affect public safety and should not be left unaddressed.

- (a) What are the different options available to you? Discuss the merit and demerit of each option and suggest the best course of action in this situation.

Q. You are an upright anti-corruption activist who has been fighting battles against many corrupt officers in the government using various tools. One day, you met your younger brother, who has recently joined a government department that is known for corruption. He invited you for lunch in a five-star hotel. After he had a couple of drinks, he opened up and started talking about corruption in his department. He told you that initially, he was extremely hesitant about taking bribes but gradually, after seeing that everyone in the department was taking bribes, he started making money, too. He explained that in his department, everyone has to pay a monthly sum to their superior. If he fails to pay his boss the monthly bribe, he may be transferred or booked in a fake case.

What should you do?

- Record the conversation on your mobile phone and report the matter to the CBI.
- Tell him not to discuss official matters with you.
- Advise your brother to stop taking bribes and lead an honest life.

Give reasons for accepting or rejecting each option. Give proper justification for each option.



PHILOSOPHY OF THE MONTH

Self-Reflection for Peace

- Globally people across all levels ache for peace, and even the United Nations since 2000 is trying to build a culture of peace. However, armed conflict continues in different parts of the world.
- To have a breakthrough in the achievement of peace there is a need to look at the conditions of those affected by conflict. There is a need to work together to eliminate existing and emerging threats to peace.
- This method of achieving peace was prescribed by Gautama Buddha, he saw numerous conflicts in his times, and instead of focusing on their identities or nature confrontation, he turned his attention to the actual conditions in which people on both sides were suffering.
- He realized that they were their minds were clouded, and they could not recognize that the other group shared their concerns. Buddha concluded that they were both suffering from the same circumstances and the same fear drive them toward violence. Conflicts today remain the same in their essential nature.
- Amartya Sen also opined that plurality of identities can play a key role in helping people resist the pull of mass psychology and the incitements to violence that provoke conflict.



Peaceful changes process involved:

- Reflection and Re-Engagement
- Consciousness- raising through dialogue
- Imaging non- violent alterantive
- Provide specific modes of empowerment
- Transformative Action

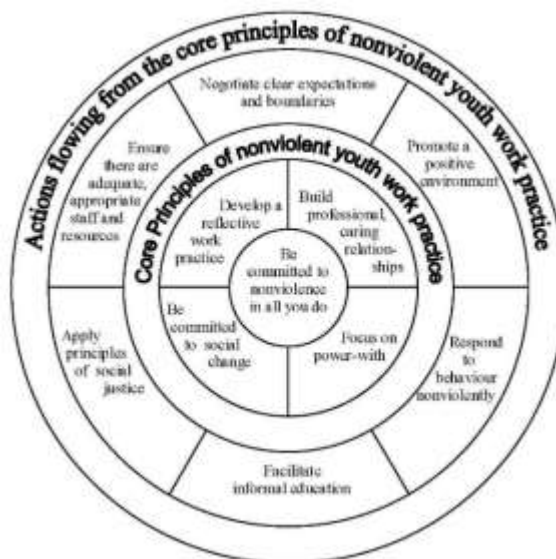
The Greatest Force-Ahimsa

- Ahimsa or Non-violence is the strength of the soul. A person who has truly realized the principle of non-violence has the strength which no weapon can match.
- Violence is like water coming out of an outlet furiously with an overwhelming force but Non-violence is the essence of discipline which no amount of violence can crush.
- Lord Mahavira considered "Ahimsa Parmo Dharma" i.e.



non-violence is the highest virtue. Non-Violence sums up in itself all those virtues that spring from love.

- Gandhiji considered Ahimsa as the law of love, in which love comprehends noble feelings such as compassion, forgiveness, tolerance, sympathy, and kindness.
- Ahimsa implies that there is no violence in thought, word, or deed and, finally, no loss of temper.
- Ahimsa is the principle that makes life worth living or meaningful.
- Ahimsa not only develops man's moral dignity and personality, but it also makes possible an ideal society.
- As India is having largest demographic dividend, Non-Violence among youths is necessary.



PT CONCATENATION

About:

This Section is dedicated to Prelims-related content. It consists of facts that might come in the prelims exam. It also comprises short, crisp, and to-the-point content highly relevant for the Prelims examination. It provides backward and forward linkages that revolve around a topic. Practice questions based on the section are also provided in the magazine.

POLITY

Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules 2021

About: Government notifies Amendments to the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules 2021

- These amendments ensure the protection of the constitutional rights of citizens
- The aim of the amendment is Open, Safe & Trusted, and Accountable Internet, and to protect the rights of Digital Nagriks.
- The intermediaries now will be expected to ensure that there is no uploading of content that intentionally communicates any misinformation or information that is patently false or untrue hence entrusting an important responsibility to intermediaries.
- The rules also have made it explicit for the intermediary to respect the rights accorded to the citizens of India under Articles 14, 19, and 21 of the Indian Constitution
- These rules mark a new partnership between the Government and Intermediaries in making & keeping our Internet Safe & Trusted and Accountable Internet

Key changes effected in the rules are :

- Imposition of a legal obligation on intermediaries to take reasonable efforts to prevent users from uploading harmful/unlawful content. Further, communications from the intermediary must be done in the regional Indian language as well.
- Any content that is defamatory or libelous will be determined through judicial review.
- Dedicated sections deal particularly with misinformation, and content that could incite violence between different religious/caste groups.
- Intermediaries are required to respect the rights guaranteed to users under the Constitution, including a reasonable expectation of due diligence, privacy, and transparency.
- Grievance Appellate Committee(s) will be established to allow users to appeal against the inaction of or decisions taken by intermediaries on user complaints. However, users will always have the right to approach courts for any remedy.

LINK IT WITH: Deep Fakes, Cyber Fraud, Press Council of India, Defamation in India.

Complaint Management System

About: PM inaugurates new Complaint Management System (CMS) of Central Vigilance Commission

- The Portal is to provide end-to-end information to citizens through regular updates on the status of their complaints
- Prime Minister will launch the new Complaint Management System portal of the CVC which is envisioned to provide end-to-end information to the citizens through regular updates on the status of their complaints.
- A series of pictorial booklets on “Ethics and Good Practices”; Compilation of best practices on “Preventive Vigilance” and a Special issue “VIGEYE-VANI” on public procurement will be released.

LINK IT WITH: Prevention of Corruption Act 1988, Central Bureau of Investigation, Public Accounts Committee, RTI Act.

SOCIAL ISSUES

Pradhanmantri Kisan Samrudhi Kendra (PMKSK)

About: Two New Reforms in the Fertilizer sector of India.

- PMKSK will provide both agri-inputs and testing facilities. They will generate awareness and provide information regarding various government schemes which will help in capacity building.
- The target of the scheme is to convert all retail fertilizer shops into PMKSK.
- Another important reform in the sector is Pradhan Mantri Bhartiya Jan Urvarak Pariyojana (One Nation-One Fertiliser) this will help in reducing all kinds of confusion about the quality of the fertilizer and its availability. There will be only one brand i.e. Bharat for all types of fertilizer.

LINK IT WITH: Soil Health Card, Fertilizer Subsidy, Nano-Liquid Fertiliser

Niveshak Didi

About: India Post Payments Bank conducts India's First Floating Financial Literacy Camp

- Niveshak Didi initiative was launched to promote Financial Literacy "By the women, for the women". It was the result of collaboration between the Investor Education and Protection Fund Authority (IEPFA) of the Ministry of Corporate Affairs (MCA) and the India Post Payments Bank.
- 'Niveshak Didi' initiative is based on the ideology of women for women as rural area women feel more comfortable sharing their queries with a female itself.
- India Post Payments Bank (IPPB) has been established under the Department of Posts, Ministry of Communication with 100% equity owned by the Government of India.
- The fundamental mandate of IPPB is to remove barriers for the unbanked and under-banked and reach the last mile by leveraging its network of post offices.
- IPPB will provide a fillip to a less cash economy and contribute to the vision of Digital India.

LINK IT WITH: National Payment Corporation of India, Small finance bank vs Payment Banks, UPI lite.

Citizen Perception Survey-2022

About: Ministry of Housing and Urban Affairs released Citizen Perception Survey 2022

- MoHUA launched the Urban Outcomes Framework 2022 to undertake a transparent and comprehensive assessment of cities based on cross-city outcomes across major sectors. The Framework also includes the third round of the Ease of Living Index.
- The Ease of Living Index, as a 360-degree assessment, aims to evaluate cities across India based on the Quality of Life, Economic Ability, and Sustainability.
- As part of the Ease of Living Index, a Citizen Perception Survey is being conducted (which carries 30% of the marks under the Ease of Living Index).
- It will help in knowing how citizens feel about different aspects of their cities including public transport, education facilities, healthcare services, water availability, cost of living, and employment opportunities, among others.
- Both offline and online versions are available.
- The offline version involving face-to-face interviews will run parallel with the online survey. The Survey will be carried out across 264 cities to capture and reflect the opinions of more than 21 lakh citizens across the length and breadth of the country. Citizens are asked to submit their feedback.
- The top performing cities will be rewarded under the 'City Engagement Award'. The National Institute of Urban Affairs (NIUA) is anchoring the program, along with its agency Quality Council of India (QCI).

LINK IT WITH: Ease of Living Index, Swachh Bharat Abhiyan-Urban, Urban flooding, Smart Cities Mission

ECONOMY

Lab Grown Diamonds

About: LGDs as a thrust sector under the Aatmanirbhar Gujarat Schemes for Assistance to Industries 2022.

- Lab Grown Diamonds are just like test tube babies grown from a single seed of Diamond under the same heat and pressure as in the crust of mother earth.
- They are ecologically friendly as they do not scar the earth with mining. Since they avoid the stigma of blood diamonds.
- They are more uniform, yet cheaper than natural diamonds.
- They are created using two techniques
 - High Pressure-High Temperature (HPHT): HPHT diamond growth occurs within massive pressure cookers. Small diamond seeds are placed into a growth cell, and then graphite is inserted on top of the diamond seeds. At this extreme temperature and pressure, the graphite in the growth cell is melted into liquid carbon and then carefully cooled into the strongest form of carbon, a diamond crystal.
 - Chemical Vapor Deposition (CVD): CVD diamond growth occurs within vacuum plasma reactors. Thin diamond plates are placed in a growth cell, and then hydrocarbon gas is injected on top of the diamond plates. High-power microwaves break the bonds of the hydrocarbon gas, separating the carbon atoms from the hydrogen atoms. The resulting free carbon within the reactor 'precipitates' onto the diamond plates, similar to the way that snowflakes collect on a table, vertically growing the diamond atom by atom.

LINK IT WITH: Blood Diamond, Kimberley Process Certification Scheme, Diamond Industry of India.

Common Income Tax Return

About: Central Board of Direct Taxes introduced a draft of the Common Income Tax Return form

- The present ITR type includes- ITR 1 (Sahaj- for small and medium taxpayers with income up to 50 Lakh), ITR 2 (For people with income from residential property), ITR 3 (for people who have income as profits from business/ profession), ITR 4 (Sugam, For Hindu Undivided Family (HUF) with income up to 50 Lakh), ITR 5 (For limited liability partnerships), ITR 6 (For businesses), ITR 7 (For trusts and non-profit organizations) ITR 1 and ITR 4 are the most used by taxpayers.
- The government is planning to merge ITR-1 to ITR-6 in a single form. However, ITR 1 and ITR 4 will continue and the taxpayer can either go for the common ITR form or choose the old form. but taxpayers filing ITR-2, ITR-3, ITR-5, and ITR-6 would not have the option to file the old forms.
- The move will place the return filing system in tandem with international best practices. It will also reduce the compliance burden on the taxpayers.

LINK IT WITH: Departments of Ministry of Finance and their role, Tax Evasion vs Tax avoidance, Black Money and related concepts.

InvIT

About: Union Minister for Road Transport and Highways introduced NHAI InvIT Non-Convertible Debentures

- They were permitted by SEBI in 2014. With a minimum investment limit of Rs 1 lakh (Set in 2019)
- An Infrastructure Investment Trust (InvITs) is like a mutual fund designed to facilitate investment in the infrastructure sector.
- It provides new finance to finish the project while investors get a new opportunity for their money, and they may also sell the units to a third party via a stock exchange.

LINK IT WITH: Mutual Funds, Equity-linked savings schemes, Public Provident Fund accounts, Investment trusts, REITs.

INTERNATIONAL RELATIONS

IndAus ECTA

About: Australia informs India that it will ratify IndAus ECTA shortly.

- India-Australia Economic Cooperation and Trade Agreement (IndAus ECTA) marks India's third FTA with an OECD country after Japan and South Korea.
- Key features include
 - 100% preferential market access to India on all of Australia's tariff lines and India offers 70% preferential market access to Australia on its tariff lines
 - Indian graduates from STEM (Science, Technology, Engineering, and Mathematics) will be granted extended post-study work visas.
 - Zero Duty Access to 96% of India's export and 85% of Australia's export.
 - Bilateral trade is expected to reach USD 45-50 billion and it will generate over one million jobs in India.
- Significance of the Pact
 - Boost India's merchandise export as the labor disadvantage of India is removed.
 - Cheap raw material availability for Indian manufacturers.
 - Change India's perception as protectionist
 - Pave way for stronger Indo-Pacific architecture.

LINK IT WITH: AUSINDEX, Comprehensive Economic Cooperation Agreement, Mutual Logistic Support Arrangement, Malabar Exercise

India-Denmark

About: India and Denmark MoU on cooperation in the field of Water Resources Development and Management

- India-Denmark signed Green Strategic Partnership in 2020. The partnership included cooperation in the field of Environment / Water and circular economy and Sustainable Urban Development including Smart Cities.
- Recently, two countries signed MoU in the field of Water Resources Development and Management. It included Nature based liquid waste abatement measures for peri-urban and rural areas.

LINK IT WITH: India-Nordic Summit, Baltic Sea and countries surrounding it, India-Denmark Commercial relations.

India-Sweden

About: 9th edition of India- Sweden Innovation

- The partnership covers several areas, including smart cities, transportation and eMobility, energy, clean technologies, new materials, space, circular and bio-based economy, and health and life sciences.
- The India-Sweden Innovation Partnership bridges institutions, R&D-intensive industries, and creative entrepreneurs to address global challenges in line with the UN Sustainable Development Goals.
- The Joint program co-funded by the Indian Department of Science & Technology (DST) and Sweden's Innovation Agency – Vinnova brings together the world-class excellence of Sweden and India to address challenges in the area of Smart Cities and Clean Technologies and Digitalization / Internet of Things (IoT).

LINK IT WITH: India-Sweden Joint Economic Commission, Nordic Council, European Free Trade Association

ENVIRONMENT

Steel Slag Roads

About: Border Road Organisation to implement Steel Slag Roads

- The slag is generated from a steel furnace burning in the form of molten flux material as an impurity. It is then poured into the slag pits for cooling and further processed to develop stable steel slag aggregates.
- Steel Slag roads are 30 percent less thick than conventional material roads because of better material characteristics. This also makes them cheaper.
- They pave way for sustainable use of waste and reduce the reliance on perishable natural aggregates. They will reduce GHG emissions and carbon footprint in road construction activity
- They are in line with Sustainable Development Goal No. 9 for building resilient infrastructure through inclusive and sustainable industrialization and green technologies.
- To counter the temperature factor thermocouple is employed in road construction.

LINK IT WITH: Plastic Roads, Project Arunank, Project Himank, Project Dantak

Continuous Marine Water Quality Monitoring Station

About: Jawaharlal Nehru Port Authority (JNPA) and IIT Madras Continuous Marine Water Quality Monitoring Station (CMWQMS)

- Aquatic monitoring is costly and the data collected is often sparse and inadequate to answer many of the questions relating to the condition of marine water and therefore fails to predict key events.
- Continuous Water Quality Monitoring (CWQM) is the in-situ instrumentation that allows for the acquisition of spatially dense datasets without the need for routine collection.
- There are several advantages of CWQM
 - Data generates improves knowledge and understanding of the relationships between water quality and changes in hydrology, geology, and land use.
 - It allows for studying cause-and-effect relationships in observed water-quality characteristics.
 - It allows for developing tools and models to ensure stream quality protection.

LINK IT WITH: Sagarmala, Land Port Authority India, Bureau of Immigration, Drinking water quality in India, Groundwater quality in India.

Barak River

About: National Waterway 16 lies on the Barak River.

- Barak rises in the Japvo mountain in the Manipur hills and enters the plains near Lakhimpur, Assam. It is one of the major rivers of South Assam and part of the Surma-Meghna River System.
- The Katakhal, Jiri, Chiri, Modhura, Longai, Sonai, Rukni, and Singla are the main tributaries. These are largely rain-fed and as a result, cause flood problems.
- Maximum area River drainages lie in Meghalaya> Manipur> Mizoram.
- In the North of the River valley lies the Barail range separating it from the Brahmaputra sub-basin, on the east by the Na Lushai hills, and on the south and west by Bangladesh.



- In the river valley, the predominant soil types found in the sub-basin are laterite and red and yellow soils.
- Aquatic biodiversity Barak rivers serve include Siamese crocodile, Ganges dolphins, smooth-coated otters, and black mugger crocodiles.
- Tipaimukh Dam is the major dam situated on the Barak river in the state of Manipur.
- Two major Wildlife sanctuaries in the river valley are Barak Bhutan Wildlife Sanctuary & Borail Sanctuary.

LINK IT WITH: Inland Waterways Authority of India, Kushariya River, Brahmaputra River

Polystyrene/Styrofoam

About: Plastic Waste Management Amendments rules 2021 had ban single-use plastic which includes polystyrene and expanded polystyrene.

- These are thermoplastic polymers.
- They are made from Styrene which is a hydrocarbon derived from petroleum by dehydrogenation of ethylbenzene.
- It is an excellent thermal and electrical insulator and is easily shaped and molded in the liquid state.
- It can be produced in a wide variety of shapes ranging from sheets to plates rods and beads.
- It is insoluble in water and inorganic acids and bases while soluble in organic solvents like ethylbenzene, chloroform, etc.
- They cause land and water pollution, contribute to global warming, and is carcinogenic in nature, and harm animals.

LINK IT WITH: Solid Waste Management, Microplastics, Marine Pollution

Semiconductor Fab Pollution

About:

- Primary Component- Ammonia, Sulfuric Acid, Hydrogen fluoride, Hydrogen Chloride, Chlorine, Nitric Acid, Ozone, Nitrogen Oxides, Glycol ethers, Methanol, Xylene Toluene.
- Waste management companies treated ethylene glycol and recycled copper compounds.
- Trace elements are Gallium, Arsenic, Indium, and Titanium Volatile organic compound.
- Pollutants: Perfluoromethane, Perfluoroethane, Perfluoropropane, Perfluorocyclobutane, Trifluoromethane, Nitrogen Trifluoride, and Sulphur Hexafluoride.

LINK IT WITH: India semiconductor industry, Environment Protection Act, E-Waste management rules

Climate Investment Fund (CIF)

About:

- It supports investment which aids in supporting climate action
- CIF is meant to finance through six multilateral development banks World Bank Group (International Finance Cooperation), Asian Development Bank, African Development Bank, European Development Bank, and Inter-American Development Bank.
- Comprises of two funds:
 - Clean Technology Fund (CTF)- Large Scale financial resources for investing in clean technology projects in Low and middle-income countries. Fund to both public and private sectors.
 - Strategic Climate Fund (SCF)- Provide an incentive for scaled-up and transformational action in the context of poverty reduction as well. Provide incentives to restore carbon-rich natural ecosystems and for sustainable development. It has two programs- The Forest Investment Program and Nature People and Climate program.

LINK IT WITH: Loss and Damage, Carbon Trading, Carbon Billioniers, Global Climate Facility

Polycarbonate/Lanex

About:

- It is a thermoplastic polymer containing carbonate groups.
- They are produced by the reaction of bisphenol A (BPA)- (A colorless solid which is soluble in most organic solvents and has very poor solubility in Water) and Phosgene.
- BPA is used in electronic components, 3D printing, and Safety Glass.

LINK IT WITH: Single Use Plastic, Plastic Pollution in India, Major Pollutants in Plastics.

Global Carbon Atlas

About: Release of Global Carbon Budget 2022-Major Carbon Emitters are-China>USA>India>Russia>Japan>Iran>Germany>Saudi Arabia>Canada>Brazil.

- Established in 2013, in the Global Carbon Project and helps in visualizing data related to the global carbon cycle.

Global Carbon Project (GCP)

- It was set up in 2001 to fully understand the carbon cycle.
- It is the partnership between International Geosphere-Biosphere Programme (IGBP)-International NGO for International Council for Science, the International Human Dimensions Programme on Global Environmental Change (IHDP), the World Climate Research Programme (WCRP)-Formed by the World Meteorological Organisation+ International Council for Science and Oceanographic Commission, and Diversitas.
- It includes the global budgets for three dominant greenhouse gases which are carbon dioxide (CO₂), Methane (CH₄), and Nitrous Oxide (N₂O).

Diversitas

- It was an international research program aimed to integrate biodiversity science for human well-being. In December 2014, its work was transferred to the program called Future Earth.

Future Earth

- It was launched in 2012 at the UN Conference on Sustainable Development (Rio+20)
- It is an international research program that aims to build knowledge about the environmental and human aspects of global change and to find solutions for sustainable development.

LINK IT WITH: Major International Climate NGOs

Bio Energy Programme

About National Bioenergy Programme

- It was launched by the Ministry of New and Renewable Energy (MNRE), Government of India in November 2022 and will continue from FY 2021-22 to 2025-26.
- The Programme has been recommended for implementation in two Phases. The Phase-I of the Programme has been approved with a budget outlay of Rs. 858 crores.
- The National Bioenergy Programme will comprise the following sub-schemes:

Waste to Energy Programme: Programme on utilizing energy from Urban, Industrial, and Agricultural Wastes /Residues to support the setting up of large Biogas, BioCNG, and Power plants excluding MSW to Power projects.

Biomass Programme: Scheme to Support the Manufacturing of Briquettes & Pellets and Promotion of Biomass (non-bagasse) based cogeneration.

Biogas Programme to support setting up of family and medium size Biogas in rural areas.

The major support extended by MNRE has been Central Financial Assistance provided for setting up of Bioenergy projects such as Biogas, BioCNG, and Power from urban, Industrial, and Agricultural Waste / Residues for reducing their capital cost/ interest on loans hence increasing project viability

Aim of the program:

- The benefits of utilization of surplus biomass should reach the rural household by way of an additional source of income for farmers.

- It has energy potential but also large socio-economic benefits are associated with it.
- To utilize huge surplus biomass, cattle dung, and industrial and urban biowaste available in the country for recovery of energy, the MNRE has been promoting bioenergy in India since the 1980s.

LINK IT WITH: International Solar Alliance, Ujwala Scheme, Biogas, Biochar, Organic Farming.

SCIENCE & TECHNOLOGY

Saliva Direct Sample Collection Kit

About: DST to support the Development and Commercialization of a 'saliva collection kit'.

- The kit will be beneficial to remote and rural areas for the diagnosis of diseases like tuberculosis, breast cancer, etc.
- The Kit contains a Molecular Transport Media (MTM). The MTM enables the laboratory to skip RNA isolation protocol and facilitates DNA isolation.
- MTM inactivates the virus at the time of collection, thus avoiding the accidental spread of infections which is inherent with conventional VTM.
- MTM does not require preserving the sample at stringent temperature conditions during transportation

LINK IT WITH: RT-PCR, ELISHA

Overhauser Magnetometer

About: An indigenous Overhauser Magnetometer Developed by the Indian Institute of Geomagnetism (IIG)

- The performance of this indigenously made magnetometer is at par with a commercial OVH sensor that is currently installed at the magnetic observatories of IIG.
- The OVH is a key instrument for carrying out magnetic field surveys for obtaining continuous geomagnetic field measurements, for the detection of magnetic anomalies due to ferromagnetic objects in the environment, and also for the calibration of low-field magnetometers.
- It is considered one of the most accurate magnetometers extensively used by all magnetic observatories around the world.
- It can absolve India's dependence on commercial OVH magnetometers for performing geomagnetic field measurements.
- OVH is used to track geomagnetic storms and signals from the Sun, which are vital in protecting satellite-based communication, power grids, and airline communication lines on the earth
- OVH is widely used in all magnetic observatories around the globe as well as for space programs.

Genome Edited Plants

About: Ministry of Environment, Forest and Climate Change exempted SDN-1 and SDN-2 categories of Genome Edited Plants from the rules of the Environment Protection Act, 1986.

SDN-1

- Involves the unguided repair of a targeted DNA break by the natural endogenous DNA repair mechanism of the host organism such as non-homologous end joining.
- The spontaneous repair of this break can lead to a mutation causing gene silencing, gene knock-out, or a change in the activity of a gene. The SDN-1 genome-edited plants produced will be free from exogenous/foreign DNA.
- These mutations can be base substitutions/indels/deletions including large deletions or structural changes. These resultant mutations are comparable to those occurring in nature, obtained through conventional mutagenic treatments or natural variation found in the primary/secondary gene pool.

SDN-2

- Involves a template-guided repair of a targeted DNA break using an externally supplied template sequence.
- The donor carries one or several small mutations flanked by two sequences matching both ends of the DNA break and is thus recognized as a repair template, allowing the introduction of the mutation(s) at the target site.
- The resultant mutant carries a modified sequence, leading to an altered expression profile of the gene and/or altered activity of the encoded protein/RNA.
- Thus, the edited version could be regarded as an allelic form comparable to those available in the primary/secondary gene pool

LINK IT WITH: Genome Editing, m-RNA, CRISPR-Cas 9

Digital Shakti 4.0
About Digital Shakti:

- It started in June 2018 to help women across the nation to raise the awareness level on the digital front, to build resilience, and fight cybercrime in the most effective ways.
- It has helped over 3 Lakh women across India have been made aware of cyber safety tips and tricks, reporting & redressal mechanisms, data privacy, and usage of technology for their benefit.
- The third phase of the program started in 2021 at Leh.
- A Resource Centre was also developed under the project to provide information on all the avenues of reporting in case a woman faces any cybercrime.

About Digital Shakti 4.0

- It was the fourth phase of the Digital Shakti Campaign and launched by National Commission for Women in collaboration with CyberPeace Foundation and Meta.
- It is focused on making women digitally skilled and aware to stand up against any illegal/inappropriate activity online.
- Digital Shakti has been accelerating the digital participation of women and girls by training them to use technology to their advantage and to keep themselves safe online.
- The larger goal of fighting cyber violence against women and girls and making the internet a safer space for them.
- Safe Spaces Online Combatting Cyber-Enabled Human Trafficking & Combatting Other forms of Online Violence” were a matter of discussion to provide online safety for women.

LINK IT WITH: Digital India, Standup India, Women in STEM in India

Graphene-stabilized tunable photonic crystal

About: Researchers have developed a soft tunable photonic crystal with enhanced thermal stability and optical purity that reflects vivid colors in the visible spectrum and has potential applications in making more durable and better reflective displays and laser devices.

About Photonic crystals (PC):

- Photonic crystals are optical nanostructures in which the refractive index changes periodically. This affects the propagation of light in the same way that the structure of natural crystals gives rise to X-ray diffraction and that the atomic lattices (crystal structure) of semiconductors affect their conductivity of electrons. Photonic crystals occur in nature in the form of structural coloration and animal reflectors. Examples found in nature include opal, butterfly wings, peacock feathers, etc., exhibiting distinct iridescent colors.

Uses of Photonic crystals:

- Useful in reflection coatings to optical computers.
- They enable the PCs to exhibit structural colors in the visible spectral regime.
- Ever since researchers learned how to fabricate photonic crystals, they have been on the constant lookout for tuning the properties in-situ post-fabrication.
- Liquid crystalline (LC) materials exhibiting self-organization, phase transition, and molecular orientation behaviors in response to external stimuli are attracting significant attention for tuning advanced photonic materials and devices.

About Blue phase (BP):

- It is a unique thermodynamic phase of liquid crystals and is a 3D photonic crystal under the combination of a cubic lattice structure and fluidity.
- With the lattice spacing of a few hundred nanometres, the cubic BP exhibits selective reflection of colors in the visible spectrum. Due to the soft stimuli responsiveness of BP, the Photonic Band Gap (PBG) can be efficiently tuned with relatively low-magnitude thermal, electric and optical fields.
- Photonic Band Gap (PBG) is a phenomenon that prevents the light of certain frequencies or wavelengths from propagating in one, two, or any number of polarisation directions within the materials.

Security Issues**Ballistic Missile Defence**

About: DRDO conducts successful maiden flight test of Phase-II Ballistic Missile Defence interceptor off Odisha coast

- The Ballistic Missile Defence program is a two-tier program in which 1st layer will constitute a missile interceptor at an exo-atmospheric altitude (between 50-180 KM range). It consists of the Prithvi Air Defence system. 2nd layer constitutes a missile interceptor at an endo-atmospheric altitude (between 15-40 KM range). It consists of an Advance Air Defence system.
- Phase II of BMD focuses on ICBM (Inter-Continental Ballistic missile) and consists of AD-I and AD-II missiles with a 5000 KM range.
- The AD-1 is a long-range interceptor missile designed for both low exo-atmospheric and endo-atmospheric interception of long-range ballistic missiles as well as aircraft.
- It is propelled by a two-stage solid motor and equipped with an indigenously-developed advanced control system, navigation, and guidance algorithm to precisely guide the vehicle to the target.
- For a successful BMD, there is a need for a Beyond Horizon Radar system. Initially, India imported Green Pine Radar from Israel in 2005. But later DRDO developed Swordfish (600-800 KM) and Super Swordfish (1500 KM) radar.

LINK IT WITH: Integrated Guided Missile Development Programme, Nuclear Triad of India, Agni-Prime

Goa Maritime Symposium (GMS) 2022

About: The fourth edition of the Goa Maritime Symposium (GMS) is being conducted by the Naval War College (NWC) at Goa.

- The participants of the Symposium comprise Captains/ Commanders and equivalent-rank officers from Navies/ Maritime forces from friendly foreign countries viz., Bangladesh, Comoros, Indonesia, Madagascar, Malaysia, Maldives, Mauritius, Myanmar, Seychelles, Singapore, Sri Lanka, and Thailand, besides India.
- The GMS is a forum for fostering collaborative thinking, cooperation, and mutual understanding between India and key maritime nations of the Indian Ocean Region (IOR).
- GMS provides a boost to 'Security and Growth for All in the Region (SAGAR) and five principles of Maritime Security enunciated by the Prime Minister of India, which imply that the prosperity of our region is interlinked with the maritime fate of all IOR littorals.

LINK IT WITH: Net Security Provider, Indo-Pacific Construct, Act East Policy.

Simbex-2022

About: Bilateral Maritime Exercise between India and Singapore

- The Indian Navy hosted the 29th edition of the Singapore-India Maritime Bilateral Exercise at Visakhapatnam.
- Two ships from the Republic of Singapore Navy, RSS Stalwart and RSS Vigilance are participating in the exercise.
- SIMBEX series of exercises began in 1994 and were initially known as Exercise Lion King

- The exercise exemplifies the high level of cooperation between India and Singapore in the maritime domain.
- It also highlights the commitment and contribution of the two nations toward enhancing maritime security in the Indian Ocean Region.

LINK IT WITH: India-Singapore Relation-From Pre to Post Independence

GARUDA-VII

- 'Exercise Garuda-VII' is a seventh edition of the bilateral air exercise between the Indian Air Force (IAF) and the French Air and Space Force (FASF) concluded at Air Force Station, Jodhpur
- The FASF participated in the exercise with Rafale fighter aircraft and A-330 Multi Role Tanker Transport (MRTT) aircraft, while the IAF contingent comprised Su-30 MKI, Rafale, LCA 'Tejas', and Jaguar fighter aircraft.
- This fighter element was complemented by the IAF's Flight Refuelling Aircraft, AWACS, and AEW&C, as well as Mi-17 helicopters and the newly inducted LCH 'Prachanda'.
- The exercise provided the two Air Forces with the opportunity for professional interaction and sharing of operational knowledge and experience.
- It provided a platform for cultural exchange between the Air Force personnel of both countries.

LINK IT WITH: India-France Relations

Art and Culture

SARAS Food Festival

About: SARAS Food festival is under the Ministry of Rural Development and is a step towards Atmanirbhar Bharat.

- The aim is to get at least 25% of all sales by women's self-help groups through e-commerce portals annually. SARAS products are prepared by women of self-help groups.
- The e-commerce portal www.esaras.in for better and more effective marketing of
- Ethnic and homemade handicrafts, paintings, toys, food, and other items will be the center of attraction.
- Women self-help groups through e-commerce portals annually.
- Each woman beneficiary must save at least one lakh rupees per annum through the sale of local products.
- The Ministry has already signed agreements with e-commerce giants like Amazon, and Flipkart
- There have been efforts by States/UTs also in getting SHGs products registered on e-commerce platforms. e.g, Flipkart, Amazon and Meesho etc.
- People can enjoy delicious cuisines of 18 States at Saras Food Festival

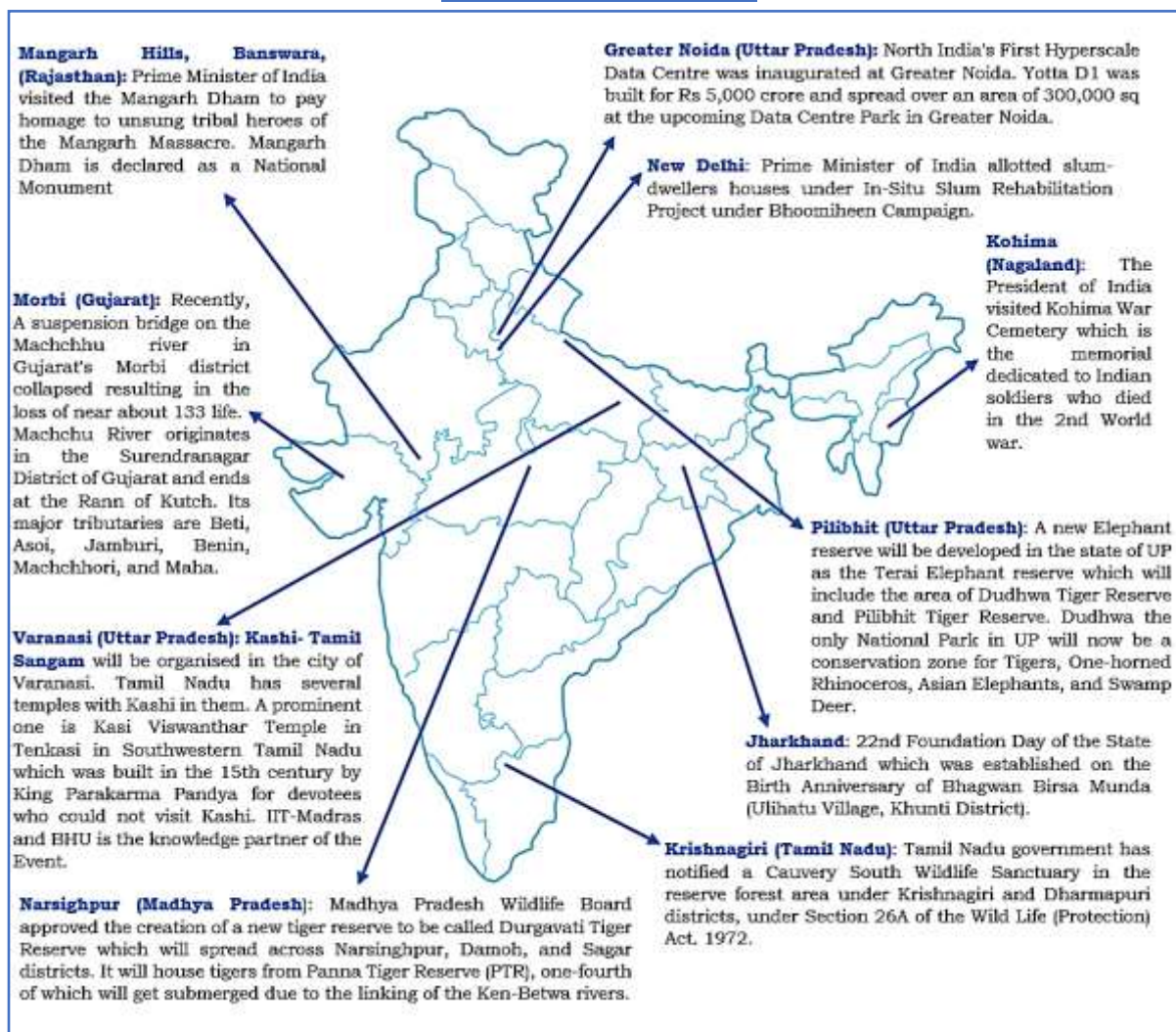
LINK IT WITH: Food Processing Industry in India- Role of MSMEs

Person in News

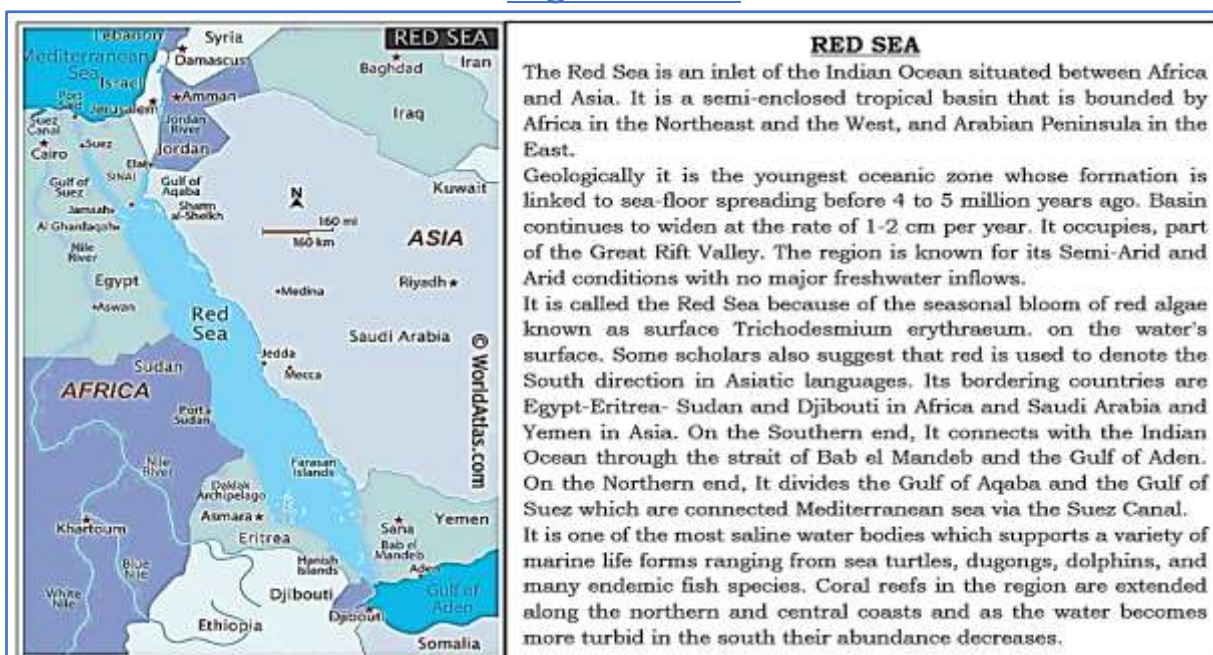
Nadaprabhu  Kempegowda	<p>The statue of Nadaprabhu Kemepegowda has been installed at the Kempegowda International Airport in Bengaluru. The statue has been named the 'statue of prosperity. Kempegowda was a chieftain under the Vijayanagar empire and was known as the founder of Bengaluru in the 16th century. He is credited for prohibiting the custom of ambulating the last two fingers of the left hand of unmarried women during an important custom called Bandi Devaru.</p>
Dr. GN  Ramachandran	<p>He was the biophysicist and first scientist who in 1954, deciphered the triple helical structure of collagen which is the most abundant protein in our body. In 1963 'the Ramachandran plot' which is a Ramachandran plot is a two-dimensional (2D) plot of the torsional angles of amino acids in a protein sequence. He established the Molecular Biophysics Unit at the Indian Institute of Science in 1970.</p>
Dr. APJ Abdul Kalam  Sir CV Raman 	<p>15th October 2022 marked the 81st Birth anniversary of Bharat Ratan Dr. APJ Abdul Kalam (Ex-President of India) Known as the 'Missile Man of India' Dr. Kalam was associated with ISRO in his early days where he contributed in the development of an indigenous Satellite Launch Vehicle and later went on to work for DRDO where he contributed to the development of Integrated Guided Missile Development Programme (IGMDP). He was also one of the brains behind India's nuclear test in Pokhran in 1998. In the health sector, he was the co-developer of 'Kalam-Raju-Stent'.</p>
Sardar Vallabhbhai Patel 	<p>7th November 2022 marked the 134th Birth anniversary of Bharat Ratan and Nobel laureate Sir CV Raman. Sir Raman was a physicist known for his work in the field of light scattering. He was given the Nobel prize for the Raman Effect which is the inelastic scattering of photons by matter. He became the first Indian Director of the Indian Institute of Science, Bangalore in 1933. He founded the Indian Journal of Physics and the Indian Academy of Sciences.</p>
Bhagwan Birsa Munda 	<p>31st October marks the birth anniversary of Bharat Ratan Sardar Vallabhbhai Patel and Rashtriya Ekta Diwas. Known as the "Iron Man of India", Patel along with VP Menon was the principal force that united India by merging roughly 565 princely states with India. He was a lawyer turned freedom fighter who was inspired by Gandhiji Satyagrah and was himself associated with Kheda Satyagraha, Bardoli Satyagraha, the Non-Cooperation movement, the civil disobedience movement, and much more. Patel was a no-nonsense administrator who guided Civil servants on the path of service.</p>
Elaben Bhatt 	<p>The government of India has declared the birth anniversary of Bhagwan Birsa Munda as Janjatiya Gaurav Diwas. Birsa Munda was a young freedom fighter and a tribal leader, whose spirit of activism in the late nineteenth century, is remembered to be a strong mark of protest against British rule in India. Against Christian missionaries and their influence, Birsa started the faith of 'Birsait'. In recognition of his impact on the national movement, the state of Jharkhand was created on his birth anniversary in 2000.</p>
	<p>She was a prominent Indian cooperative organizer, activist, and Gandhian. She founded the Self-Employed Women's Association and Shri Mahila Sewa Sahakari Cooperative Bank. She came up with the Shram Shakti Report on self-employed women in the informal sector. In 1977, Ms. Bhatt received the Ramon Magsaysay Award. She also received two of India's highest civilian honors: the Padma Bhushan in 1985 and the Padma Shri in 1986. Ms. Bhatt was appointed to the upper house of India's Parliament in 1986.</p>

MAP CONNECT

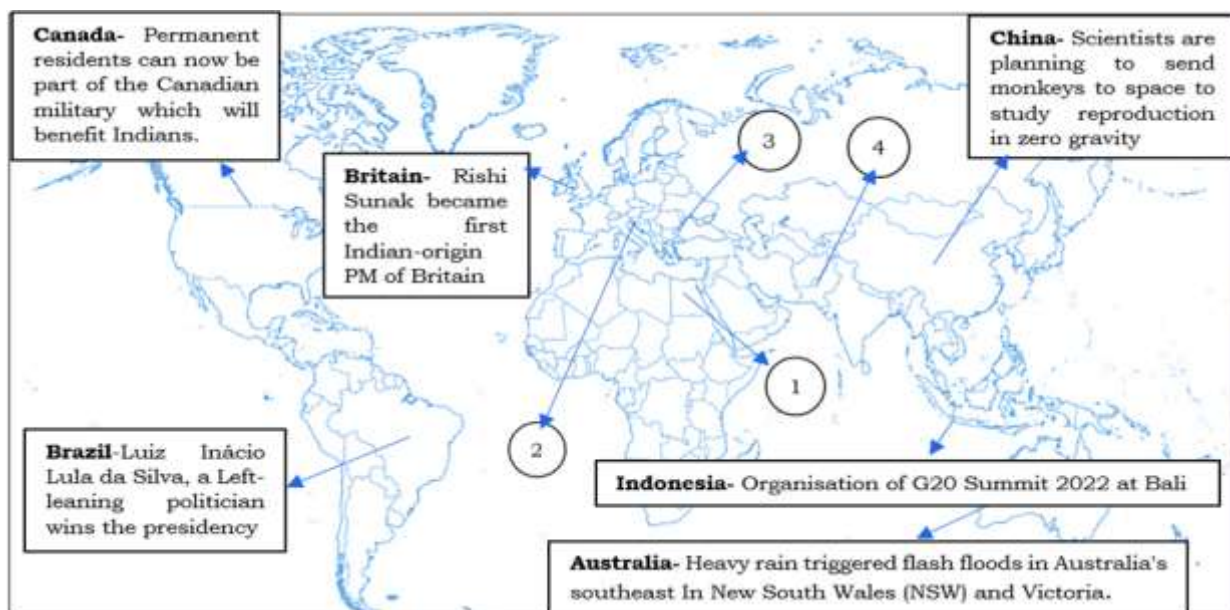
Places in News- India



Region in News



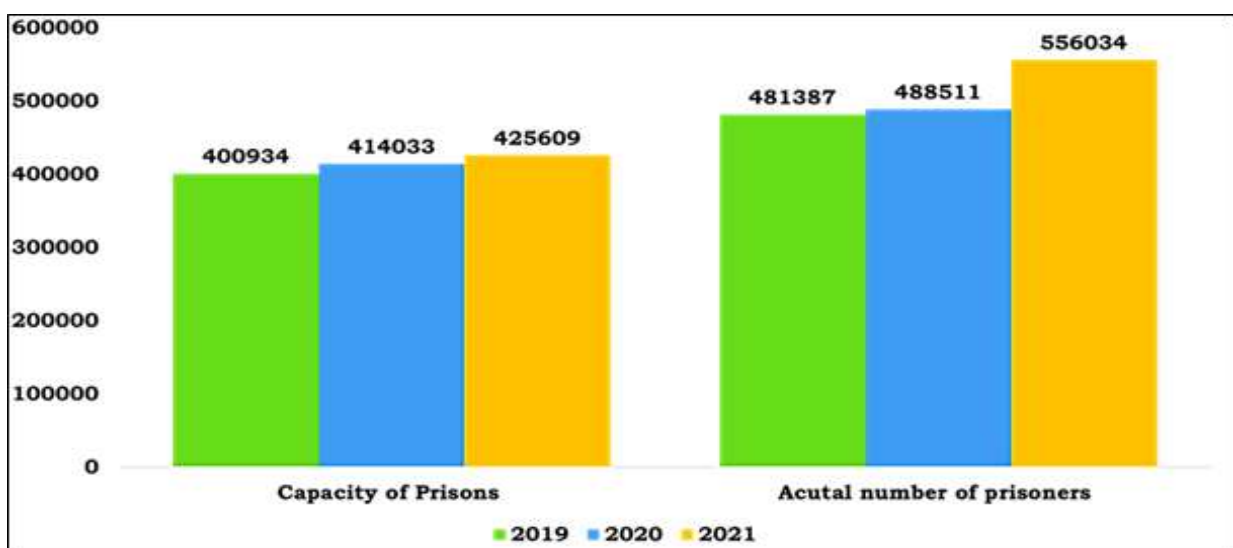
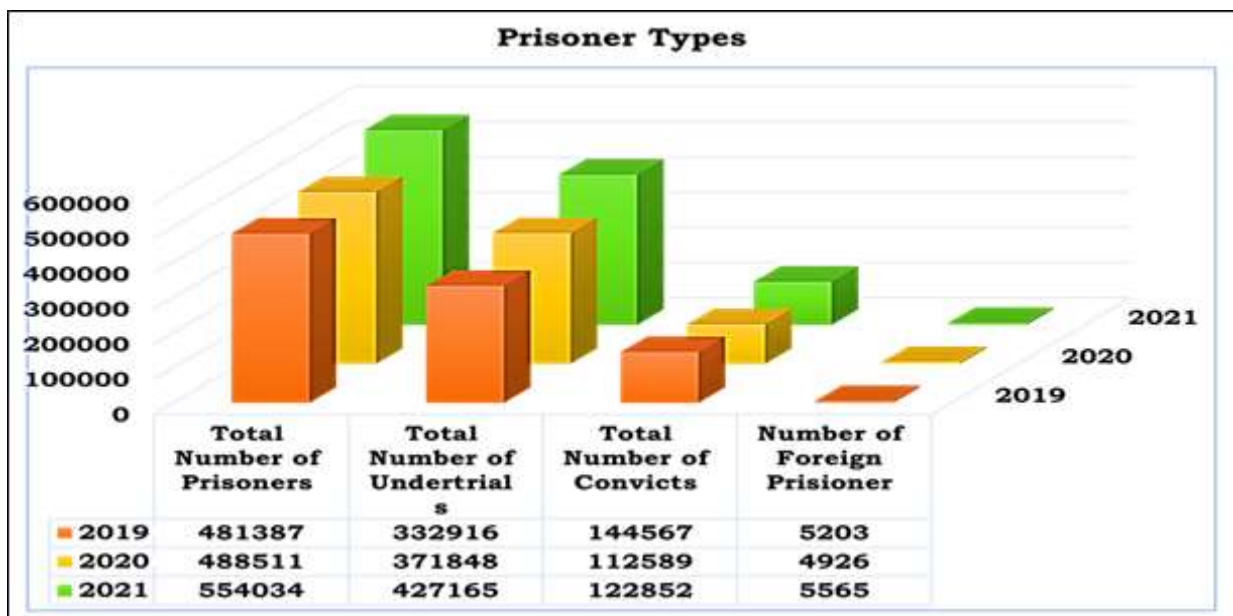
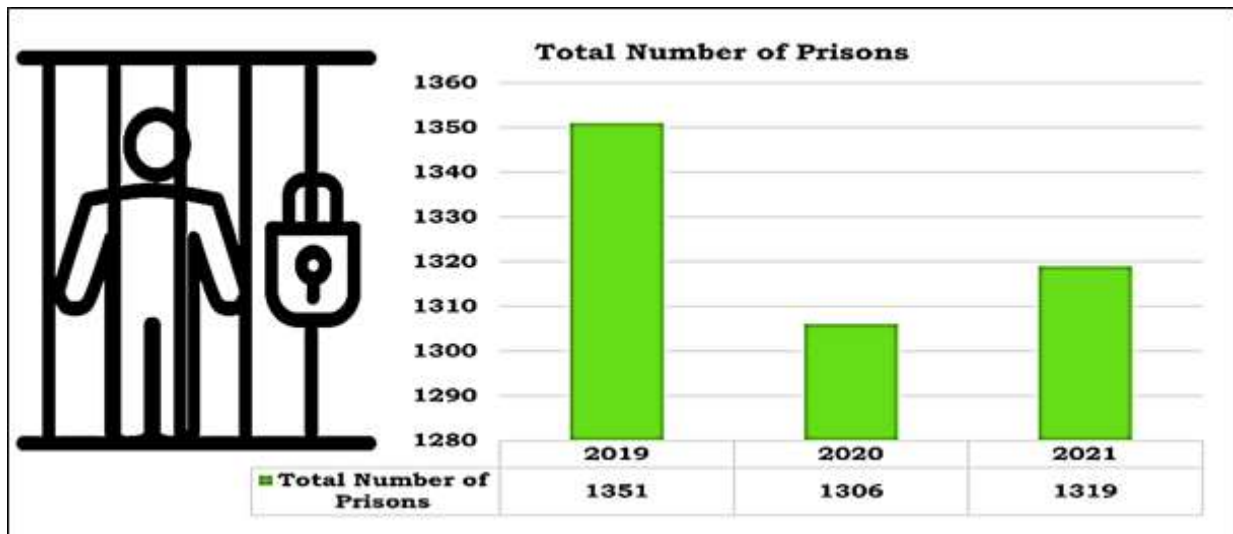
Places in News-World

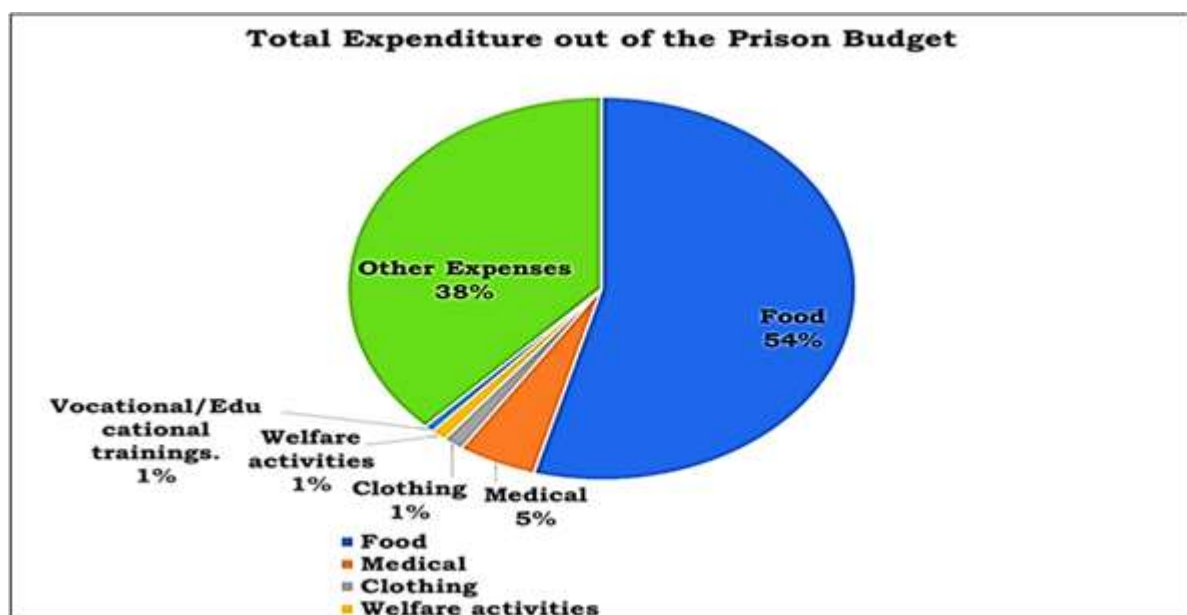
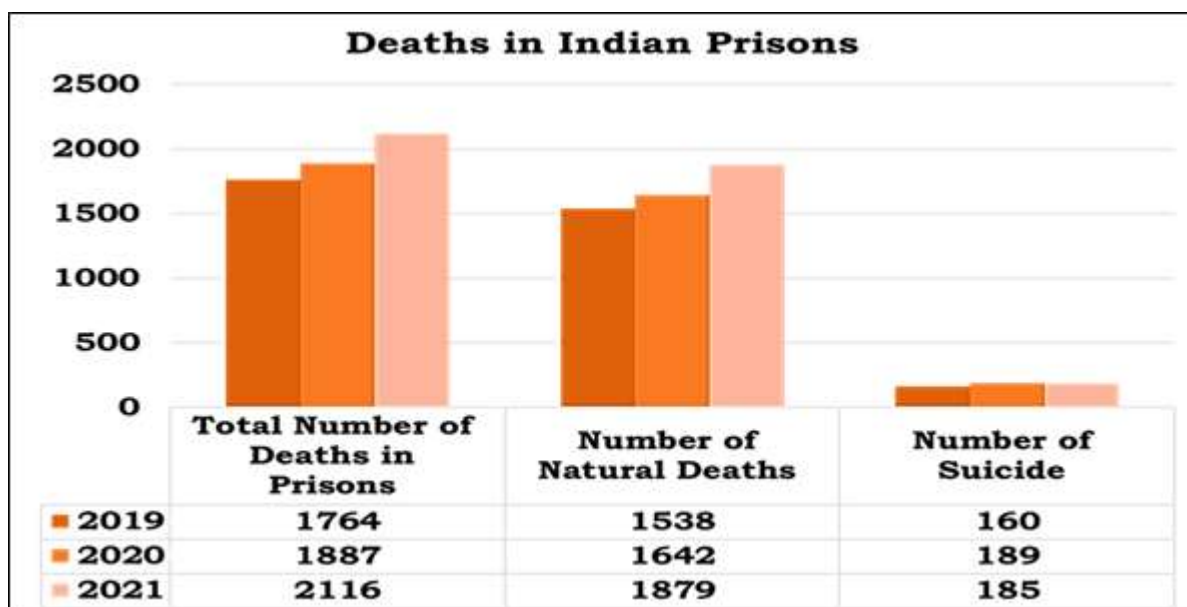
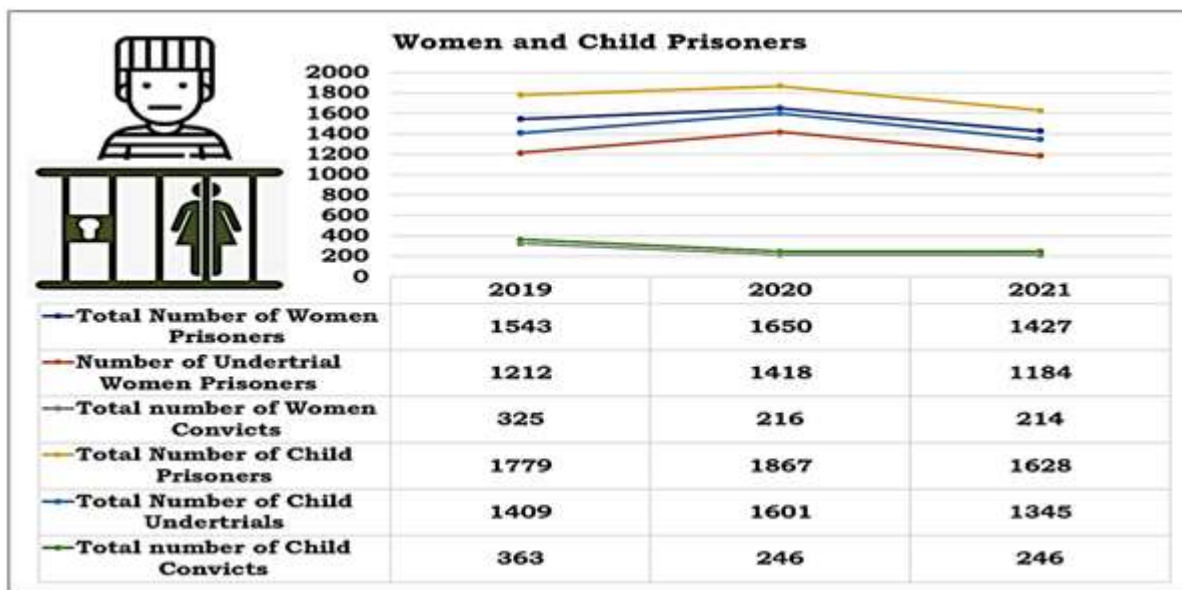


S.No	Name of Place (Region)	Reason
1.		27th meeting of the Conference of Parties to the United Nations Framework Convention on Climate Change.
2.		Natasa Pirc Musar was elected as the first women President of Slovenia.
3.		Ukrainian President Zelenskyy has vowed to keep pushing Russian forces out of his country after they withdrew from Kherson.
4.	Pakistan	Instability Continues in Pakistan after Ex-Prime Minister Imran Khan was shot at a rally just outside the town of Gujranwala

DATA OF THE MONTH

Overflowing Indian Prisons- Prison Statistics in India





Key Highlights of the 2021 Report

- There are 32 Women's Jails in India spread across 15 States/UT in India. These are Rajasthan (highest number of Women Jails), Tamil Nadu, Kerala, Andhra Pradesh, Bihar, Gujarat, Uttar Pradesh, Delhi, Karnataka, Maharashtra, Mizoram, Odisha, Punjab, Telangana, and West Bengal. The occupancy rate in Women's Jails was 56.3% as of 31st December 2021. The highest women's occupancy rate is in the state of Uttarakhand>Bihar>Chhattisgarh.
- Among the convicts of Offences against Women, the highest number of inmates were convicted for Rape followed by convicts of Dowry Deaths. The same goes for the undertrials.
- The occupancy rate in Indian prisons had surged from 112% to 130% in the last decade. Of all of India's 36 States and UTs, half of them have an occupancy rate of more than 50% as of December 2021. In the states of Uttarakhand, Uttar Pradesh, and Delhi occupancy rate crossed 180% in 2021. Among the major States, significant decreases were observed in Chhattisgarh and Punjab where the occupancy rate decreased by 108% points and 51% points, respectively.
- The maximum number of undertrials are lodged in: Uttar Pradesh>Bihar>Maharashtra.
- The maximum number of prisoners belongs to the age group of 18-30 years followed by the age group of 30-50 years. This shows the loss of demographic dividend for India.
- Almost one-fourth of prisoners are illiterate, therefore they lack knowledge about their rights. Therefore, there is a need to spread legal awareness among prisoners in India using civil society and the Legal service authority act.
- Among the foreign convicts, the highest number of foreign convicts were from Bangladesh followed by Nepal Nigeria, and Pakistanis (5.8%, 63 convicts) at the end of 2021. This has forced BSF to hand over illegal migrants with a clean record to Bangladeshi officials as prisons are overflowing in the State of West Bengal (the highest number of foreign convicts are in the state).
- There were 587 NGOs who were working exclusively for prison reforms and 202 NGOs who were working exclusively for the welfare of women during the year 2021.
- The vacancies for prison officers are alarmingly high in some states. In Uttarakhand, Chhattisgarh, Bihar, and Jharkhand over 60% of officer positions were vacant.



SCAN THIS QR TO GET
MORE DATA TOPICWISE

THEMATIC ESSAYS

1. Technology has exceeded our humanity
2. The rights of every man are diminished when the rights of one man are threatened.
3. Liberty does not exist in the absence of morality



NOTE: Attempt the above given essays, and to get direction and approach 'Scan QR Code'.

Concept Clearing Assignment

1. Discuss the role of organic fertilizer in bringing the next green revolution in the country and suggest measures to make agriculture chemical free.
2. What are the aims and objectives of In-SPACE? What are the advantages of privatization of the space sector?
3. Critically analyze India's steps towards an undifferentiated and undiluted approach to terrorism.
4. What are the ways of making monetary policy and also discuss the limitations of Monetary Policy?
5. Briefly discuss the difference between Old Pension Policy and New Pension Policy. Give an account of Government efforts taken to boost NPS.

6. Access the role of Big techs in the financial sector and also mention the risk associated with it.
7. Critically analyse the reasons and impact of pay parity on society. Discuss the initiatives of the government to reduce the gender pay gap.
8. Discuss the challenges faced by rural women and how these shortcomings can affect the future of India's rural economy.
9. What conclusion we can draw from the WHO Global Tuberculosis Report 2022 regarding the condition of Tuberculosis? Critically analyse the impact of tuberculosis on the social and economic life of the people.
10. How far have India and Australia defence ties reached and what are the hurdles in India and Australia relations?
11. Discuss the focus areas of India in the G-20 Summit. What are the major challenges for G20 nations in the future?
12. Explain India's Catch-22 Dilemma and how it has impacted India-Iran relations.
13. What are the criteria for the disqualification of convicted leaders? Critically Analyse the state of political criminalisation in India.
14. Explain the role of the governor in a parliamentary system. Discuss the role of the governor while expunging any member from the Council of Ministers of states. removal of ministers.
15. Briefly discuss the features of Section 8 of the RTI Act 2005. Why exemptions on banks is being criticized?

PT ORIENTED QUESTIONS

1. With reference to the 1267 committee, consider the following statements:
 1. Only UN member states can propose a terrorist name to the consolidated list.
 2. It can restrict the entry of terrorist groups anywhere in the world.
 Which of the given statements is/are correct?
 - (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
 2. Which of the following states can place a hold on the listing of terrorist groups?
 1. Iran
 2. Japan
 3. France
 4. China
 Select the correct answer from the codes given below:
 - (a) 1 only
 - (b) 4 only
 - (c) 2 and 3 only
 - (d) 3 and 4 only
 3. With reference to the DNA, which of the following statements is incorrect?
 - (a) DNA is a double helical structure
 - (b) The sequence of protein bases determines information in a strand of DNA.
 - (c) It is made of chemical building blocks called nucleotides.
 - (d) Organisms inherit half of their nuclear DNA from their parents
 4. With reference to exoplanets, which of the following statement is/are correct?
 1. An exoplanet is any planet beyond our solar system.
 2. Barium was found on two Jupiter size exoplanets.
 3. Exoplanets are easily detected through a telescope.
 Select the correct answer using the code below:
 - (a) 1 and 2 only
 - (b) 1 only
 - (c) 2 and 3 only
 - (d) 1, 2 and 3
 5. Which of the given statements is correct, with respect to NavIC?
 - (a) Its use is restricted to the North Eastern region of India
 - (b) L5 band alone improves its accuracy
 - (c) It is operational since 2015
 - (d) It is based on the Indian Regional Navigation Satellite System
 6. With reference to PAYG (Pay as You Go), consider the following statements:
 1. It is an unfunded pension scheme.
 2. The scheme provides stability during market fluctuations.
 3. The scheme is based on OASIS (Old Age Social and Income Security Project) report.
- Select the correct answer using the codes below:
- (a) 1 only
 - (b) 2 only
 - (c) 1 and 3 only
 - (d) 1 and 2 only
7. Which committee is associated with Competition Act, 2002?
 - (a) Tendulkar Committee
 - (b) Raghavan Committee
 - (c) G V Ramakrishna Committee
 - (d) Chakravarty Committee
 8. Which of the following is/are the parameters to be counted as green bonds?
 1. They should promote climate resilience.
 2. It is in form of dated security.
 3. It should carry higher interest rates than regular government borrowings.
 Select the correct answer using the codes given below:
 - (a) 1 only
 - (b) 2 only
 - (c) 1 and 2 only
 - (d) 1, 2 and 3
 9. Which of the given statements is/are the reasons for the increase in Minimum Support Price (MSP)?
 1. Increase in crop production.
 2. Increase in wholesale prices of wheat flour.
 3. Growth in rural wages of non-agricultural workers.
 Select the correct answer using the codes given below:
 - (a) 1 only
 - (b) 2 only
 - (c) 1 and 2 only
 - (d) 2 and 3 only
 10. Which of the following diseases is/are associated with the BCG (Bacillus Calmette-Guérin) Vaccine?
 1. Bladder cancer
 2. Tuberculosis
 3. Meningitis
 Select the correct answer using the codes given below:
 - (a) 1 only
 - (b) 2 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3
 11. With reference to the two-finger test, which of the following statements is/are correct?

1. The test is based on determining the laxity of vaginal muscle.
 2. The test is scientifically proven.
 3. The test is subjected to women of all ages once medically indicated.
- Select the correct answer using the codes given below:
- (a) 1 only (b) 1 and 2 only
(c) 1 and 3 only (d) 1, 2 and 3
12. With reference to the World Population Prospects (WPP) Report, which of the following statements is/are not correct?
- (a) India is expected to surpass China as the world's most populous country in the year 2023.
 - (b) There is an increase of 9 years in population growth from 2019.
 - (c) India is expected to surpass China as the world's most populous country in the next 5 years.
 - (d) Life expectancy at birth for women exceeded that for men by 5.4 years globally.
13. Which of the following statements correctly describes the Phantom Pocket vibration syndrome?
- (a) Feeling of fatigue looking at vibrating phones in pockets
 - (b) False feeling that cell phone is vibrating in pockets
 - (c) Feeling of anxiety in the presence of the phone
 - (d) False feeling of others' phones vibrating
14. With reference to the ASEAN, consider the following statements:
1. It was established with the signing of the Bangkok declaration.
 2. ASEAN became a 10-member state body with the addition of Myanmar.
- Which of the given statements is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
15. With reference to the recently concluded G-20 summit in Bali, which one of the following statements is not correct?
- (a) Countries condemned Russia's action in Ukraine and demanded its unconditional withdrawal.
 - (b) They welcomed the establishment of the Pandemic Fund hosted by the World bank.
 - (c) Decided to continue the efforts to achieve the temperature goal from the 2015 Paris Agreement on climate change.
 - (d) Members criticised the Black Sea grains initiative.
16. Consider the following statements:
1. Australia is the ninth largest trading partner of India.
 2. India and Australia are partners in the trilateral Supply Chain Resilience Initiative (SCRI) arrangement along with China.
- Which of the following statement is/are correct, with reference to India-Australia trade relationships?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
17. With reference to the Digital Public Infrastructure (DPI), which of the given statements is/are correct?
1. It is a digital system that can increase resilience.
 2. G20 can be a strong advocate for DPI.
 3. Better DPI needs restricted data access.
- Select the correct answer using the codes given below:
- (a) 1 only (b) 1 and 2 only
(c) 2 only (d) 1, 2 and 3
18. With reference to the Lab Grown diamonds, consider the following statements:
1. These are grown from a single seed of Diamond at the same temperature and pressure.
 2. Chemical Vapor deposition is the only technique involved in their formation.
- Which of the given statements is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
19. With reference to the steel slag road, consider the following statements:
1. Steel Slag roads are less thick than conventional material.
 2. The associated disadvantage is they are costlier.
 3. Thermocouple is employed in road construction to counter temperature.
- Which of the given statements is/are correct?
- (a) 1 and 3 only (b) 1 only
(c) 2 only (d) 2 and 3 only
20. With reference to the Barak River, which of the given statements is incorrect?

- (a) Barak river originates in the Japvo hills.
 (b) Katakali is a tributary of Barak River.
 (c) Maximum drainage area lies in Mizoram.
 (d) Tipaimukh Dam is the major dam situated on the Barak River.
21. Which of the following statements is/are correct, with reference to the Polystyrene?
 1. These are thermoplastic polymers.
 2. They are made from Styrene.
 3. It can be only produced in sheets.
 Select the correct answer using the code given below:
 (a) 1 only (b) 2 only
 (c) 1 and 2 only (d) 2 and 3 only
22. Which of the following components is/are associated with Semiconductor Fab Pollution?
 1. Ammonia
 2. Ozone
 3. Methanol
 4. Nitrogen
 Select the correct answer using the code given below:
 (a) 1 and 2 only (b) 1, 2 and 3 only
 (c) 2 and 3 only (d) 1, 2, 3 and 4
23. With reference to the Bio Energy Programme, which of the following statements is/are correct?
 1. It was launched by the Ministry of New and Renewable Energy.
 2. The Phase-I of the Programme has been approved.
 3. Waste to Energy Programme is its sub-scheme.
 Select the correct answer using the codes below
 (a) 1 only (b) 2 only
 (c) 1 and 3 only (d) 1, 2 and 3
24. With reference to the Saliva Direct Sample Collection Kit, consider the following statements:
 1. The kit will be beneficial to remote and rural areas.
 2. It requires preserving the samples at a stringent temperature.
 3. Molecular Transport Media inactivates the virus at the time of collection.
 Which of the given statements is/are correct?
 (a) 1 and 3 only
 (b) 1 only
 (c) 1 and 2 only
 (d) 1, 2 and 3
25. Which among the following are the pollutants of the Semiconductor Fab Industry?
 1. Perfluoropropane
 2. Perfluoroethane
 3. Perfluorocyclobutane
 4. Bifluoromethane
 5. Nitrogen fluoride
 6. Sulphur Octafluoride
 Select the correct answer using the code given below:
 (a) 1, 2 and 3 only
 (b) 2, 4, 5 and 6 only
 (c) 1, 3, 4 and 5 only
 (d) 4, 5 and 6 only
26. Consider the following statements: (UPSC 2019)
 1. Agricultural soils release nitrogen oxides into environment.
 2. Cattle release ammonia into environment
 3. Poultry industry releases reactive nitrogen compounds into environment.
 Which of the statements given above is/are correct?
 (a) 1 and 3 only (b) 2 and 3 only
 (c) 2 only (d) 1, 2 and 3
27. Which one of the following groups of plants was domesticated in the 'New World' and introduced into the 'Old World'? (UPSC 2019)
 (a) Tobacco, cocoa and rubber
 (b) Tobacco, cotton and rubber
 (c) Cotton, coffee and sugarcane
 (d) Rubber, coffee and wheat
28. In the context of India which one of the following is the characteristic appropriate for Bureaucracy? (UPSC 2020)
 (a) An agency for widening the scope for parliamentary democracy
 (b) An agency for strengthening the structure of federalism
 (c) An agency for facilitating the political stability and economic growth
 (d) An agency for the implementation of public policy
29. Consider the following pairs (UPSC 2020)
International agreement/setup - Subject
 1. Alma Ata declaration - Healthcare of the people
 2. Hague convention - Biological and Chemical Weapons
 3. Talanoa dialogue - Global Climate Change
 4. Under 2 Coalition - Child Rights

Which of the pairs above is/are correct?

- (a) 1 and 2 only
- (b) 4 only
- (c) 1 and 3 only
- (d) 2, 3 and 4 only

30. With reference to the history of ancient India, Bhavabhutti, Hastimalla and Kshemeshwara were famous (UPSC 2021)

- (a) Jain monks
- (b) Playwrights
- (c) Temple architects
- (d) philosophers

ANSWERS

1. (a)	7. (b)	13. (b)	19. (a)	25. (a)
2. (d)	8. (c)	14. (a)	20. (c)	26. (d)
3. (b)	9. (b)	15. (d)	21. (c)	27. (a)
4. (a)	10. (d)	16. (d)	22. (b)	28. (d)
5. (d)	11. (a)	17. (b)	23. (d)	29. (c)
6. (c)	12. (c)	18. (c)	24. (a)	30. (b)



FEEDBACK FORUM