KSG

ABOUT CURRENT CONNECT

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

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

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 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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SCIENCE & TECHNOLOGY

SECURITY

ART & CULTURE

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GS – I	Culture-Art Forms, Literature and Architecture from ancient to modern times.	Indian history significant events, personalities, issues and	Post independence issues, National boundary and disputes	Indian society features, issues, globalization and diversity	Women – issues and developments	Urbanization – problems of industries andresources – India and world	Distribution 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. Their powers and functions.	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 sections of our society, self-help groups and issues and initiatives. 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; 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	Governance/e- Ethics in international issues	Personalities and their teachings	Other important topics			
Mis.											

POLITY

Ladakh Resident Certificate Order 2021

News Excerpt
The Ladakh administration has decided to issue "Resident Certificate" only to the Permanent Resident Certificate holders of the region, unlike J&K where new domicile laws allowed outsiders too to apply for jobs, land and other facilities.

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Pre-Connect
- Permanent Residency Certificates is a proof of permanent resident of a citizen in a village or town or ward. This certificate is issued for availing domicile linked quotas in government jobs and admission in educational institutions etc. It certifies that a particular person belongs to the state.
- The residence certificate is an important document that acts as address proof for Indian Citizens.
- There is a fine line difference between PRC and Domicile. Domicile is one for all Indians, it is proof of your residence in India and in a state. However, PRC is given by the state and the criterion for issuing the PRC is decided by the state.
- The terms "Domicile" and "Residence" are often mistaken as the same. However, the two have different legal definitions. "Domicile" is your "permanent home," while "Residence" is your "temporary home."

J&K makes domicile certificate mandatory for admissions to educational institutions, professional exams

> **Excerpts of the Ladakh Resident Certificate Administrative Order**
> ❖ According to the Ladakh Resident Certificate Order 2021 passed, "any person who possesses a Permanent Resident Certificate (PRC) issued by the competent authority in the districts of Leh and Kargil or belongs to a category of persons who would have been eligible to be issued PRC shall be eligible to receive the 'Resident Certificate'."
> ❖ The order is "to temporarily define 'Resident of Union Territory of Ladakh' for the purpose of appointment to all the non-gazetted posts borne on the establishment of any department or service of administration of Ladakh".
> ❖ All the Tehsildars have been authorised competent authority to issue the 'Resident Certificate'.
> ❖ The 'Resident Certificate' being restricted to locals of the region is unlike J&K. According to the Jammu and Kashmir Grant of Domicile Certificate (Procedure) Rules, 2020, different categories of non-locals, including non-local government employees, to register for domicile certificates in J&K after meeting a few criteria.

➢ The J&K administration scrapped Permanent Resident Certificates (PRCs), which defined "State subjects", and made the domicile status certificate a basic eligibility condition for admission to educational institutions and professional examinations in Jammu and Kashmir.

➢ The notification stated, "Any candidate interested in appearing in any entrance test, conducted by the Board, must possess Domicile Certificate issued under the Jammu and Kashmir Grant of Domicile Certificate (Procedure) Rules, 2020 and such age and qualification, including of category certificate and experience, as prescribed by the Government for such course from time to time."

➢ Earlier, the J&K government notified the Jammu and Kashmir Grant of Domicile Certificate (Procedure) Rules, 2020 on May 18, 2020 and allowed non-locals under different categories to register for domicile certificates in J&K, which was barred prior to the August 5, 2019 decision to end the region's special status. These non-locals, according to the government, are allowed to apply for the government jobs in the UT.

> **PEPPER IT WITH**
> Constitutional Provisions regarding Citizenship, Citizenship Act-1955, Single Citizenship, Overseas Citizenship of India, Rights Outside Part III

➢ With the enactment of the Jammu and Kashmir Reorganization Act, 2019 a series of

Constitutional changes have been affected.

➤ The order said, "In terms of the Jammu and Kashmir Reorganization (Removal of Difficulties) Order, 2019 any reference by whatever form to 'permanent residents of the State or hereditary State subject', wherever they occurred in any Act or notification issued or rules, orders made there under, stands omitted with necessary grammatical variation."

Conclusion

The new rules replace "permanent resident" with "domicile" – anyone who has lived in the Union Territory of Jammu and Kashmir for 15 years or studied there for seven years or written Class 10 or 12 board examinations in a school there. Exemptions were also made for certain Central government and public sector employees. Those registered as migrants by the relief and rehabilitation commissioner were also to get domicile rights.

New rules defining domiciles were framed last year, months after the centre split the state of Jammu and Kashmir into two Union Territories, abolished autonomy guaranteed to the state under Article 370, and scrapped Article 35A. The latter empowered state governments of Jammu and Kashmir to define "permanent residents" or state subjects and reserve for them certain rights and privileges, including the right to own land and hold government jobs in the state.

Virtual Hearings and Judiciary

News Excerpt

Chief Justice of India (CJI) recently expressed his dissatisfaction in open court over the software newly put in place in the Supreme Court for virtual hearings.

Pre-Connect

- Virtual Courts is a concept, aimed at eliminating the presence of litigant or lawyer in the court and for adjudication of cases on a virtual platform. The concept has been evolved in order to efficiently utilize court resources and to provide litigants with an effective avenue to settle petty disputes.

- Virtual Court can be administered by a Judge over a virtual electronic platform whose jurisdiction may extend to the entire state and function 24X7. Neither litigant nor Judge would have to physically visit a court for effective adjudication and resolution.

- Communication would only be in electronic form and sentencing and a further

> ### App for journalists patchy
> ❖ The court's mobile app for journalists to view virtual hearings, which was launched recently keeping in mind the health and convenience of reporters during the pandemic, has unfortunately been patchy. There were days when several courtrooms were not accessible on the app. Special Bench hearings was invariably unavailable on it.
> ❖ After the introduction of Cisco, the number of courtrooms available through the mobile app have diminished with each passing day. Recently, only three of a total 14 virtual courts were available on the app. Reporters have gone back to depending on lawyers for virtual court links in order to cover crucial hearings.
> ❖ Chief Justice Ramana, while launching the mobile app, had highlighted the need for transparency. "The role of the media assumes importance in the process of disseminating information," he stressed. The initiative to launch the mobile app for journalists came after he had heard that reporters were depending on lawyers for video links of virtual hearings.

payment of fine or compensation would also be accomplished online. These courts may be used for disposal of cases where there may be proactive admission of guilt by the accused or proactive compliance of the cause by the defendant on receipt of the summons in electronic form. Such matters may be treated as disposed of after the payment of the fine.

- Since it is essential to firstly identify the type of cases which can be effectively disposed of by Virtual Courts, presently and as part of the pilot project the following categories of cases have

been found feasible to be tried in virtual courts:-
- o Offences under Motor Vehicle Act (Traffic Challan Cases)
- o Petty Offences where summons can be issued under Section 206
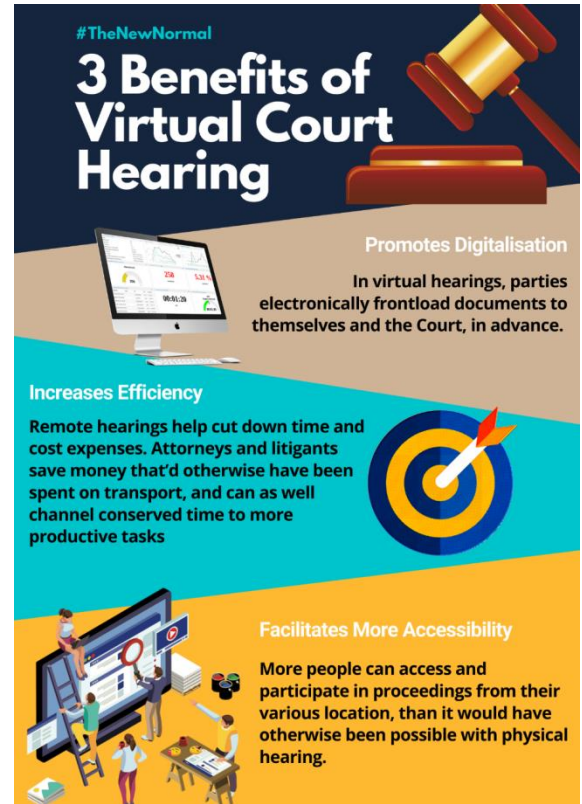
Dissatisfaction of the Judiciary

➢ The CJI's remark has come within days of the court moving to Cisco from the previous one - Vidyo. In fact, a few days ago, some senior lawyers, who had been unhappy with Vidyo, were seen commending the shift to Cisco.

➢ Months of virtual court hearings through Vidyo had seen lawyers complain of poor connectivity, echoes and other disruptions. On several occasions, judges too had recorded their unhappiness about the technical interruptions during hearings.

➢ Recently, a Bench of the Supreme Court took an exasperated poke at the virtual court system. The Hon'ble court noted that ***"We, at the inception, must note our exasperation at the inability of the virtual court system to work satisfactorily in the Supreme Court while there are no such problems in the Delhi High Court next door! We have been since yesterday trying to cope with the problem of disconnections, resonance of voices, even when there is single person arguing... The only voice we hear is the resonance of our own voices!"***.

#TheNewNormal

3 Benefits of Virtual Court Hearing

Promotes Digitalisation
In virtual hearings, parties electronically frontload documents to themselves and the Court, in advance.

Increases Efficiency
Remote hearings help cut down time and cost expenses. Attorneys and litigants save money that'd otherwise have been spent on transport, and can as well channel conserved time to more productive tasks

Facilitates More Accessibility
More people can access and participate in proceedings from their various location, than it would have otherwise been possible with physical hearing.

Limitations of the Virtual Courts

✓ Holding hearings on a digital platform in India is challenging and a consuming task. Thus, setting up a framework in areas where the technology is yet to be a part of the court system, like lower courts in various districts, creates barriers for the advocates and clients to present their cases effectively.

✓ India still lacks advanced technology expertise, which plays a vital role in building an e-court system. While we are a developing country and still advancing in technology, India will take time to implement such changes.

✓ Indian virtual courts lack a strongly encrypted system to protect tons of electronic data, which encourage hackers to have unethical access to the confidential data of courts.

✓ The new lawyer might miss the spatial experience of real courts, which help them boost their confidence and enhance their personality in an open court.

Hearing in Virtual Courts in India

▪ Within a couple of months since the imposition of the lockdown, the SC instituted documents filing online. Further, high courts initiated live streaming their virtual hearings. For instance, the Gujarat High Court conducted live online streaming of hearings on YouTube.

▪ The new digitalised framework has provided flexibility to record, cure errors, pay court fees and file case documents from anywhere at any time. Even Former Chief Justice of India Bobde, had pressed a need for resorting to e-hearing. He hoped the same to be an 'irreversible change' that needed to expand through the country.

▪ The SC implemented due measures and adopted technological assistance to ensure effective administration to dispense justice to India's people to cope with the situation. The court also laid out the 'Guidelines for Court Functioning Through Video Conferencing During Covid-19 Pandemic'. One of the mentionable excerpts from the document read:

"The Indian Judiciary has incorporated Information and Communication Technology systems through the e-Courts Integrated Mission Mode Project (e-Courts Project) as part of the National eGovernance Plan (NeGP) has reduced conventional impediments and legal uncertainty surrounding the use of virtual courts. ICT enabled infrastructure is available across all courts including the district judiciary, which constitutes the initial interface of the court system with the citizen."

This idea of incorporating ICT goes way back and is not just exclusive of exceptional circumstances like the pandemic. In *State of Maharashtra v Praful Desai,* **2003**, the court recognised the use of technology. It held that the term 'evidence' includes electronic evidence and that video conferencing may be used to record evidence. However, this recognition didn't consider deploying new digital systems or legal scapes but sought assistance from technology that already existed at the time.

Way Forward

- To start with, the court will need to develop a well-defined framework supported by an accessible platform and direct virtual court system in India. India also needs to harp on advanced infrastructure to run a virtual court that eradicates the digital divide, simultaneously upping judicial functioning.

- While the digitised judicial systems give some semblance of convenience for the people who interact with the court, digitisation also brings threats of intrusion etc. For the same, these systems must be secured and encrypted to protect and restore extensive information of the court.

- The centre has formulated a committee to operate the virtual court system. But the bureaucracy should be trained effectively to cope with changing systems and digitalisation. Moreover, all persons dealing with the law within the court, including judges and lawyers, should be made familiar with the new systems.

- It is essential that apart from skilling, the interface of such systems must be user-friendly for all people without complicating access to information or the law.

Fast and Secured Transmission of Electronic Records system

- ❖ In a big fillip to the fundamental rights of life, dignity and personal liberty, the Supreme Court has introduced a new system by which its crucial decisions, including orders on bail and stay of arrest, can be communicated electronically to prison authorities and investigating agencies through a secure channel.

- ❖ Following a recent order by a Special, the apex court has introduced the "Fast and Secured Transmission of Electronic Records" (FASTER) system.

- ❖ The system is meant to ensure that undertrials are not made to wait for days on end behind bars to be released because the certified hard copies of their bail orders were late to reach the prison.

- ❖ The system would also prevent unnecessary arrests and custody of people even after the court has already granted them its protection. It may even communicate a stay on an execution ordered by the final court on time.

- ❖ A report submitted by Supreme Court's Secretary to the Bench explained that the Rules and Handbook on Practice and Procedure enable the Registry to transmit a certified copy of the judgment or order either in physical or electronic form.

E-authenticated copies: It is proposed that the e-authenticated copies of the record of proceedings/orders, digitally signed by the authorised officer may be transmitted through FASTER [Fast and Secured Transmission of Electronic Records] system to the duty-holders of the justice system.

PEPPER IT WITH
Family Courts, Gram Nyayalaya, Lok Adalat, Mobile Court

Conclusion

- o In India, a significant amount of time goes into resolving disputes. If the e-courts project is implemented, it will go a long way in saving costs and time for the litigants.

- o The start of digitisation of the judiciary aimed at easing access and usage of the new system.

Hence, once the objective is achieved, more cases and urgent matters can be listed for adjudication. Therefore, it is prudent to run more virtual courts for the timely delivery of justice.

o The government is taking active steps to establish virtual courts all over India, and as a result, the efforts will provide quick and cost-effective solutions to the litigants.

o With the help of virtual courts, the judiciary in India can overcome the challenges and make the service delivery mechanism transparent and cost-efficient.

o Thus, the e-court project anchors the executive and the judiciary to reaffirm their resolve to support a speedy, efficient and quality justice delivery in the country. Automation will make the legal profession more equitable to lawyers across the country and create a fair environment for litigants.

Crimes against women in 2021

News Excerpt

National Commission for Women chief Rekha Sharma recently said there has been a rise in the complaints because the commission has been regularly conducting awareness programs due to which the public is now more aware about its work.

Pre-Connect

The National Commission for Women was set up as statutory body in 1992 under the National Commission for Women Act, 1990 to:

o Review the Constitutional and Legal safeguards for women;

o Recommend remedial legislative measures;

o Facilitate redressal of grievances and

o Advise the Government on all policy matters affecting women.

In keeping with its mandate, the Commission initiated various steps to improve the status of women and worked for their economic empowerment. The Commission completed its visits to all the States/UTs except Lakshdweep and prepared Gender Profiles to assess the status of women and their empowerment. It received a large number of complaints and acted suo-moto in several cases to provide speedy justice. It took up the issue of child marriage, sponsored legal awareness programmes, Parivarik Mahila Lok Adalats and reviewed laws such as Dowry Prohibition Act, 1961, PNDT Act 1994, Indian Penal Code 1860 and the National Commission for Women Act, 1990 to make them more stringent and effective.

It organized workshops/consultations, constituted expert committees on economic empowerment of women, conducted workshops/seminars for gender awareness and took up publicity campaign against female foeticide, violence against women etc. in order to generate awareness in the society against these social evils.

Highlights of the Report

• There was a 46 per cent rise in complaints of crimes against women in the first eight months of 2021 over the corresponding period of last year, and over half of these were from Uttar Pradesh.

• There has been a rise in the complaints because the commission has been regularly conducting awareness programs due to which the public is now more aware about its work.
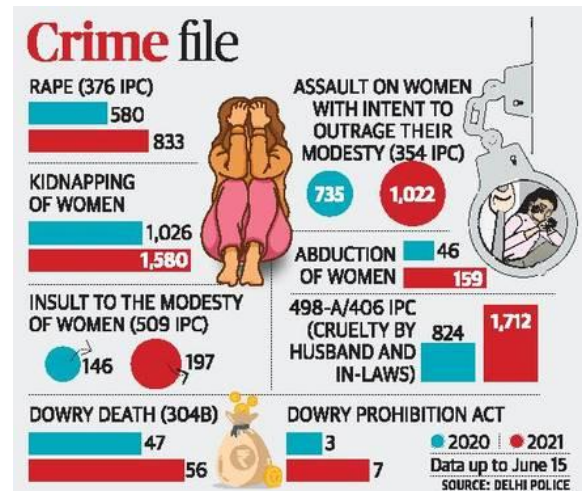
PEPPER IT WITH
National Commission for Scheduled Tribes, National Commission for Scheduled Castes

• In July, as many as 3,248 complaints were received by the NCW which is the highest in a

month since June 2015.

- Of the 19,953 complaints, the highest number of 7,036 were recorded under the right to live with dignity clause, followed by 4,289 complaints of domestic violence and 2,923 complaints of harassment of married women or dowry harassment.
- The right to live with dignity clause takes into account the emotional abuse of women.
- As many as 1,116 complaints have been received regarding the offence of outraging modesty of women or molestation, followed by 1,022 complaints of rape and attempt to rape and 585 complaints of cybercrimes.
- Among states and union territories, the highest number of complaints was received from Uttar Pradesh (10,084), followed by Delhi (2,147), Haryana (995) and Maharashtra (974).
- The commission has always made it a point to launch new initiatives to help women. Keeping in line with this, NCW have launched a round-the-clock helpline number as well to provide support services to women in need where they can also register a complaint.

> **Composition of the Commission:-**
> ❖ A Chairperson, committed to the cause of women, to be nominated by the Central Government.
> ❖ five Members to be nominated by the Central Government from amongst persons of ability, integrity and standing who have had experience in law or legislation, trade unionism, management of an industry potential of women, women's voluntary organisations (including women activist), administration, economic development, health, education or social welfare;
> ❖ Provided that at least one Member each shall be from amongst persons belonging to the Scheduled Castes and Scheduled Tribes respectively;
> ❖ a Member-Secretary to be nominated by the Central Government who shall be:-
>   o an expert in the field of management, organisational structure or sociological movement, or
>   o an officer who is a member of a civil service of the Union or of an all-India service or holds a civil post under the Union with appropriate experience

Conclusion

The rise in complaints is due to more awareness among women to reach out for help. It is a good thing because it means more women have the courage to speak up and there are platforms in place now and they are aware of where to report. People are reaching out now. Earlier women might not be coming forward to lodge their complaint. They didn't know what they are going through is harassment but now they do, and they are coming forward to report.

Crime in India: NCRB Report

News Excerpt

The Coronavirus pandemic and subsequent lockdown resulted in a drop in traditional crimes like theft, robbery, and assault on women and children in 2020, but there was a drastic jump in disobedience to government orders, primarily arising due to violations of COVID-19 norms, official data showed.

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Pre-Connect

Crime in India

This is the oldest and the most prestigious publication brought out by NCRB. The data for the report is collected by State Crime Records Bureaux (SCRBx) from the District Crime Records Bureaux (DCRBx) and sent to NCRB at the end of every calendar year under the reference. Data from mega-cities (cities having population of 10 lakh or more as per the latest census) is also collected separately. District-wise data on some IPC heads is collected and published separately. The first edition of 'Crime in India' pertains to the year 1953.

Scope: The report contains comprehensive information on:
   o cases registered and their disposal and
   o persons arrested and their disposal

The report contains a dedicated chapter on crime against some vulnerable sections of the society - women, children, Scheduled Castes / Scheduled Tribes and senior citizens.

Salient Fields of the Crime in India Report

- The report contains statistical information on cognizable crimes as reported in police stations during the reference year.
- Information on police casualties and police firing, police & civilians' casualties is given in separate chapters to ensure adequate focus to these issues.
- Information on complaints against police personnel and custodial crimes has also been given in separate chapters. It has been the NCRB's constant endeavour to improve the scope, coverage, content and presentation of the publication.
- In this connection, the Bureau has started publication of dedicated chapters on cyber-crimes, human trafficking, crime against senior citizens, crime against foreigners inter-alia foreign tourists, offences against the State, environment related offences and seizures of arms & drugs by police.
- Besides, data on economic crimes, recidivism and crime in railways has also been given in separate chapters. Information on kidnapping and abduction is presented in respect of total population, women & girls and children separately.

Data Generates Research and Decision Making:

The report is the only, and most comprehensive, databank available with the Government of India on the subject. The data contained in the report is used by policy makers, NGOs, researchers and public at large. Keeping in view the extensive, and increasing, dependence of various stakeholders on the information contained in the report, NCRB, on their own initiative, digitised all the editions of the report from 1953 to 2019 and made them available on NCRB's website. Besides, historical data in open-source formats are also made available on Open Government Data (OGD) Platform India website http://data.gov.in.

Highlights of the Report

- According to the latest data, communal riots registered an increase of 96% in 2020 over the previous year. Similarly, caste riots saw an increase of close to 50%, agrarian riots 38% and riots during 'andolan/morcha' increased by 33%.
- The report says that due to the complete lockdown from March 25 and May 31 last year, the number of cases registered for crimes against women, children and senior citizens, theft, burglary, robbery and dacoity, among others, dropped by about 2 lakhs. Murder registered a marginal increase of 1% even as offences falling under the category of "violent crimes" decreased by 0.5%.
- The NCRB says even in the category of Special and Local Laws, more cases were registered under 'Other State Local Act'.
- The year also saw a significant drop in cases related to 'Offences against the State', with a drop of 27% over 2019. UP, however, was the only major state to record an increase in this category, mostly due to the large number of 'Damage to Public Property' cases registered by the state.
- 'Offences against the State' include cases related to sedition and waging war against the nation, those falling under provisions of the Unlawful Activities Prevention Act (UAPA), Official Secrets Act and Damage to Public Property Act.

A JUMP IN NUMBERS

OFFENCES	2019	2020	% increase
Communal riots	438	857	96%
Caste riots	492	736	50%
Agrarian riots	1,579	2,188	38%
Andolan/Morcha riots	1,442	1,905	33%
Promoting Enmity Between Groups	1,058	1,804	70%
TOTAL RIOTS (including other causes)	45,985	51,606	12%

Offences Against The State decreased by 27%, but UP only major state where they increased   *Source: NCRB*

- According to the NCRB data, 2020 saw 857 cases of communal riots being registered across the country as compared to 438 in 2019. Most of the 2020 cases are attributed to the Northeast Delhi riots of February 2020. Delhi Police alone registered 520 cases of communal

riots in the year.

➢ Cases of caste conflict increased from 492 in 2019 to 736 in 2020. Bihar recorded the highest number in this category at 208.

➢ NCRB data reflects the number of cases registered by police and hence, the data often hinges on the responsiveness of the police personnel on the ground.

➢ The year, that saw unprecedented protests against the three farm laws passed by the Centre, recorded 2,188 agrarian riots, a jump from 1,579 in 2019.

➢ Interestingly, Punjab reported zero cases of agrarian riots and Haryana 34. The highest number of cases have been reported from Bihar (1,286), followed by Maharashtra (279), Karnataka (148), UP (142) and Jharkhand (83).

➢ In cases of rioting during 'andolan/morcha', it is Kerala that has recorded the highest number of cases at 1,798, accounting for almost 95% of all such cases in 2020.

➢ The year saw the number of attacks on police personnel decrease from 1,054 to 616 in 2020, a drop of almost 40%.

➢ In 2020, 1,804 cases of 'Promoting Enmity Between Groups' were registered across the country as compared to just 1,058 in 2019. The highest number of such cases were reported from Tamil Nadu (303).

➢ In the category of 'Offences Against the State', 2020 saw 2,000 fewer cases being registered as compared to 2019, which recorded 7,656 cases. Out of 5,613 cases registered this year, 80.6% of cases were registered under The Prevention of Damage to Public Property Act — suggesting state crackdown on violent protests — followed by 796 (14.2%) cases under the Unlawful Activities Prevention Act (UAPA).

➢ UAPA cases, in fact, registered a decrease of 35% in 2020 over 2019. The highest number of UAPA cases were registered in J&K (287), followed by Manipur (169), Jharkhand (86), Assam (76) and UP (72). UP was the only state in the top five with no ongoing insurgency to record such high numbers.

➢ UP is also the only major state to have recorded an increase in the number of cases under 'Offences Against the State'. UP's high numbers are attributable to the very high number of Damage to Public Property Act cases registered by the state. At 2,126, the state accounts for almost 50% of all such cases registered across the country — over 95% of cases in UP under the category of Offences Against the State pertain to Damage to Public Property.

➢ The lockdown had a bearing on the patterns of crimes that were registered in 2020

Analytica

✓ The annual report, 'Crime in India', released by the National Crime Records Bureau this year needs to be carefully parsed before gleaning insights or making State-wise comparisons. The reason is the significant variances in case registration across States and UTs, especially serious crimes pertaining to rape and violence against women. States/UTs such as Tamil Nadu with 1808.8, Kerala (1568.4) and Delhi (1309.6) recorded the highest crime rate (crimes per one lakh people) overall.

✓ But it is difficult not to see these numbers as a reflection of better reporting and police registration of cases in these States and the capital city, respectively. On the other hand, while there was an 8.3% decline in registered cases of crimes against women in 2020 (of which the bulk of them, 30.2%, were of the category "Cruelty by husband or his relatives"), this number has to be assessed along with the fact that the year saw prolonged lockdowns during the first wave of the coronavirus pandemic.

✓ This period coincided with a high number of complaints of domestic violence — the number of complaints received by National Commission for Women registered a 10-year high as of June 2020.

✓ The seeming mismatch between the NCW and NCRB data must be studied and can only be explained by a lack of registration of cases in some States where crime reporting remains sluggish either due to a fear of doing so or a lackadaisical approach to such cases by law enforcement.

✓ The lockdown also led to an overall fall in crime related to theft, burglary and dacoity.

✓ The COVID-19 related disruption also led to a greater registration of cases overall (a 28% increase in 2020 compared to 2019) largely due to a 21-fold increase in cases related to disobedience to the order duly promulgated by a public servant and over four times in cases involving violations of other State local laws.

✓ India had one of the most stringent lockdowns and law enforcement spared little in enforcing strictures on physical distancing. The question of registration does not apply to some types of cases such as murders — which showed a marginal increase of 1% compared to 2019. Worryingly, while there was a reduction in the registered number of economic offences (by 12% since 2019), cybercrimes recorded an increase of 11.8%.

> **PEPPER IT WITH**
> Salient features of the Indian Penal Code, Criminal Procedure Code, Civil Procedure Code, Art. 20 and 21 of the Indian Constitution

✓ While cases related to sedition declined from 93 in 2019 to 73 last year, Manipur and Assam led with 15 and 12 cases each. Sedition has increasingly been used as a weapon to stifle dissent and this trend needs to be reversed urgently.

✓ According to the data, cases pertaining to transmitting of sexually explicit act and material accounted for 19 cases in 2019, which increased to 59 in 2020. Cyber fraud increased while cyber stalking came down. Online bank fraud cases also increased.

✓ Across metropolitan cities, a total of 18,657 cases have been registered under cybercrimes, showing an increase of 0.8% over 2019 (18,500 cases). Cybercrime rate also increased from 16.2 in 2019 to 16.4 in 2020. Crime head-wise cases revealed that computer-related offences (Section 66 of IT Act) formed the highest number of cybercrimes, accounting for 60.9% (11,356 cases) during 2020.A senior police officer said that the reason for increase in cybercrimes in 2020 could be COVID-19 induced lockdown, due to which cybercriminals found novel ways to cheat people.

Conclusion

The increase in cybercrimes is cause for concern as this requires sharper law enforcement as seen even in highly developed societies.

Patents (Amendment) Rules, 2021

News Excerpt

The Patents (Amendment) Rules, 2021 have been notified and has come into force from the date of Publication in the Official Gazette i.e., 21 September 2021.

GS CONNECT											
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Pre-Connect

• A patent is an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem. To get a patent, technical information about the invention must be disclosed to the public in a patent application. There are four different patent types:
   o Utility patent. This is what most people think of when they think about a patent.
   o Provisional patent.
   o Design patent.
   o Plant patent.

• Copyright secures Creative or intellectual creations. Trademarks secure the branding under which products and services are sold. Patent secures inventions that are useful for the world and has some use. e.g., new invention in pharmaceutical industry.

Background

➢ The history of Patent law in India starts from 1911 when the Indian Patents and Designs Act, 1911 was enacted. The present Patents Act, 1970 came into force in the year 1972, amending and consolidating the existing law relating to Patents in India. The Patents Act, 1970 was again amended by the Patents (Amendment) Act, 2005, wherein product patent was extended to all

fields of technology including food, drugs, chemicals and micro-organisms. After the amendment, the provisions relating to Exclusive Marketing Rights (EMRs) have been r epealed, and a provision for enabling grant of compulsory license has been introduced. The provisions relating to pre-grant and post-grant opposition have been also introduced.

➢ An invention relating to a product or a process that is new, involving inventive step and capable of industrial application can be patented in India. However, it must not fall into the category of inventions that are non-patentable as provided under sections 3 and 4 of the (Indian) Patents Act, 1970. In India, a patent application can be filed, either alone or jointly, by true and first inventor or his assignee.

➢ The Patents Act 1970, along with the Patents Rules 1972, came into force in 1972, replacing the Indian Patents and Designs Act 1911. The Patents Act was largely based on the recommendations of the **Ayyangar Committee Report headed by Justice N. Rajagopala Ayyangar**. One of the recommendations was the allowance of only process patents with regard to inventions relating to drugs, medicines, food and chemicals.

➢ Later, India became signatory to many international arrangements with an objective of strengthening its patent law and coming in league with the modern world. One of the significant steps towards achieving this objective was becoming the member of the Trade Related Intellectual Property Rights (TRIPS) system.

➢ Significantly, India also became signatory of the Paris Convention, the Patent Cooperation Treaty and the Budapest Treaty.

Paris Convention for the Protection of Industrial Property (1883)

The Paris Convention applies to industrial property in the widest sense, including patents, trademarks, industrial designs, utility models (a kind of "small-scale patent" provided for by the laws of some countries), service marks, trade names (designations under which an industrial or commercial activity is carried out), geographical indications (indications of source and appellations of origin) and the repression of unfair competition. The substantive provisions of the Convention fall into three main categories: national treatment, right of priority, common rules.

Patent Cooperation Treaty (PCT) – The International Patent System

The Patent Cooperation Treaty (PCT) assists applicants in seeking patent protection internationally for their inventions, helps patent offices with their patent granting decisions, and facilitates public access to a wealth of technical information relating to those inventions. By filing one international patent application under the PCT, applicants can simultaneously seek protection for an invention in a large number of countries.

Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure

Adopted in 1977, the Budapest Treaty concerns a specific topic in the international patent process: microorganisms. All states party to the Treaty are obliged to recognize microorganisms deposited as a part of the patent procedure, irrespective of where the depository authority is located. In practice this means that the requirement to submit microorganisms to each and every national authority in which patent protection is sought no longer exists.

Rights granted by a Patent

✓ If the grant of the patent is for a product, then the patentee has a right to prevent others from making, using, offering for sale, selling or importing the patented product in India. If the patent is for a process, then the patentee has the right to prevent others from using the process, using the product directly obtained by the process, offering for sale, selling or importing the product in India directly obtained by the process.

✓ Before filing an application for grant of patent in India, it is important to note "What is not Patentable in India?" Any invention which is (a) frivolous, (b) obvious, (c) contrary to well established natural laws, (d) contrary to law, (e) morality, (f) injurious to public health, (g) a mere discovery of a scientific principle, (h) the formulation of an abstract theory, (i) a mere discovery of any new property or new use for a known substance or process, machine or apparatus, (j) a substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substance, (k) a mere arrangement or rearrangement or duplication of known devices, (l) a method of agriculture or horticulture and (m) inventions relating to atomic energy, are not patentable in India.
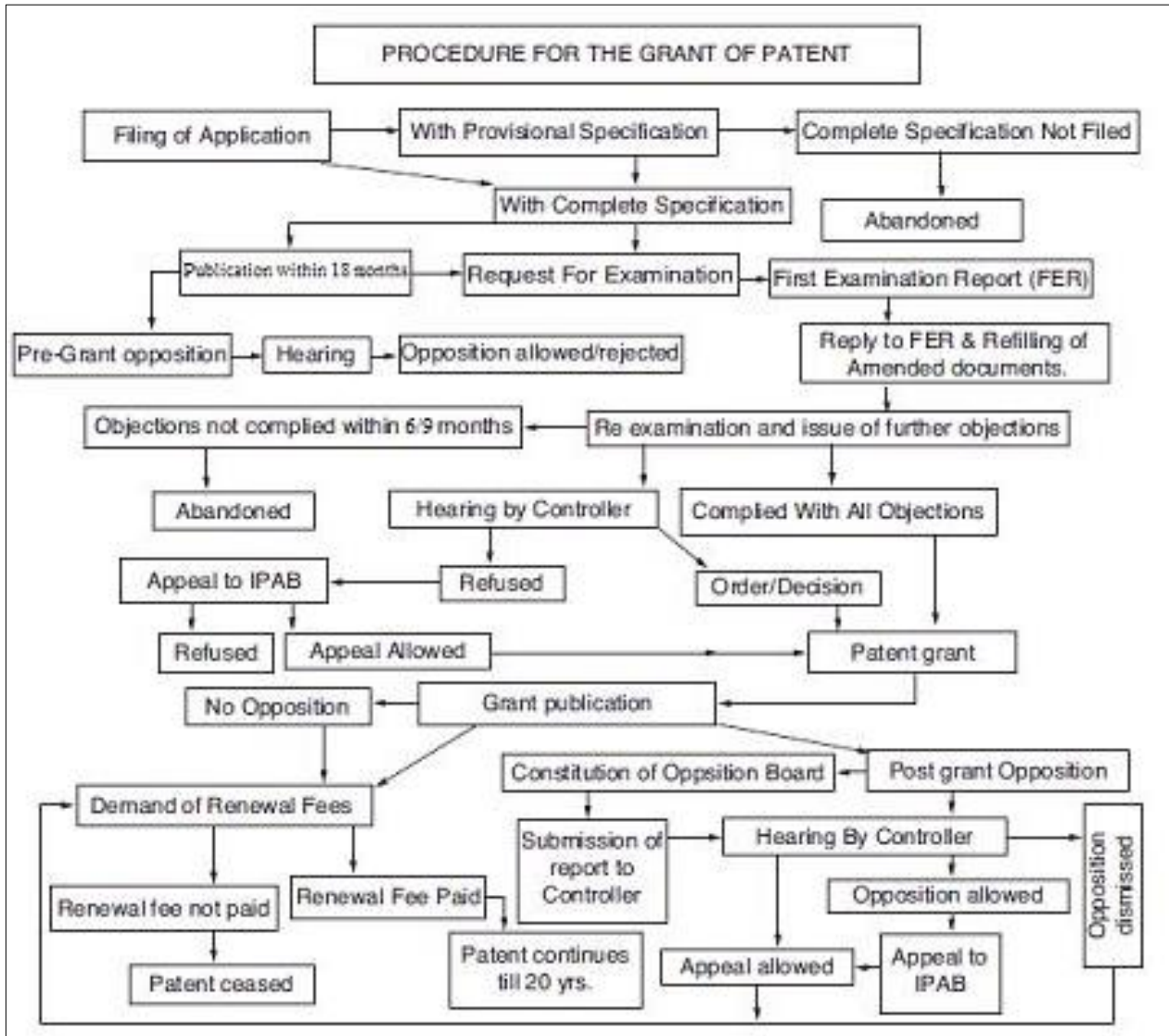
Term of Patent: The term of every patent in India is 20 years from the date of filing the patent application, irrespective of whether it is filed with provisional or complete specification. However, in case of applications filed under the Patent Cooperative Treaty (PCT), the term of 20 years begins from the international filing date.

Infringement of Patent: Patent infringement proceedings can only be initiated after grant of patent in India but may include a claim retrospectively from the date of publication of the application for grant of the patent. Infringement of a patent consists of the unauthorised making, importing, using, offering for sale or selling any patented invention within the India. Under the (Indian) Patents Act, 1970 only a civil action can be initiated in a Court of Law. Further, a suit for infringement can be defended on various grounds including the grounds on which a patent cannot be granted in India and based on such defence, revocation of Patent can also be claimed.

Key highlight of the Patents (Amendment) Rules, 2021

- The category of applicants for patent has been amended to specifically include "**educational institution**" along with natural person, startup and small entity.
- Rule 2, has been amended to insert the following after sub-rule (c): -
    "(ca) "educational institution" means a university established or incorporated by or under Central Act, a Provincial Act, or a State Act, and includes any other educational institution as recognized by an authority designated by the Central Government or the State Government or the Union territories in this regard;".
- The "educational institution" category can be claimed by filing supporting documentary evidence to this effect. However, the nature of documentary evidence has not been specified.
- The fee applicable for an educational institution has been made same as that for a natural person, startup or small entity.
- In the principal rules, in rule 7,–
    i. in sub–rule (1), for the second proviso, the following proviso shall be substituted,
    "Provided further that in the case of a small entity, or startup, or educational institution, every document for which a fee has been specified shall be accompanied by Form–28.";
    ii. for sub–rule (3), the following sub–rule shall be substituted, namely: –

"(3) In case an application processed by a natural person, startup, small entity or

PROCEDURE FOR THE GRANT OF PATENT

Filing of Application → With Provisional Specification → Complete Specification Not Filed

With Complete Specification

Abandoned

Publication within 18 months → Request For Examination → First Examination Report (FER)

Pre-Grant opposition → Hearing → Opposition allowed/rejected

Reply to FER & Refilling of Amended documents.

Objections not complied within 6/9 months ← Re examination and issue of further objections

Abandoned

Hearing by Controller

Complied With All Objections

Appeal to IPAB ← Refused

Order/Decision

Refused   Appeal Allowed

Patent grant

No Opposition ← Grant publication

Constitution of Oppsition Board ← Post grant Opposition

Demand of Renewal Fees

Submission of report to Controller → Hearing By Controller → Opposition dismissed

Renewal fee not paid   Renewal Fee Paid

Opposition allowed

Patent ceased

Patent continues till 20 yrs.

Appeal allowed   Appeal to IPAB

educational institution is fully or partly transferred to a person other than a natural person, startup, small entity or educational institution, the difference, if any, in the scale of fees between the fees charged from the natural person, startup, small entity or educational institution and the fees chargeable from the person other than a natural person, startup, small entity or educational institution, shall be paid by the new applicant along with the request for transfer."

▪ Schedule 1 and 2 has been modified.

Conclusion

The Patents (Amendment) Rules 2021 are in line with the Government's vision of incentivising patent filings for educational institutions. The reduced fee should encourage the educational institutions to increase their patent filings.

> **PEPPER IT WITH**
> World Intellectual Property Organization, Copyright Act, 1957

Right to Government aid and Fundamental Right

News Excerpt

A bench of Supreme Court held that the grant of aid brings with it conditions which the institution receiving it is bound to comply with. If an institution does not want to accept the conditions, it can decline the grant but cannot say that the grant must be on its own terms.

The judgment came in an appeal filed by the government of Uttar Pradesh against a decision of the Allahabad High Court to declare a provision of the Intermediate Education Act of 1921 unconstitutional.

Pre-Connect

- Article 30 of the Indian Constitution says: "All minorities, whether based on religion or language, shall have the right to establish and administer educational institutions of their choice."

- Article 30 of the Indian constitution consists of provisions that safeguard various rights of the minority community in the country keeping in mind the principle of equality as well.

- Article 30(1) says that all minorities, whether based on religion or language, shall have the right to establish and administer educational institutions of their choice.

- Article 30(1A) deals with the fixation of the amount for acquisition of property of any educational institution established by minority groups.

- Article 30(2) states that the government should not discriminate against any educational institution on the ground that it is under the management of a minority, whether based on religion or language, while giving aid.

Core points of the Judgement

➢ The Supreme Court held that the right of an institution, whether run by a majority or minority community, to get government aid is not a fundamental right. Both have to equally follow the rules and

Concept of Minority in the Indian Constitution

Religious minorities: While Article 30 and Article 29 of the Constitution do not specify 'minorities' in India, it is classified into religious minorities and linguistic minorities.

Religious Minorities in India: The basic ground for a community to be nominated as a religious minority is the numerical strength of the community. For example, in India, Hindus are the majority community. As India is a multi-religious country, it becomes important for the government to conserve and protect the religious minorities of the country. Section 2, clause (c) of the National Commission of Minorities Act, declares six communities as minority communities. They are:

- Muslims
- Christians
- Buddhists
- Sikhs
- Jains and
- Zoroastrians (Parsis)

Linguistic Minorities: Class or group of people whose mother language or mother tongue is different from that of the majority groups is known as the linguistic minorities. The Constitution of India protects the interest of these linguistic minorities.

Constituent Assembly debates around Article 30 of the Indian Constitution

❖ On December 8, 1948, the Constituent Assembly debated around the need for imparting primary education in one's mother tongue. One of the members of the Assembly moved an amendment to restrict the scope of this article to linguistic minorities. He argued that a secular state should not recognise minorities based on religion.

❖ Another member of the Assembly proposed to guarantee linguistic minorities the fundamental right to receive primary education in their language and script. He was concerned about the status of minority languages, even in regions which had a significant minority population.

❖ The Constituent Assembly rejected the proposals.

conditions of the aid.

➢ A Bench of Justices S.K. Kaul and M.M. Sundresh said referring to the court's historic T.M.A Pai decision in its judgment, **"Whether it is an institution run by the majority or the minority, all conditions that have relevance to the proper utilisation of the grant-in-aid by an educational institution can be imposed. All that Article 30(2) states is that on the ground that an institution is under the management of a minority, whether based on religion or language, grant of aid to that educational institution cannot be discriminated against, if other educational institutions are entitled to receive aid."**

➢ It held that a grant of government aid comes with accompanying conditions. An institution is free to choose to accept the grant with the conditions or go its own way.

➢ The Bench observed, **"If an institution does not want to accept and comply with the conditions accompanying such aid, it is well open to it to decline the grant and move in its own way. On the contrary, an institution can never be allowed to say that the grant of aid should be on its own terms."**

➢ The court explained why institutions cannot view government aid as a "**matter of right**". Firstly, government aid is a policy decision. It depends on various factors including the interests of the institution itself and the ability of the government to understand the exercise.

➢ The court noted, **"**Financial constraints and deficiencies are the factors which are considered relevant in taking any decision qua aid, including both the decision to grant aid and the manner of disbursement of an aid."

➢ Apex Court said, "Once we hold that right to get an aid is not a fundamental right, the challenge to a decision made in implementing it, shall only be on restricted grounds. Therefore, even in a case where a policy decision is made to withdraw the aid, an institution cannot question it as a matter of right. Maybe, such a challenge would still be available to an institution, when a grant is given to one institution as against the other institution which is similarly placed."

Right of Minorities to Establish and Administer Educational Institutions

The right under Article 30 also includes the right of a minority to impart education to its children in its own language. Minority educational institutions are of three types:

    a. Institutions that seek recognition as well as aid from the State;
    b. Institutions that seek only recognition from the State and not aid; and
    c. Institutions that neither seek recognition nor aid from the State.

The institutions of first and second type are subject to the regulatory power of the state with regard to syllabus prescription, academic standards, discipline, sanitation, employment of teaching staff and so on. The institutions of third type are free to administer their affairs but subject to operation of general laws like contract law, labour law, industrial law, tax law, economic regulations, and so on. In a judgement delivered in the Secretary of Malankara Syrian Catholic College case (2007), the Supreme Court has summarized the general principles relating to establishment and administration of minority educational institutions in the following way:

✓ The right of minorities to establish and administer educational institutions of their choice comprises the following rights:
    ○ To choose its governing body in whom the founders of institution have faith and confidence to conduct and manage affairs of the institution;
    ○ To appoint teaching staff (teachers/ lecturers and he masters/princi-pals) as also non-teaching staff; and to take action, if there is dereliction of duty on the part of any of its employees
    ○ To admit eligible students of their choice and to set uniform reasonable fee structure; and
    ○ To use its properties and assets for the benefit of the institution

✓ The right conferred on minorities under Article 30 is only to ensure equality with the majority and not intended to place the minorities in a more advantageous position vis-a-vis the majority. There is no reverse discrimination in favour of minorities. The general laws of the

land relating to national interest, national security, social welfare, public order, morality, health, sanitation, taxation etc., applicable to all, will equally apply to minority institutions also.

✓ The right to establish and administer educational institutions is not absolute. Nor does it include the right to maladminister. There can be regulatory measures for ensuring educational character and standards and maintaining academic excellence. There can be checks on administration as are necessary to ensure that the administration is efficient and sound, so as to serve the academic needs of the institution. Regulations made by the State concerning generally the welfare of students and teachers, regulations laying down eligibility criteria and qualifications for appointment, as also conditions of service of employees (both teaching and non-teaching), regulations to prevent exploitation or oppression of employees, and regulations prescribing syllabus and curriculum of study fall under this category. Such regulations do not in any manner interfere with the right under Article 30(1).

✓ Subject to the eligibility conditions/ qualifications prescribed by the State being met, the unaided minority educational institutions will have the freedom to appoint teachers/lecturers by adopting any rational procedure of selection.

✓ Extension of aid by the State, does not alter the nature and character of the minority educational institutions. The conditions can be imposed by the State to ensure proper utilization of the aid, without however diluting or abridging the right under Article 30(1).

> **PEPPER IT WITH**
> Features of Fundamental Rights, Definition of State, Laws Inconsistent with Fundamental Rights, Cultural and Educational Rights, Conflict Between Fundamental Rights and Directive Principles, T.M.A.Pai Foundation & Ors vs State of Karnataka & Ors.

Conclusion

The justiciability of Fundamental Rights and non-justiciability of Directive Principles on the one hand and the moral obligation of State to implement Directive Principles (Article 37) on the other hand have led to a conflict between the two since the commencement of the Constitution. In the *Champakam Dorairajan case (1951),* the Supreme Court ruled that in case of any conflict between the Fundamental Rights and the Directive Principles, the former would prevail. It declared that the Directive Principles have to conform to and run as subsidiary to the Fundamental Rights. But it also held that the Fundamental Rights could be amended by the Parliament by enacting constitutional amendment acts. As a result, the Parliament made the First Amendment Act (1951), the Fourth Amendment Act (1955) and the Seventeenth Amendment Act (1964) to implement some of the Directives.

Karbi Anglong Agreement

News Excerpt

Centre has signed an historic Karbi Anglong Agreement to end the decades old crisis ensuring Assam's territorial integrity.
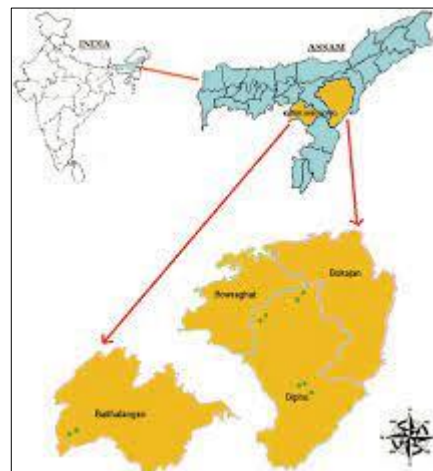
Pre-Connect

- Karbi Anglong is the largest district in Assam, comprising various tribal and ethnic groups such as Karbis, Bodos, Kukis, Dimasas, Hmars, Garos, Rengma Nagas, Tiwas, and Man (Tai Speaking). Several clashes have taken place among these tribes over the years.

- Karbis at 46.38 per cent form the majority of the population. They linguistically belong to the Tibeto–Burman group. Karbi Anglong is an autonomous district under the Sixth Schedule of the Indian Constitution.

- Located in the central part of Assam, Karbi Anglong spreads over an area of 10,434 sq kms. As per the official census of 2011, Karbi Anglong has a population of 956,313 (951 females/1000 males) with average literacy rate of 69.25 per cent.

- It is geographically divided into two parts i.e., East Karbi Anglong (EKA) and West Karbi Anglong (WKA) with its administrative headquarters located at Diphu town in EKA. The terrain

in the district is hilly with thick vegetation and dense tropical forest cover.

Background

➢ Semson Singh Ingti, regarded as the father and architect of 'Karbi nation' and 'Karbi nationalism', along with few other educated elite, started a movement aimed at raising the political consciousness among the Karbi people. The first Karbi socio-political organisation namely Karbi A Dorbar was formed in the year 1946. During the time of Indian independence, the Bordoloi sub-committee found 'considerable' but unequal progress in the hill areas. The Mikir Hills and the Garo Hills – both parts of the partially excluded areas - were found to be the most backward areas of the region.

➢ The Autonomous District Council was formed under the provision of the Sixth Schedule on June 23, 1952. In the year 1970, bifurcation of the United Mikir Hills District took place which gave birth to separate Mikir Hills and North Cachar districts. The formation of Meghalaya and Nagaland was one of the catalytic factors.

➢ On October 14, 1976, the Mikir Hills District was renamed as Karbi Anglong and the district council as Karbi Anglong District Council (KADC). On April 01, 1995, a Memorandum of Understanding (MoU) was signed followed by necessary constitutional amendments upgrading the Karbi Anglong District Council (KADC) to Karbi Anglong Autonomous Council (KAAC).

What does the Peace Accord say?

✓ Among other things, the Centre said that the accord is called — "will ensure greater devolution of autonomy to the Karbi Anglong Autonomous Council, protection of identity, language, culture, etc. of Karbi people and focussed development of the Council area, without affecting the territorial and administrative integrity of Assam".

✓ Under the agreement, the armed groups will shun violence and join the democratic process while the government will facilitate the rehabilitation of their cadres.

✓ The accord also talks about giving "more legislative, executive, administrative and financial powers to KAAC" and setting up "a Karbi Welfare Council for focussed development of Karbi people living outside KAAC area".

✓ One of the highlights of the accord is the creation of a Special Development Package of Rs 1,000 crore for the state to run over a period of five years that will fund "specific projects for the development of Karbi areas".

✓ A senior Assam police officer had said at the time of the surrender by the insurgents that "all insurgent outfits of Karbi Anglong district have now been brought into the mainstream" and that "Karbi Anglong militant outfits joining the mainstream means a decline in influence of Naga militant outfits in Assam".

Why are there protests against the Accord?

▪ Reports from Karbi-Anglong district following the signing of the accord said that more than 24 outfits representing indigenous and ethnic groups in Karbi-Anglong have come out against the accord saying that their demand remains for the creation of an 'autonomous state' under the provision of Article 244(A) of the Constitution.

▪ The groups said they were also against the marking of 10 seats on KAAC for people from any community. "There is no point of reservation of seats in sixth schedule administered areas like KAAC. We knew that all seats here are for tribes. All constituencies in KAAC should have been reserved for the tribals living in Karbi Anglong. Tactfully, these 10 seats have been taken away from us, paving the way for other community representation." a leading national English daily quoted convenor of the forum for the 24+ outfits, as saying. He added that their forum would continue protests on the issue of Article 244(A).

▪ This article, inserted into the Constitution by the 22nd Amendment Act in 1969, provides for the creation of an 'autonomous state' within Assam out of tribal areas. It is different from the

sixth schedule in that it provides for greater powers for the council, including the creation of a legislature and a council of ministers.

Way Forward

+ **Transparency and Accountability of the KAAC:** On the part of government, it is necessary that funds required by these councils are allocated timely to empower these councils to have credibility among the populace. Creation of KAATC with enhanced executive, legislate powers and development functions is long awaited and need to be expedited.

+ **Addressing the Aspirations of All Communities:** There is a need to assuage the grievances and apprehensions of Kuki, Naga and other communities inhabiting Karbi Anglong. Hence, it is important that aspirations of these communities are addressed by giving them adequate representation in the KAAC/KAATC. An inclusive approach to development would lead to peace and harmony in this region.

> **Salient features of the Agreement**
> ❖ This Memorandum of Settlement will ensure greater devolution of autonomy to the Karbi Anglong Autonomous Council, protection of identity, language, culture, etc. of Karbi people and focused development of the Council area, without affecting the territorial and administrative integrity of Assam.
> ❖ The Karbi armed groups have agreed to abjure violence and join the peaceful democratic process as established by law of the land. The Agreement also provides for rehabilitation of cadres of the armed groups.
> ❖ The Government of Assam shall set up a Karbi Welfare Council for focused development of Karbi people living outside KAAC area.
> ❖ The Consolidated Fund of the State will be augmented to supplement the resources of KAAC.
> ❖ Overall, the present settlement proposes to give more legislative, executive, administrative and financial powers to KAAC.

+ **Closure of Camps and Rehabilitation of Cadres:** An attempt towards early finalisation of the Memorandum of Settlement (MoS) followed by comprehensive rehabilitation of cadres and closure of these camps is necessary for bringing peace in Karbi Anglong. In the interim, it is important to manage ceasefire camps and strictly implement ceasefire ground rules while ensuring smooth integration of cadres into the mainstream.

> **PEPPER IT WITH**
> Fifth and Sixth Schedules of the Indian Constitution, Karbi Anglong Autonomous Council, NLFT Tripura Agreement, 2019; Bodo Peace Accord; Bru Accord, 2020, Article 244(A)

+ **Inclusive Development:** Inclusive development is a pro-poor approach that equally values and incorporates the contributions of all stakeholders including the marginalised groups in addressing development issues.

+ **Sustained Security Forces' Operations:** Security forces have been operating effectively in the East Karbi Anglong which has restricted the movement of the cadres. The pressure generated by the security forces has led to surrender by the cadres. There have also been numerous incidents wherein the locals have apprehended the cadres and handed them over to the Army. These are positive indicators and show waning support for militancy in the area. Several bold and innovative operations launched by the security forces have helped extend the reach of civil administration and the police to remote areas. Such synergised operations need to continue to maintain pressure on the militant outfits and extend development activities to the remote areas of the district.

Conclusion

Karbis have been seeking better opportunities, all round development, basic facilities and greater security through better governance. Most of the rural areas in the interiors are yet to be connected with a metalled road. Therefore, improvement of roads and transport as well as building of RCC bridges along with other development projects should be the focus area. The infrastructure for education is also appalling in the district and urgently needs to be improved. Therefore, an inclusive approach to development in both Karbi and non-Karbi inhabited areas is necessary for

stability and peace in Karbi Anglong.

Forest Rights Act, 2006

News Excerpt

After a long delay, the Jammu and Kashmir government has decided to implement the Forest Rights Act, 2006, which will elevate the socio-economic status of a sizeable section of the 14-lakh-strong population of tribals and nomadic communities, including Gujjar-Bakerwals and Gaddi-Sippis, in the Union Territory.

GS CONNECT

Pre-Connect

- The Bakarwal community is listed as Scheduled Tribes along with Gurjars in Jammu and Kashmir in 1991. As a nomadic tribe they spread over a large part starting from Pir Panjal Range to Hindukush to Ladakh located in Himalayan mountains of South Asia.
- Gujjar Bakarwals inhabit high mountain ranges of Jammu and Kashmir. They travel higher up the mountains and lower down to plains according to seasonal variation to rear large numbers of sheep and goats for livelihood.
- Their houses are made of stone and mud. Nobody lives here in winter. In summer, the Bakarwal people live here when they bring their goats to higher lands for grazing.
- The Gujjar tribes of Jammu and Kashmir is better known for its skillful servant to the wild goats when walking and meandering through the narrow hilly tracts. They are known to be descents of the Dards of Chilas in Gilgit region.

Historical Background

➤ In the colonial era, the British diverted abundant forest wealth of the nation to meet their economic needs. While procedure for settlement of rights was provided under statutes such as the Indian Forest Act, 1927, these were hardly followed. As a result, tribal and forest-dwelling communities, who had been living within the forests in harmony with the environment and the ecosystem, continued to live inside the forests in tenurial insecurity, a situation which continued even after independence as they were marginalised.

➤ The symbiotic relationship between forests and forest-dwelling communities found recognition in the National Forest Policy, 1988. The policy called for the need to associate tribal people in the protection, regeneration and development of forests.

➤ The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, was enacted to protect the marginalised socio-economic class of citizens and balance the right to environment with their right to life and livelihood.

Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006

✓ FRA 2006 recognizes the rights of the forest dwelling tribal communities and other traditional forest dwellers to forest resources, on which these communities were dependent for a variety of needs, including livelihood, habitation and other socio-cultural needs.

✓ The Act encompasses rights of self-cultivation and habitation which are usually regarded as individual rights; and community rights as grazing, fishing and access to water bodies in forests, habitat rights for PVTGs, Traditional Seasonal Resource access of Nomadic and Pastoral community, access to biodiversity, community right to intellectual property and traditional knowledge, recognition of traditional customary rights and right to protect, regenerate or conserve or manage any community forest resource for sustainable use. It also provides rights to allocation of forest land for developmental purposes to fulfil basic infrastructure needs of the community.

✓ In conjunction with the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Settlement Act, 2013 FRA protects the tribal population from eviction without rehabilitation and settlement.

✓ The Act further enjoins upon the Gram Sabha and rights holders the responsibility of conservation and protection of bio-diversity, wildlife, forests, adjoining catchment areas, water sources and other ecologically sensitive areas as well as to stop any destructive practices

affecting these resources or cultural and natural heritage of the tribals. The Gram Sabha is also a highly empowered body under the Act, enabling the tribal population to have a decisive say in the determination of local policies and schemes impacting them.

✓ Thus, the Act empowers the forest dwellers to access and use the forest resources in the manner that they were traditionally accustomed, to protect, conserve and manage forests, protect forest dwellers from unlawful evictions and also provides for basic development facilities for the community of forest dwellers to access facilities of education, health, nutrition, infrastructure etc.

Objective

▪ To undo the historical injustice occurred to the forest dwelling communities.
▪ To ensure land tenure, livelihood and food security of the forest dwelling Scheduled Tribes and other traditional forest dwellers.
▪ To strengthen the conservation regime of the forests by including the responsibilities and authority on Forest Rights holders for sustainable use, conservation of biodiversity and maintenance of ecological balance.

Conclusion

After a wait of more than 14 years, due rights have been conferred upon the tribal community by implementing the Forest Rights Act, 2006, keeping in mind the basic spirit of social equality and harmony as guided by the Constitution of our country and Parliament. The Union Territory saw the arbitrary demolition of Gujjar and Bakerwal houses during a forest reclamation drive in contravention of the Forest Rights Act of 2006. It

PEPPER IT WITH
Particularly Vulnerable Tribal Groups, Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Settlement Act, 2013

will certainly change the condition of tribal communities in Jammu and Kashmir. They will become self-reliant with access to resources for their development. It will help in ensuring a dignified life to the tribal population. Tribal people have close ties with forests and sadly there was no legal framework. The move will address the prolonged suffering of tribal people and also ensure forest conservation. The implementation of the Act will empower the tribal community by restoring to them the rights for a better life, while fulfilling the primary needs of water, food, home and livelihood.

De-registration of inactive parties

News Excerpt

The Election Commission of India (ECI) has asked the Law Ministry to give it the power to deregister political parties that have not contested an election over the past many years.

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Pre-Connect

• Political parties are voluntary associations or organised groups of individuals who share the same political views and who try to gain political power through constitutional means and who desire to work for promoting the national interest.

• There are four types of political parties in the modern democratic states, viz.,
  o (i) Reactionary parties which cling to the old socio-economic and political institutions;
  o (ii) Conservative parties which believe in the status-quo;
  o (iii) Liberal parties which aim at reforming the existing institutions; and
  o (iv) Radical parties which aim at establishing a new order by overthrowing the existing institutions.

• In their classification of political parties on the basis of ideologies, the political scientists have placed the radical parties on the left and the liberal parties in the centre and reactionary and conservative parties on the right. In other words, they are described as the leftist parties, centrist parties and the rightist parties.

• There are three kinds of party systems in the world, viz.,

1. One party system in which only one ruling party exists and no opposition is permitted, as for example, in the former communist countries like the USSR and other East European countries;
2. Two-party system in which two major parties exists, as for example, in USA and Britain; and
3. Multi-party system in which there are a number of political parties leading to the formation of coalition governments, as for example, in France, Switzerland and Italy.

Key Issues around the deregistration of the inactive political parties

➢ The Election Commission notified the updated list of registered political parties that included 2,796 registered unrecognised parties, at a time it has sought the power to deregister inactive parties.

➢ The EC has raised concern over the possible misuse of the income tax exemption by parties that don't contest elections. The Law Ministry was yet to respond to the EC's recent proposal seeking the power to deregister inactive parties. Only 673 parties, including recognised and unrecognised, had participated in the 2019 Lok Sabha elections. In March 2019, the list of registered unrecognised parties had 2,293 names.

➢ EC had raised the concern that the Income Tax exemption on donations given to registered parties under Section 13 A of the Income-tax Act could be misused by some. EC has brought the matter in the notice of the Central Board of Direct Taxes.

➢ Among the concerns was that some of the registered parties may be collecting donations and using them for other purposes, functioning as shell entities and money laundering. EC had proposed de-registering such parties that don't contest two consecutive elections, Parliamentary or Assembly.

➢ While the EC has the power to register parties under the Representation of the People Act, 1951, it does not have the power to deregister parties that are inactive.

➢ On the latest list of parties are eight national recognised parties — the All-India Trinamool Congress, the Bahujan Samaj Party, the BJP, the CPI, the CPI(M), the INC, the NCP and the National People's Party, which is the latest addition, and 54 recognised State parties, some of which are recognised in multiple States.

The Money Laundering Angle

It is suspected that several unrecognised parties may be engaged in money laundering, given the I-T exemptions they enjoy

The number of registered unrecognised parties increased from 1,112 parties in 2010 to 2,301 in 2019, and now is over 2,700

Although unrecognised, these parties netted ₹65 crore in 2018-19 and ₹24.6 crore in 2017-18

ADR assessments show maximum unregistered parties in UP and the highest donations going to such parties in Gujarat

Constitutional and Legal Front

✓ Registration of Political parties is governed by the provisions of Section 29A of the Representation of the People Act, 1951. A party seeking registration under the said Section with the Commission has to submit an application to the Commission within 30 days following the date of its formation as per guidelines prescribed by the Election Commission of India in the exercise of the powers conferred by Article 324 of the Commission of India and Section 29A of the Representation of the People Act, 1951. However, the entire Representation of the People Act, 1951 does not provide any mechanism for the de-registration of a political party.

✓ In *Indian National Congress (I) vs Institute Of Social Welfare & Ors., 2002* Kerala High Court held that the Election Commission of India while exercising the power to register a political party under Section 29A of the Act acts quasi-judicially and once a political party is registered, no power of review having been conferred on the EC, the Commission has no power to de-register a political party for having violated the provisions of the Constitution or committed a breach of an undertaking given to the Election Commission.

✓ Many a times Higher Judiciary, Election Commission and Law Commission put up the argument before the legislature and executive to bring law related to the de-registration of a political party. In 2016, the Election Commission had recommended 47 proposals of Electoral Reforms and one of the reforms suggested was related to "de-registration of political parties.

✓ In the present scenario, EC possesses the power to register a political party but it does not

possess the power to de-register it. However, the Commission can review its order of registering a political party when it falls within the ambit of playing fraud on commission and if the party is declared unlawful under UAPA or any other law.

✓ In its 61st Report on Electoral Reforms, Department Related Parliamentary Standing Committee on Personnel, Public Grievances, Law and Justice recommended that EC has assumed the power under para 16 A of the Election Symbol (Reservation and Allotment) Order, 1968 to de-recognize the Political Parties in the event of a violation of Model Code of Conduct. The net effect of de-recognition of the political party makes that party almost dysfunctional as its symbol is taken away.

✓ Law Commission of India's report on Electoral Reforms, Report No. 255 (March 12, 2015) also supported the view of the Election commission which states that:
   o There is no mechanism to review a party's practice against the principles enshrined in the Constitution or against the requirements of the ECI's Guidelines and Application Format for the Registration of Political Parties under Section 29A.
   o There is no power of de-registration if parties having registered under section 29A of the RPA continue to avail of tax benefits under section 13A of the IT Act, without contesting elections.

Conclusion

Many political parties get registered but never contest election and such parties exist only on paper. From various investigation reports by Election Commission, it can be inferred that most of these parties are formed to get income tax exemption or used for money laundering and bribing in general elections. It would only be logical that the Commission which has the power to register political parties is also empowered to de-register it in appropriate cases. One of the recommendations given by the Law Commission of India is that the authority for registration, de-registration, recognition and de-recognition of parties and for appointing the body of auditors should be the Election Commission whose decisions should be final and only subject to review by the Supreme Court on points of law.

SOCIAL ISSUES, SCHEMES AND COMMITTEES

Global Status Report on Dementia

News Excerpt

Recently, according to a global status report on the public health response to dementia, only quarter of countries have a national policy, strategy or plan for supporting people with dementia and their families released by the World Health Organization (WHO).

Pre-Connect

- Dementia is a syndrome – usually of a chronic or progressive nature – that leads to deterioration in cognitive function (i.e. the ability to process thought) beyond what might be expected from the usual consequences of biological ageing.

- It affects memory, thinking, orientation, comprehension, calculation, learning capacity, language, and judgement. Consciousness is not affected. The impairment in cognitive function is commonly accompanied, and occasionally preceded, by changes in mood, emotional control, behaviour, or motivation.

- Dementia results from a variety of diseases and injuries that primarily or secondarily affect the brain, such as Alzheimer's disease or stroke.

- Dementia is currently the seventh leading cause of death among all diseases and one of the major causes of disability and dependency among older people worldwide. Dementia has physical, psychological, social and economic impacts, not only for people living with dementia, but also for their careers, families and society at large. There is often a lack of awareness and understanding of dementia, resulting in stigmatization and barriers to diagnosis and care.

Source of the Report

- 62 countries have submitted data to the GDO, 56% of which are high-income nations and 44% are low- and middle-income nations.
- Together, these countries represent 76% of people aged 60 years or older.
- Data includes issues ranging from national policies and diagnosis, treatment and care, support for careers and research and innovation.

Key Finding of the reports:

- The 'Global status report on the public health response to dementia' takes stock of progress made to date towards the 2025 global targets for dementia laid out in the WHO's 'Global Dementia Action Plan' published in 2017.

- It uses data from WHO's Global Health Estimates 2019 and the Global Burden of Disease Study 2019 as well as from WHO's Global Dementia Observatory (GDO).

- World Health Organization (WHO) estimates that more than 55 million people (8.1% of women and 5.4% of men over 65 years) are living with dementia. This number is estimated to rise to 78 million by 2030 and to 139 million by 2050.

- WHO's Western Pacific Region has the highest number of people with dementia (20.1 million), followed by the European Region (14.1 million).

- Four years ago, governments agreed on a set of targets to improve dementia care. But targets alone are not enough.

> **The Global Action plan on the public health response to dementia 2017-2025:**
> - It was adopted by World Health Organization (WHO) Member States at the 70th World Health Assembly in May 2017. The plan followed 10 years of advocacy for a global response to dementia by Alzheimer's Disease International and others worldwide.
> - The global plan aims to improve the lives of people with dementia, their families and the people who care for them, while decreasing the impact of dementia on communities and countries.

Analytica

What are the causes of Dementia?

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- Dementia is caused by damage to brain cells. This damage interferes with the ability of brain cells to communicate with each other. When brain cells cannot communicate normally, thinking, behavior and feelings can be affected.
- Different types of dementia are associated with particular types of brain cell damage in particular regions of the brain.
- For example, in Alzheimer's disease, high levels of certain proteins inside and outside brain cells make it hard for brain cells to stay healthy and to communicate with each other.
- The brain region called the hippocampus is the center of learning and memory in the brain, and the brain cells in this region are often the first to be damaged.

Dementia and India

- As per the 2011 census, India is home to about 65 million people of age 65 and above, constituting 5.5% of the total population. Prevalence of dementia in India is reported to be 2.7%.
- As the age increase, prevalence of dementia increases. For example, nearly 20% of people above 80 suffer from dementia. Mean age of presentation is relatively younger at 66.3 years in India, about 10 years lesser than in the developed countries.
- Unlike the West, in India most of the elderly people live with their families and most patients with dementia are taken care of by the families. With the increasing elderly population and reducing joint family system in our country, dementia poses a great challenge.

Treatment of Dementia in India

The treatment or service gap for dementia in India is thought to be nearly 90%, with only one in 10 people with dementia receiving a diagnosis, treatment or care.

The reasons for this are manifold, but the main ones appear to be very poor awareness of dementia in society as well as among health care professionals, very low specialist or trained human resource capacity for the care of those with dementia, and lack of public health priority for dementia.

Way forward

- There is already a significant burden of the dementia in India and with an ageing population it is only expected to grow over the coming decades. The current care services for dementia are vastly inadequate.
- There is an urgent need to prioritise development and piloting of tiered, integrated and holistic dementia care services accessing resources in public and private healthcare.
- It should be using a collaborative community-based care model to enable such a service to be universally available, accessible, equitable, effective and affordable to population at large.

Conclusion

India is a diverse country with a multitude of languages and dialects and vastly varying educational levels. Hence, language and education dependent screening and cognitive assessment scales would be a challenge. The use of content-free speech analysis to predict dementia years before its onset could be a vital innovation in the prevention or early recognition of dementia.

Swachh Survekshan Grameen 2021

News Excerpt

Recently, Ministry of Jal Sakti launched Swachh Survekshan Grameen 2021 under Swachh Bharat Mission (Grameen) Phase-II by Department of Drinking Water and Sanitation(DDWS).

Pre-Connect

Swachh Bharat Mission (Grameen):

- To accelerate the efforts to achieve universal sanitation coverage and to put the focus on sanitation, the Prime Minister of India had launched the Swachh Bharat Mission on 2nd October 2014.

- Under the mission, all villages, Gram Panchayats, Districts, States and Union Territories in India declared themselves "open-defecation free" (ODF) by 2 October 2019.
- To ensure that the open defecation free behaviours are sustained, no one is left behind, and that solid and liquid waste management facilities are accessible, the Mission is moving towards the next Phase II of SBM(G)i.e ODF-Plus.
- ODF Plus activities under Phase II of Swachh Bharat Mission (Grameen) will reinforce ODF behaviours and focus on providing interventions for the safe management of solid and liquid waste in villages.
- In February 2020, the Phase-II of the SBM(G) with a total outlay of Rs. 1,40,881 crores was approved with a focus on the sustainability of ODF status and Solid and Liquid Waste Management (SLWM). SBM(G) Phase-II is planned to be a novel model of convergence between different verticals of financing and various schemes of Central and State Governments. The programme will be implemented in mission mode from 2020-21 to 2024-25.

About the Survey

➢ The Swachh Survekshan Grameen 2021 or rural cleanliness survey 2021 is set to be launched in villages under the Swachh Bharat Abhiyan (Clean India Mission).
➢ The Survekshan is a survey that assesses the state of hygiene, cleanliness and sanitation in rural India as a part of the Centre's initiative to award Open Defecation Free (ODF) Plus status to villages.
➢ As part of the 2021 rural cleanliness survey, as many as 17,475 villages spanning across 698 districts in India would be covered, and the surveyors would be looking at about 87,250 public places like anganwadicentres, markets, religious places, schools, and public health centres.
➢ Not only that but nearly 1.75 lakh households would also be interviewed to receive feedback on issues related to the Swachh Bharat Mission.
➢ ODF-plus status aims to ensure management of solid as well as liquid waste and is an upgradation of ODF status in which construction of adequate toilets was required so that people did not have to defecate in the open.
➢ For ODF-plus, local bodies are required to ensure that toilets are accessible to all households, panchayat buildings, schools and anganwadicentres in the villages.
➢ Along with this, they are also required to ensure that solid and liquid waste is effectively managed in at least 80% of the households and in all public places so that there is minimal littering and minimal water stagnation.
➢ The survey would give 30% weight to direct observation of sanitation, while citizen's feedback would account for 35% of the score. The remaining 35% weightage would be accorded to service level progress on parameters related to sanitation.

Report on the State of Social Protection

News Excerpt

Recently, United Nation's International Labour Organization released its report on the State of Social Protection.

Pre-Connect

- The International Labour Organization (ILO) is devoted to promoting social justice and internationally recognized human and labour rights, pursuing its founding mission that social justice is essential to universal and lasting peace.
- Only tripartite U.N. agency, the ILO brings together governments, employers and workers representatives of 187 member States, to set labour standards, develop policies and devise programmes promoting decent work for all women and men.

Key finding of the reports

Despite progress in recent years in extending social protection in many parts of the world, when the coronavirus disease (COVID-19) pandemic hit many countries were still facing significant challenges in making the human right to social security a reality for all.

The state of social protection: Progress made, but not enough

➢ As of 2020, only 46.9 per cent of the global population were effectively covered by at least one social protection benefit Sustainable Development Goal (SDG).

➢ While the remaining 53.1 per cent – as many as 4.1 billion people – were left wholly unprotected. Behind this global average, there are significant inequalities across and within regions.

➢ Only 30.6 per cent of the working-age population are legally covered by comprehensive social security systems that include a full range of benefits.

➢ This implies that the large majority of the working-age population – 69.4 per cent, or 4 billion people – are only partially protected or not protected at all

➢ The financial gap for building social protection floors has widened by approximately 30 per cent since the onset of the COVID-19 crisis, owing to the increased need for healthcare services, income security measures, and reductions in GDP caused by the crisis.

Social protection for children remains limited, yet is critical for unlocking their potential

✓ The vast majority of children still have no effective social protection coverage, and only 26.4 per cent of children globally receive social protection benefits.

✓ Effective coverage is particularly low in some regions: 18 per cent in Asia and the Pacific, 15.4 per cent in the Arab States and 12.6 per cent in Africa.

✓ On average, national expenditure on social protection for children is too low, equating to only 1.1 per cent of GDP, compared to 7 per cent of GDP spent on pensions.

✓ The regions of the world with the largest share of children in the population, and the greatest need for social protection, have some of the lowest coverage and expenditure rates, especially sub-Saharan Africa (0.4 per cent of GDP).

Social protection for women and men of working age provided insufficient protection against key risk

▪ **Maternity:** Some countries have made decisive progress towards universal or near-universal effective maternity coverage. Despite the positive developmental impacts of supporting childbearing women, only 44.9 per cent of women with new-borns worldwide receive a cash maternity benefit.

▪ **Sickness:** The crisis has demonstrated the importance of ensuring income security during ill health, including quarantine. However, only a third of the world's working-age population have their income security protected by law in the event of sickness.

▪ **Disability:** The share of people with severe disabilities worldwide who receive a disability benefit remains low at 33.5 per cent. Importantly, several countries now have universal disability benefit programmes in place.

▪ **Unemployment protection**: A mere 18.6 per cent of unemployed workers worldwide have effective coverage for unemployment and thus actually receive unemployment benefits. This remains the least developed branch of social protection.

▪ Expenditure estimates show that worldwide only 3.6 per cent of GDP is spent on public social protection to ensure income security for people of working age.

Social protection for older women and men still faces coverage and adequacy challenges

✦ Globally, 77.5 per cent of people above retirement age receive some form of old-age pension. However, major disparities remain across regions, between rural and urban areas, and between women and men. Expenditure on pensions and other benefits for older people accounts for 7.0 per cent of GDP on average, again with large variations across regions.

✦ The COVID-19 crisis has brought additional pressures to bear on the costs and financing of pension systems, but the impact over the long term will be moderate to low.

Gap between rich and poor grows

▪ Low-income countries would require an additional $77.9 billion (€66 billion) per year to

guarantee at least basic social protection coverage, equivalent to 16 per cent of gross domestic product (GDP).

- Lower-middle-income countries would need an additional $362.9 billion per year and upper-middle-income countries would need an additional $750.8 billion per year.
- On average, countries around the globe spend approximately 13 per cent of GDP on social protection (health care excluded).
- But spending can vary significantly between nations. High-income countries spend on average 16.4 per cent of GDP on social protection while low-income countries spend only 1.1 per cent.

Analytica

› The global health emergency caused by the coronavirus has provoked governments to unleash significant social protection spending. This has included increasing benefits, improving delivery mechanisms, and extending coverage to groups that were previously unprotected.

› However, despite international efforts, higher-income countries have been more successful in their response than low- and middle-income countries. These coverage and financing gaps between countries supported a recent forecast from the International Monetary Fund (IMF) warning that richer countries were seeing signs of a healthy recovery while gains in poorer countries were being reversed, the report said. Compounded by an uneven vaccine rollout, these gaps in social protection also point to a greater likelihood of an uneven global recovery from COVID-19.

› Social protection could provide wide-ranging social and economic benefits for countries at all levels of development.

› These include better health and education, more sustainable economic systems, better managed migration and an improved observance of human rights.

Way forward

» Universal social protection is supported through the joint efforts of the United Nations agencies "working as one", and through concerted efforts with relevant international, regional, subregional and national institutions and social partners, civil society and other stakeholders, including through the Global Partnership for Universal Social Protection.

» The unique policy window prised open by COVID-19 should embolden countries to take decisive action now about the future of social protection and pursue a high-road policy approach with vigour. Doing so will empower societies to deal with future crises and the challenges posed by demographic change, the evolving world of work, migration, environmental challenges and the existential threat of climate change. Ultimately, a robust social protection system will shore up and repair a fragile social contract and enable countries to enjoy a socially just future.

World University Ranking

New Excerpt

Recently, the Times Higher Education (THE) World University Ranking realised the latest edition of global league table and did not have single India Institute in the top 300.

Pre-Connect

The Times Higher Education

- They aim to create university rankings to assess university performance on the global stage and to provide a resource for readers to understand the different missions and successes of higher education institutions.
- THE rankings cover the three main missions of university activity: research, teaching and impact.
- Each university in the rankings has a detailed profile, with a breakdown of its overall scores across the rankings and supplementary data designed to help students Asia University Ranking

Key finding

World University Ranking

➢ UK's University of Oxford retains first place in the Times Higher Education World University Rankings for the sixth consecutive year as the US and UK take all top ten positions for the second year running.

➢ In Asia, mainland China registers its highest ever position in the ranking (16th) and sees a record 10 universities reach the world top 200, while South Korea, Japan, Singapore and Hong Kong all achieve their highest positions under the current methodology.

➢ Dramatic improvements for the Middle East, as Saudi Arabia and Egypt emerge as the fastest-rising countries in the world.

➢ A record 1,662 universities from 99 countries and regions are part of this year's rankings as the competition in the global knowledge economy intensifies.

India's Position

✓ Indian Institute of Science (IISc) is the country's top performing institute, but is ranked in the 301-350 bracket. It is followed by IIT Ropar and JSS Academy of Higher Education and Research. Both are in the 351-400 bracket.

✓ Overall, India is home to 35 of the world's top 1,000 universities, its second-highest total ever in the rankings. Last year, it was 36. Globally, the University of Oxford tops the ranking for the sixth consecutive year.

✓ There's no Indian university in THE World University Rankings 2022 by subject.

✓ Saveetha University and Symbiosis International University are the only two universities in the global rankings for Law.

✓ Many Indian institutions had featured in the THE rankings announced for other subjects earlier.

✓ India's Indian Institute of Science, placed in Rank 81, is the only institution in the top 100 in Computer Science

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NitiAayog'sAtal Innovation Mission in collaboration with ISRO and CBSE has launched 'Space Challenge' for school students across India.

This challenge has been designed for all the school students, mentors and teachers across the country who not only are associated with schools having Atal Tinkering Labs (ATL) labs but for all the non-ATL schools as well.

This is to ensure that students of classes 6 to 12 are given an open platform where they can innovate and enable themselves to solve digital age space technology problems, it added. The ATL Space Challenge 2021 aligns with the World Space Week 2021 which is being observed from October 4-10 each year at the global level in order to celebrate the contributions of space science and technology.

The aim of this challenge is to enable innovation among young school students to create something in space sector that will not only help them learn about the space but create something that the space programme can use itself.

Is methodology of THE Global Ranking is fair for India?

This is the second consecutive year that the IITs in Mumbai, Delhi, Kanpur, Guwahati, Madras, Roorkee and Kharagpur have not participated in the THE global rankings. They had announced their boycott in April last year, citing concerns over transparency after none of them found a place among the world's best 300 universities. Before the announcement, the IITs had held two meetings with THE officials to flag issues of "transparency" in the ranking parameters, especially the citation metric.

Statement of THE Official's

THE's ranking methodology is transparent and trusted globally. "Our ranking system is based entirely on a relationship of trust and transparency with the universities that take part, and inclusion.

We are trusted all over the world. We firmly believe that the decision not to participate in these globally recognised and trusted rankings disadvantages the IITs. We are proud of our transparent methodology. We are ready and available at any time to continue discussions with the IITs. We would welcome their participation."

category.

Why no India Institute in the top 100 World University Ranking?

The institutes were ranked based on academic reputation, employer reputation, faculty-student ratio, citations per faculty, international faculty and international students.

Indian institutes were strongly impacted by poor scores in international faculty and international student parameters.

We look at five key reasons why Indian universities find it hard to build a global repute.

1. Non-conducive parameters

The parameters that measure global repute are not helping Indian universities. The parameters talk about global diversity, international faculty, international students, research intensity and number of professors that are engaged in research, among others. Many Indian universities, designed to meet UGC and AICTE guidelines, are not used to adhering to such parameters.

2. Social Inclusiveness

In India, by design, Indian universities are supposed to be socially inclusive."Our students are all not always the best of the best. We include the marginalised sections of the society for the overall betterment of the country. Some of the foreign universities with global repute don't have such compulsion.

3. Data Collection

Indian universities and ranking agencies alike have rued over the lack of willingness or initiative among some of the universities in collection and sharing of data that could fit the parameters set by the ranking agencies. One of the things that a committee of IIT directors was working to improve global reputation was on this front.

4. Collaborations

An area where management institutes have had a relatively higher success is international collaborations. While some of the Indian universities have had collaborations for teaching and research, more efforts are still wanting. According to a director of one of the older IITs, the faculty should also be looking for international collaborations to enhance brand recall of IITs among foreign peers.

5) Publicizing Research and Teaching

Director of another IIT admitted that institutes like the IITs and IISc need to work on building their international presence by publicizing their research and courses abroad. Barring a few, not many IITs have been focusing on publishing their research work in the right kind of publications internationally.

The Indian universities could make small changes in terms of asking their faculty to participate in global research projects and get international faculty and students onboard.

Conclusion

- One of the reasons for India's exclusion from the top rankings seems to be the poor research culture in Indian institutions. "In universities, most or all faculty have to teach an inordinate number of courses per semester because teaching is the number one priority.
- Imposing a cap on the number of hours per year a faculty has to engage in teaching and having a reward system that focuses on quality rather than quantity of journal publications can help in improving Indian universities' rankings.

The India Ranking 2021: NIRF

News Excerpt

Recently, the Education Ministry released the sixth edition of the National Institute of Ranking Framework (NIRF) ranking 2021.

Pre-Connect

- National Institute Ranking Framework or NIRF is the first-ever effort by the government to rank higher education institutions (HEIs) in the country. Before NIRF's launch in 2016, HEIs were usually ranked by private entities, especially news magazines. While participation in the NIRF was voluntary in the initial years, it was made compulsory for all government-run educational institutions in 2018. This year, roughly 6,000 institutions have participated in NIRF — about twice the number in 2016.

Edu Minister launches #nirfranking2021

CATEGORY: Overall

Rank 1: **IIT Madras**
Rank 2: **IISc**
Rank 3: **IIT BOmbay**
Rank 4: **IIT Delhi**
Rank 5: **IIT Kanpur**

- In order to be ranked, all education institutions are assessed on five parameters:
- teaching, learning and resources, research and professional practices, graduation outcomes, outreach and inclusivity, and perception.
- NIRF lists out best institutions across 11 categories – overall national ranking, universities, engineering, college, medical, management, pharmacy, law, architecture, dental and research.
- Last year, the NIRF rankings were released in online format owing to the pandemic. IIT Madras was adjudged the top institute of India 2020 (overall category) while the Indian Institute of Science (IISc) Bangalore was the top university followed by Jawaharlal Nehru University (JNU).

Key findings

➢ IIT Madras has topped the list in the overall category, while IISc Bengaluru is at the second position followed by IIT Bombay.

➢ Under the best college category, Miranda House has again topped the list this year. Lady Shri Ram College for Women of Delhi and Loyola College of Chennai has secured the second rank and third rank respectively.

Analytica

Why did the Union government decide to rank HEIs?

✓ The idea of NIRF has its roots in the global rankings. The union government and government-run HEIs were quite upset about their standing in QS World University Rankings and the Times Higher Education World University Ranking.

✓ During the Winter Session of Parliament in 2015, the then Education Minister Smriti Irani had attributed their poor performance in global league tables to subjective ranking methodology.

✓ To counter this, India decided to emulate the Chinese example. When China encountered the same problem about two decades ago, they responded with a university ranking system of their own.

✓ The Shanghai Rankings, done by the Shanghai Jiao Tong University, was born out of this in 2003. Nine Chinese universities and three from India (Indian Institute of Science (IISc), IIT Kharagpur and IIT Delhi) made it to the top 500 in the first edition of the Shanghai Rankings.

✓ India too decided to start its own rankings, with parameters that would be more suitable to the Indian context.

✓ There was one big difference, though. While the Shanghai Rankings were international in character from the first year itself, the NIRF only ranked Indian HEIs. The long-term plan was to make it an international league table.

Reform in Urban Planning: NITI Aayog Report

News Excerpt

Recently, NITI Aayog launched a report on measures to ramp up urban planning capacity in India.

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Pre-Connect

- The report, titled 'Reforms in Urban Planning Capacity in India'
- The report has been developed by NITI Aayog, in consultation with concerned ministries and

eminent experts in the domain of urban and regional planning. It presents a condensed outcome of the extensive deliberations and consultations conducted over a period of 9 months.

Need for such measures

➢ In the coming years, urban India will power the growth of the Indian economy. Urban challenges, including town planning, need greater policy attention in our country. There is a compelling need to plug the gaps in urban planning capacity in the country, else a huge opportunity for rapid, sustainable and equitable growth would be at risk of being missed.

➢ Urbanization is the driving force of the Indian economy. The country has reached a turning point in its transformation. It will be half urban in a couple of decades. This is the first time in the history of India that the question of urban planning capacity has been dealt with in depth.

➢ Greater synergies among the public and private sectors and education institutions will provide a massive boost towards making Indian cities more liveable, competitive, and sustainable.

Suggested Reforms in Urban Planning Capacity

The problem

✓ India is home to 11% of the total global urban population. By 2027, India will surpass China as the most populous country in the world. Unplanned urbanization, however, exerts great strain on our cities. In fact, the Covid-19 pandemic has revealed the dire need for the planning and management of our cities.

✓ Urban planning is the foundation for an integrated development of cities, citizens, and the environment. Unfortunately, it has received due attention so far. The existing urban planning and governance framework is complex, which often leads to ambiguity and lack of accountability.

✓ Issues like lack of availability of serviced land, traffic congestion, pressure on basic infrastructure, extreme air pollution, urban flooding, water scarcity and droughts are not merely a reflection of infrastructural shortcomings in the cities. These issues indicate a deep and substantial lack of adequate urban planning and governance frameworks.

Steps for strengthening the urban planning education system:

❖ History of human settlements in the Indian subcontinent must be taught to all young planners in a more exhaustive and analytical manner. Educational institutions must also focus on teaching economics to future planners in a way that equips them to understand its applications in urbanisation, urban development and policy

❖ The Central universities and technical institutions in all the States/ UTs of the Indian Himalayan Region may be encouraged to establish a 'department of planning and public policy' and offer postgraduate degree programmes (M.Tech.) with specializations in 'hill area planning', 'environmental planning', 'regional planning', and 'rural area planning'

❖ The Advisory Committee also recommends that all such institutions may synergize with the Ministry of Rural Development, Ministry of Panchayati Raj and respective state rural development departments/directorates and develop demand-driven short-term programmes on rural area planning.

❖ Planning' as an umbrella term, including all its specializations such as environment, housing, transportation, infrastructure, logistics, rural area, regional, etc., or any other nomenclature approved by AICTE, should be included as a discipline under the National Institute Ranking Framework (NIRF) of MoE to encourage healthy competition among the institutions.

❖ Faculty shortage in educational institutions conducting degree and PhD programmes in planning needs to be resolved in a timebound manner. In this regard, the faculty recruitment rules, particularly of the centrally funded technical institutions, need to be reviewed and strengthened with suitable provisions. Faculties need to be encouraged to write and publish technical papers, which should be linked with their promotion so that quality improvement can be incentivized.

Recommendations

1. Programmatic Intervention for Planning of Healthy Cities: Every city must aspire to become a 'Healthy City for All' by 2030. The report recommends a Central Sector Scheme '500 Healthy Cities Programme', for a period of 5 years, wherein priority cities and towns would be selected jointly by the states and local bodies.

2. Programmatic Intervention for Optimum Utilization of Urban Land: All the cities and towns under the proposed 'Healthy Cities Programme' should strengthen development control regulations based on scientific evidence to maximize the efficiency of urban land (or planning area). The report recommends a sub-scheme 'Preparation/Revision of Development Control Regulations' for this purpose.

3. Ramping Up of Human Resources: To combat the shortage of urban planners in the public sector, the report recommends that the states/UTs may need to a) expedite the filling up of vacant positions of town planners, and b) additionally sanction 8268 town planners' posts as lateral entry positions for a minimum period of 3 years and a maximum of 5 years to meet the gaps.

4. Ensuring Qualified Professionals for Undertaking Urban Planning: State town and country planning departments face an acute shortage of town planners. This is compounded by the fact that in several states, ironically, a qualification in town planning is not even an essential criterion for such jobs. States may need to undertake requisite amendments in their recruitment rules to ensure the entry of qualified candidates into town-planning positions.

5. Re-engineering of Urban Governance: There is a need to bring in more institutional clarity and also multi-disciplinary expertise to solve urban challenges. The report recommends the constitution of a high-powered committee to re-engineer the present urban-planning governance structure. The key aspects that would need to be addressed in this effort are: i) clear division of the roles and responsibilities of various authorities, appropriate revision of rules and regulations, etc., ii) creation of a more dynamic organizational structure, standardisation of the job descriptions of town planners and other experts, and iii) extensive adoption of technology for enabling public participation and inter-agency coordination.

6. Revision of Town and Country Planning Acts: Most States have enacted the Town and Country Planning Acts, that enable them to prepare and notify master plans for implementation. However, many need to be reviewed and upgraded. Therefore, the formation of an apex committee at the state level is recommended to undertake a regular review of planning legislations (including town and country planning or urban and regional development acts or other relevant acts).

7. Demystifying Planning and Involving Citizens: While it is important to maintain the master plans' technical rigour, it is equally important to demystify them for enabling citizens' participation at relevant stages. Therefore, the committee strongly recommends a 'Citizen Outreach Campaign' for demystifying urban planning.

8. Steps for Enhancing the Role of Private Sector: The report recommends that concerted measures must be taken at multiple levels to strengthen the role of the private sector to improve the overall planning capacity in the country. These include the adoption of fair processes for procuring technical consultancy services, strengthening project structuring and management skills in the public sector, and empanelment of private sector consultancies.

9. Measures for strengthening human resource and match demand–supply: The profession needs more structuring, skill-mapping, and data-basing of the workforce to bridge the gap between demand and supply. The Advisory Committee recommends the constitution of a 'National Council of Town and Country Planners' as a statutory body of the Government of India. Also, a 'National Digital Platform of Town and Country Planners' is suggested to be created within the National Urban Innovation Stack of MoHUA. This portal is expected to enable self-registration of all the planners and evolve as a marketplace for potential employers and urban planners.

Conclusion

- The political leadership, decision-makers and planners need to reach a common consensus that a promise to save the environment from the strains of urbanization is a promise of economic growth in the long run.
- The road to reform may be long. Collaborative, concerted and cooperative efforts are required

to strengthen the urban planning capacity of the country. The moment to start is now, if the country has to keep pace with the emerging demands of time.

SPIN Scheme

News Excerpt

Recently, Khadi and Village Industries Commission (KVIC) launched a unique Scheme called SPIN (Strengthening the Potential of India) and set up a pottery cluster under SFURTI Scheme.

Pre-Connect

SFURTI Scheme: The objectives of the scheme is to organize the traditional industries and artisans into clusters to make them competitive and provide support for their long term sustainability, sustained employment, to enhance marketability of products of such clusters, to equip traditional artisans of the associated clusters with the improved skills, to make provision for common facilities and improved tools and equipment's for artisans, to strengthen the cluster governance systems with the active participation of the stakeholders, and to build up innovated and traditional skills, improved technologies, advanced processes, market intelligence and new models of public-private partnerships, so as to gradually replicate similar models of cluster-based regenerated traditional industries.

About SPIN Scheme

- SPIN Scheme in which 780 potters from Uttar Pradesh, Bihar, Rajasthan and Jharkhand have registered for financial assistance from the bank to begin their own business. Out of these, 110 artisans are from Varanasi.

- SPIN Scheme enables the registered potters to get a direct loan from the banks under PradhanMantriShishu Mudra Yojana. Under the SPIN Scheme, KVIC is acting as a facilitator for financial aid to potters through RBL bank and also providing training to the artisans, opting for this scheme.

- Under this scheme, there will be no financial burden on the exchequer and the loan will be repaid by the potter in easy instalments. The SPIN scheme, thus, aims at infusing self-sustainability in the Indian pottery sector.

> Recently, Ministry of Railways, Communications, Electronics and Information Technology launched Rail Kaushal Vikas Yojana, a program under the aegis of Pradhan Mantri Kaushal Vikas Yojana (PMKVY).
>
> ❖ The aim of this initiative is to impart training skills to the youth in various trades to bring qualitative improvement and training in remote areas to be conducted under Rail Kaushal Vikas Yojana.
> ❖ The training will be provided to 50000 candidates over a period of three years. Initially, the training will be provided to 1000 candidates.
> ❖ The program curriculum has been developed by Banaras Locomotive Works, the nodal PU for this scheme, which will also standardize assessments and maintain centralized database of participants. The scheme is being launched for 1000 participants initially and will be over and above the training provided to apprentices under the Apprentice Act 1961.

- Kashi Pottery Cluster" at Village Bhatti in Varanasi is the first pottery cluster in Varanasi district set up by KVIC under the SFURTI Scheme.
- Kashi Pottery Cluster" at Village Bhatti in Varanasi. This is the first pottery cluster in Varanasi district set up by KVIC under the SFURTI Scheme.
- In addition to this, KVIC distributed tool sets to 80 carpentry artisans in Varanasi and also planted 2000 bamboo saplings at Sewapuri Ashram in Varanasi.

Salient Features of SPIN Scheme

➢ It is a no-subsidy program
➢ KVIC facilitates potters to get bank loans under PradhanMantriShishu Mudra Yojana
➢ No financial burden on the exchequer

➢ Beneficiaries can repay the loans in easy instalments.

Global Innovation Index 2021

News Excerpt
India has climbed 2 spots and has been ranked 46th by the World Intellectual Property Organization in the Global Innovation Index 2021 rankings.

Pre-Connect
About the Global Innovation Index
- Since its inception in 2007, the GII has shaped the innovation measurement agenda and become a cornerstone of economic policymaking, with an increasing number of governments systematically analysing their annual GII results and designing policy responses to improve their performance.
- Published annually, the core of the GII provides performance measures and ranks 132 economies on their innovation ecosystems. The Index is built on a rich dataset – the collection of 81 indicators from international public and private sources – going beyond the traditional measures of innovation since the definition of innovation has broadened.
- The GII report is published by WIPO in partnership with the Portulans Institute, with support of corporate network partners, such as the Confederation of Indian Industry, Brazilian National Confederation of Industry, Ecopetrol Group (Colombia), and the Turkish Exporters Assembly.
- India has been on a rising trajectory, over the past several years in the Global Innovation Index (GII), from a rank of 81 in 2015 to46in 2021.

Key finding of the Index
➢ "India (at 46) moves further ahead, by two spots (48 in GII 2020), after making it into the top 50 last year. It takes second place in the lower middle-income group. India held the third position in its income group in 2019 and 2020, having entered the top three in 2019.
➢ India has been portrayed as successful in developing sophisticated services that are technologically dynamic and can be traded internationally.
➢ It continues to lead the world in the information and communication technology services exports indicator (1) and holds top ranks in other indicators, such as domestic industry diversification (12) and graduates in science and engineering (12).
➢ The world's most-innovative economy in 2021 is Switzerland followed by Sweden, the United States of America (U.S.), the United Kingdom (U.K.) and Republic of Korea, according to the GII 2021 rankings.
➢ In spite of the human and economic toll of the COVID-19 pandemic, governments and enterprises in many parts of the world have increased their investments in innovation.

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How India performance improves?
✓ The consistent improvement in the GII ranking is owing to the immense knowledge capital, the vibrant start-up ecosystem, and the amazing work done by the public and the private research organizations.
✓ The Scientific Departments like the Department of Atomic Energy; the Department of Science and Technology; the Department of Biotechnology and the Department of Space have played a pivotal role in enriching the National Innovation Ecosystem.
✓ The NITI Aayog has been working tirelessly to ensure the optimization of the national efforts for bringing policy led innovation in different areas such as electric vehicles, biotechnology, nano technology, space, alternative energy sources, etc.
✓ The India Innovation Index, the latest edition of which was released last year by the NITI Aayog, has been widely accepted as a major step in the direction of decentralization of innovation across all the states of India. A constant thrust in monitoring and evaluating India's position in the global rankings has been provided by the NITI Aayog, including in the GII.
✓ The Confederation of Indian Industry (CII) has also been leading from the front as a

torchbearer of India's journey towards an innovation driven economy.

Way forward

▪ In the last decade and a half since its inception, the GII has supported countries around the globe as they improve their innovation investments and related policies. Dozens of countries from all regions and income groups already actively use the GII framework in the construction of their pro-innovation policies. It has charted the rising understanding of how important innovation is to growth in an interconnected but competitive worldwide economy.

▪ As we look toward the exit of the current crisis, let us focus on using innovation to deepen the transformation of our economies and societies for the good of all. The pandemic has already accelerated digital ways of working, living and playing, while boosting technology trends all over the world. In this future world where technology, innovation and creativity are even more important for the global economy, it is my hope that the GII will continue to help guide policymakers and others so that we can build back better.

State Food Safety Index

News Excerpt

Recently, In an effort to galvanize States to work towards ensuring safe food for citizens, Union Minister for Health and Family Welfare released Food Safety and Standards Authority of India (FSSAI)'s 3rd State Food Safety Index (SFSI) to measure the performance of States across five parameters of food safety.

About the Index

This year, FSSAI is releasing the **3rd State Food Safety Index** for the year 2020-21:

This index is based on performance of State/ UT on five significant parameters, namely, Human Resources and Institutional Data, Compliance, Food Testing – Infrastructure and Surveillance, Training & Capacity Building and Consumer Empowerment. The Index is a dynamic quantitative and qualitative benchmarking model that provides an objective framework for evaluating food safety across all States/UTs.

Key findings

About PoshanVatika

PoshaVatika means that small piece of land where the people of the house grow vegetables to make sure that all in the family specially children and women should not become victim of mal-nutrition. The main objective is to ensure supply of nutrition through organically home grown vegetables and fruits simultaneously ensuring that the soil must also remain healthy.

• As per the ranking of the 20 large states, Gujarat was the best state in the country in terms of food safety with 72 points out of 100, highest across all the categories.

• Southern states of Kerala and Tamil Nadu bagged the second and the third places respectively for ensuring food safety in the regions.

• Odisha, Uttar Pradesh, Himachal Pradesh, Madhya Pradesh, West Bengal, Karnataka and Telangana formed the rest of the top-10 states in this category of states. Among the large states, Bihar ranked last at 20th position, while Andhra Pradesh was placed 19th and Rajasthan was 18th.

• Meanwhile, in the small states, Goa topped the list, followed by Meghalaya and Manipur. Among the eight small states, Mizoram ranked last.

• As far as the eight UTs are concerned, Jammu and Kashmir was ranked as the UT with highest food safety, while Andaman and Nicobar Islands were ranked second and national capital of Delhi was ranked third. Lakshadweep was ranked as the UT with the lowest standards of food safety, securing only 18 points out of 100, the lowest among all categories.

• The states and UTs were ranked on the basis of five parameters – Human Resources and Institutional Data having 20% of the weightage, Compliance with 30% weightage, Food Testing – Infrastructure and Surveillance being given 20% weightage, Training and Capacity Building having 10% weightage and Consumer Empowerment being given 20% weightage.

Ayushman Bharat Digital Mission

New Excerpt

Recently, Prime Minister launched the Ayushman Bharat Digital Mission (ABDM).

Pre-Connect
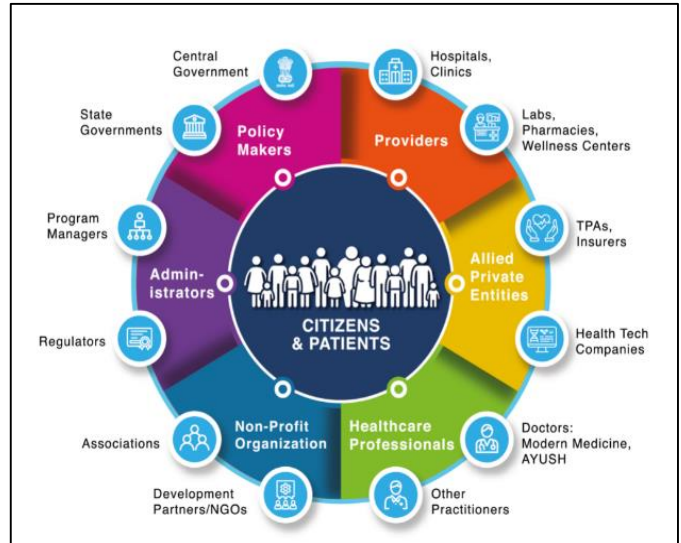
Ayushman Bharat Digital Mission will connect the digital health solutions of hospitals across the country with each other. The Mission will not only make the processes of hospitals simplified but also will increase ease of living. The Digital Ecosystem will also enable a host of other facilities like Digital Consultation, Consent of patients in letting medical practitioners access their records, etc. With the implementation of this scheme, old medical records cannot get lost as every record will be stored digitally.

About the mission

The Ayushman Bharat Digital Mission (ABDM) aims to develop the backbone necessary to support the integrated digital health infrastructure of the country. It will bridge the existing gap amongst different stakeholders of Healthcare ecosystem through digital highways.

What is the unique health ID, and how does one get it?

- If a person wants to be part of the ABDM, she must create a health ID, which is a randomly generated 14-digit number. The ID will be broadly used for three purposes: unique identification, authentication, and threading of the beneficiary's health records, only with their informed consent, across multiple systems and stakeholders.

- One can get a health ID by self-registration on the portal or by downloading the ABMD Health Records app on one's mobile. Additionally, one can also request the creation of a health ID at a participating health facility, which may include government or private hospitals, community health centres, and wellness centres of the government across India.

- The beneficiary will also have to set up a Personal Health Records (PHR) address for consent management, and for future sharing of health records.

What is a PHR address?

- It is a simple self-declared username, which the beneficiary is required to sign into a Health Information Exchange and Consent Manager (HIE-CM). Each health ID will require linkage to a consent manager to enable sharing of health records data.

- An HIE-CM is an application that enables sharing and linking of personal health records for a user. At present, one can use the health ID to sign up on the HIE-CM; the National Health Authority (NHA), however, says multiple consent managers are likely to be available for patients to choose from in the near future.

> **National Digital Health Eco-system**
> It is a National Digital Health Eco-system that supports Universal Health Coverage in an efficient, accessible, inclusive, affordable, timely, and safe manner, through provision of a wide-range of data, information and infrastructure services, duly leveraging open, interoperable, standards-based digital systems, and ensuring the security, confidentiality and privacy of health-related personal information.

What does one need to register for a health ID?

Currently, ABDM supports health ID creation via mobile or Aadhaar. The official website states that ABDM will soon roll out features that will support health ID creation with a PAN card or a

driving licence. For health ID creation through mobile or Aadhaar, the beneficiary will be asked to share details on name, year of birth, gender, address, mobile number/Aadhaar.

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Are personal health records secure?

The NHA says ABDM does not store any of the beneficiary health records. The records are stored with healthcare information providers as per their "retention policies", and are "shared" over the ABDM network "with encryption mechanisms" only after the beneficiary express consent.

Is heath ID is permanent?

No, the NHA says ABDM, supports such a feature. Two options are available: a user can permanently delete or temporarily deactivate her health ID.

On deletion, the unique health ID will be permanently deleted, along with all demographic details. The beneficiary will not be able to retrieve any information tagged to that health ID in the future, and will never be able to access ABDM applications or any health records over the ABDM network with the deleted ID.

Benefits

You can access your digital health records right from admission through treatment and discharge. Second, you can access and link your personal health records with your health ID to create a longitudinal health history.

How do private players get associated with a government digital ID?

✓ The NHA has launched the NDHM Sandbox: a digital architecture that allows helps private players to be part of the National Digital Health Ecosystem as health information providers or health information users.

✓ The private player sends a request to NHA to test its system with the Sandbox environment. The NHA then gives the private player a key to access the Sandbox environment and the health ID application programming interface (API).

✓ The private player then has to create a Sandbox health ID, integrate its software with the API; and register the software to test link records and process health data consent requests. Once the system is tested, the system will ask for a demo to the NHA to move forward. After a successful demo, the NHA certifies and empanels the private hospital.

Why is this initiative significant?

▪ As the Prime Minister highlighted on Monday, the initiative has the potential to "increase the ease of living" along with "simplifying the procedures in hospitals".

▪ At present, the use of digital health ID in hospitals is currently limited to only one hospital or to a single group, and mostly concentrated in large private chains. The new initiative will bring the entire ecosystem on a single platform.

▪ For instance, if a patient is getting treated at AIIMS, Delhi, and wants to move to another hospital in a different city, and if that hospital is also on the centralised ecosystem, the patient does not have to carry physical health records or files of several years of treatment, as the medical history is readily available.

▪ The system also makes it easier to find doctors and specialists nearest to you. Currently, many patients rely on recommendations from family and friends for medical consultation, but now the new platform will tell the patient who to reach out to, and who is the nearest. Also, labs and drug stores will be easily identified for better tests using the new platform.

Economy

New framework for Financial Data

News Excerpt

On September 2 eight of India's major banks — State Bank of India, ICICI Bank, Axis Bank, IDFC First Bank, Kotak Mahindra Bank, HDFC Bank, IndusInd Bank and Federal Bank — joined the Account Aggregator (AA) network that will enable customers to easily access and share their financial data. The framework, which has been under discussion since 2016 and in the testing phase for some time, will now be open to all customers.

Pre-Connect

- According to the RBI, an Account Aggregator is a non-banking financial company engaged in the business of providing, under a contract, the service of retrieving or collecting financial information pertaining to its customer.
- It is also engaged in consolidating, organising and presenting such information to the customer or any other financial information user as may be specified by the bank.
- The AA framework was created through an inter-regulatory decision by RBI and other regulators including Securities and Exchange Board of India, Insurance Regulatory and Development Authority, and Pension Fund Regulatory and Development Authority (PFRDA) through and initiative of the Financial Stability and Development Council (FSDC). The licence for AAs is issued by the RBI, and the financial sector will have many AAs.
- The AA framework allows customers to avail various financial services from a host of providers on a single portal based on a consent method, under which the consumers can choose what financial data to share and with which entity.

Analytica

Functions of Account Aggregator

➢ It reduces the need for individuals to wait in long bank queues, use Internet banking portals, share their passwords, or seek out physical notarisation to access and share their financial documents.

➢ An Account Aggregator is a financial utility for secure flow of data controlled by the individual.

➢ According to experts, Account Aggregators are an exciting addition to India's digital infrastructure as it will allow banks to access consented data flows and verified data.

➢ This will help banks reduce transaction costs, which will enable us to offer lower ticket size loans and more tailored products and services to our customers. It will also help us reduce frauds and comply with upcoming privacy laws.

How does Account Aggregator Network Work?

✓ It has a three-tier structure: Account Aggregator, FIP (Financial Information Provider) and FIU (Financial Information User).

✓ An FIP is the data fiduciary, which holds customers' data. It can be a bank, NBFC, mutual fund, insurance repository or pension fund repository.

✓ An FIU consumes the data from an FIP to provide various services to the consumer. An FIU is a lending bank that wants access to the borrower's data to determine if the borrower qualifies for a loan. Banks play a dual role – as an FIP and as an FIU.

✓ An AA should not support transactions by customers but should ensure appropriate mechanisms for proper customer identification. An AA should share information only with the customer to whom it relates or any other financial information user as authorised by the customer.

✓ AAs enable secure, consented data flows while protecting user privacy. In conjunction with other platforms like the UPI, Account Aggregator creates in India the most cutting edge digital financial infrastructure in the world.

What purpose does it serve?

- According to iSpirt, a think tank for the Indian software products industry, an AA creates secure, digital access to personal data at a time when Covid-19 has led to restrictions on physical interaction.
- It reduces the fraud associated with physical data by introducing secure digital signatures and end-to-end encryption for data sharing.
- These capabilities in turn open up many possibilities. For instance, whereas physical collateral is usually required for an MSME loan, with secure data sharing via AA, 'information collateral' (or data on future MSME income) can be used to access a small formal loan.

What data can be shared?

- An Account Aggregator allows a customer to transfer his financial information pertaining to various accounts such as banks deposits, equity, mutual fund and pension funds to any entity requiring access to such information.
- There are 19 categories of information that fall under 'financial information', besides various other categories relating to banking and investments.
- For sharing of such information, the FIU is required to initiate a request for consent by way of any platform/app run by the AA. Such a request is received by the individual customer through the AA, and the information is shared by the AA, after consent is obtained.
- The AA framework is an excellent initiative that will compile all the digital footprints of the customer at one place and make it easy for lenders like us to access it. It will enable us to provide very quick turnarounds to customers
- Data transmitted through the AA is encrypted. AAs are not allowed to store, process and sell the customer's data. No financial information accessed by the AA from an FIP should reside with the AA. It should not use the services of a third-party service provider for undertaking the business of account aggregation.
- According to RBI, user authentication credentials of customers relating to accounts with various FIPs shall not be accessed by the AA.

Additional Tier 1 bonds

- ❖ State Bank of India (SBI) said it raised ₹4,000 crore via Basel-compliant Additional Tier 1 bonds at a coupon rate of 7.72%.
- ❖ This is the first issuance of AT1 bonds in the domestic market since SEBI put in place new regulations.
- ❖ The bank said the coupon rate of 7.72% is the lowest pricing ever offered on such debt, issued by any Indian bank since the implementation of Basel III capital rules in 2013.
- ❖ AT1 Bonds stand for additional tier-1 bonds. These are unsecured bonds which have perpetual tenure. In other words, the bonds have no maturity date. They have call option, which can be used by the banks to buy these bonds back from investors. These bonds are typically used by banks to bolster their core or tier-1 capital.
- ❖ AT1 bonds are subordinate to all other debt and only senior to common equity. Mutual funds (MFs) are among the largest investors in perpetual debt instruments, and hold over Rs 35,000 crore of the outstanding additional tier-I bond issuances of Rs 90,000 crore.

Crypto Finance and Banking

News Excerpt

The development of Bitcoin and thousands of other cryptocurrencies in a little over a decade has changed the definition of money — and spawned a parallel universe of alternative financial services, allowing crypto businesses to move into traditional banking territory.

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Alternative Banking Services Offered by Crypto Businesses

- Most notably, lending and borrowing. Investors can earn interest on their holdings of digital currencies — often a lot more than they could on cash deposits in a bank — or borrow with crypto as collateral to back a loan.
- Crypto loans generally involve no credit checks as transactions are backed by digital assets.
- The crypto business market is quickly being flooded with businesses from the vaguely familiar to science fiction-like entities. They run the gamut from BlockFi, which offers interest-bearing accounts like a bank and has state lender licenses, and Kraken Bank, which was granted a Wyoming bank charter and hopes to soon take retail deposits, to markets controlled by computer code and devised to be governed by users through a token distribution structure.
- A decentralized, automated lending and borrowing system began in 2018 and now has more than $18 billion in assets earning interest.

How do crypto offerings differ from bank services?

- ➢ Superficially, some look similar. Ex. the BlockFi interest account, where consumers deposit cash or crypto and earn monthly interest, as if at a bank. But one big difference is the interest rate — depositors can earn a yield more than 100 times higher on BlockFi than on average bank accounts.
- ➢ Those rewards come with risks. Deposits are not guaranteed by the Federal Deposit Insurance Corp.
- ➢ Cyberattacks, extreme market conditions, or other operational or technical difficultiescould lead to a temporary or permanent halt on withdrawals or transfers, the company cautions in the fine print.
- ➢ Some regulators and lawmakers worry that those warnings are not prominent enough and that consumers need stronger protections.

Why such high yields?

- ✓ Traditional banks lend out their customers' deposits and pay clients a slice of the earnings as interest. Crypto outfits take a similar approach: They pool deposits to offer loans and give interest to depositors.
- ✓ But by law, banks are required to have reserves to ensure that even if some loans go bad, customers can still withdraw funds, whereas crypto banks do not have the same reserve requirements and the institutions they lend to can take risky bets.
- ✓ BlockFi, for example, lends to hedge funds and other institutional investors who exploit flaws in crypto markets to make fast money without actually holding risky assets, betting on discrepancies between actual crypto values and crypto futures. When successful, their speculation generates returns that help fuel the higher, riskier consumer yields.

What is a stablecoin?

- Crypto is very volatile, making it less practical for transactions like payments or loans. That's where stablecoins come in.
- They are cryptocurrencies pegged to stable assets, commonly the dollar. They are meant to provide the steady value of government-issued money in digital form for blockchain transactions, but they are issued by private entities. Popular dollar-tied tokens include Tether and USD Coin.
- The number of stablecoins in circulation globally has jumped from $29 billion in January to $117 billion as of early September, according to The Block, a publication dedicated to cryptocurrency.
- To keep the value of government-issued money stable, central bankers manage supply and demand and ensure that there are ample reserves.
- Stablecoin issuers are supposed to similarly hold and monitor reserves. But there is no guarantee they actually hold the one-to-one dollar backing they claim.
- Some authorities fear a sudden surge in withdrawals could lead to a collapse in one of those assets, putting consumers, financial companies and possibly the broader economy at risk.

Others suggest a central bank digital currency would render stablecoins irrelevant.

What is a central bank digital currency?

+ Central bankers are examining the potential for issuance of a government-issued cryptocurrency. That would theoretically offer the convenience of crypto with the reliability of money controlled by a central bank.

+ Many countries, including the United States, are considering developing a central bank digital currency.

+ Because a stablecoin aims to do in digital form what government money does — provide a stable value — a US digital dollar could undermine the private money minters of the cryptosphere.

+ Stablecoin issuers say the government will not catch up to the innovations in the market for years — if at all. Meanwhile, the system will become more dependent on stablecoins, and it is unclear whether markets awash in those assets will abandon them altogether for a potential FedCoin.

What is DeFi?

o Decentralized finance, or DeFi, loosely describes an alternative finance ecosystem where consumers transfer, trade, borrow and lend cryptocurrency, theoretically independently of traditional financial institutions and the regulatory structures that have been built around Wall Street and banking.

o The DeFi movement aims to "disintermediate" finance, using computer code to eliminate the need for trust and middlemen from transactions.

o Practically speaking, users are not engaging with a financial services company — at least not one that collects identifying information or claims custody of their assets.

o It's a computer-controlled market that automatically executes transactions, like issuing loans backed by crypto or paying interest on holdings.

o DeFi platforms are structured to become independent from their developers and backers over time and to ultimately be governed by a community of users whose power comes from holding the protocol's tokens.

o By comparison, centralized finance, or CeFi, businesses more closely resemble traditional finance, or TradFi, where consumers enter into an agreement with a company like BlockFi that collects information about them, requires them to turn over their crypto and also serves as a central point for regulators.

Benefits of Crypto-Finance

o Innovators argue that crypto fosters financial inclusion. Consumers can earn unusually high return on their holdings, unlike at banks. One in 10 American adults say they do not have a checking account and about a quarter are "underbanked" and unable to qualify for loans.

o Crypto businesses say they serve their needs and, outside the United States, provide financial stability for customers in countries with volatile government-issued currencies.

o According to industry advocates, crypto finance gives people long excluded by traditional institutions the opportunity to engage in transactions quickly, cheaply and without judgment.

o Because crypto backs their loans, the services generally require no credit checks, although some take customer identity information for tax reporting and anti-fraud purposes.

o On a DeFi protocol, users' personal identities are generally not shared, since they are judged solely by the value of their crypto.

Way Forward

o Some regulators and innovators argue that new technology demands a new approach, saying novel risks can be addressed without necessarily crimping innovation.

o For example, instead of mandating that DeFi protocols maintain the reserves of a bank and collect customer information, officials might create new kinds of requirements devised for the technology and products, like code audits and risk parameters.

o Questions of identity, which are crucial to fighting financial fraud, could be addressed by

flipping the old script.

o According to experts, instead of starting with specifics — collecting the identity of individuals — law enforcers could take the broad view, using artificial intelligence and data analysis to monitor suspicious activity and working back to track identity.

RBI's Directions for Card data

❖ The Reserve Bank of India (RBI) has directed that no entity or merchant, other than card issuers and card networks, should store card details — or card-on-file (CoF) — from January 1, 2022. Simultaneously, it has also extended tokenisation of CoF by card issuers.

❖ Tokenisation refers to replacement of actual card details with an alternate code called the "token", which will be unique for a combination of card, token requestor and device. It reduces the frauds that occur by sharing card details like card number and CVV. The token is used to perform card transactions in contactless mode at point-of-sale terminals, quick response and code payments.

❖ A CoF transaction is a transaction where a cardholder has authorised a merchant to store the cardholder's Mastercard or Visa payment details. The cardholder then authorises that same merchant to bill the cardholder's stored Mastercard or Visa account.

❖ E-commerce companies and airlines and supermarket chains normally store card details in their system.

❖ The Reserve Bank has permitted card issuers to offer card tokenisation services as token service providers (TSPs). The facility of tokenisation will be offered by the TSPs only for the cards issued by or affiliated to them

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District Level Committees for power related schemes

News Excerpt

Ministry of Power has issued an order for the setting up of District Level Committees which shall exercise oversight over all power related schemes of Government of India ; as also its impact on the provision of services to the people. This is being done in order to ensure the involvement and oversight of the people in the process of power sector reforms, and their implementation, in the country.

Highlights

- The Composition of the Committee would be:

  (a) Most Senior MP in the district: Chairperson

  (b) Other MPs in the district: Co-chairpersons

  (c) District Collector: Member Secretary

  (d) Chairperson/President of the District Panchayat: Member

  (e) MLAs of the district: Members

  (f) Most Senior representatives of CPSUs of Ministry Members of Power and NRE located in the concerned district, or their nominated officials for the district.

  (g) Chief Engineer/Superintending Engineer of the Convenor DISCOM/ Power Department concerned

- The order states that the Committee of a district will meet at District Headquarters at least once in three months to review and coordinate overall development of power supply infrastructure in the district in accordance with the schemes of the Government which may, inter-alia, include the following aspects:

  a. All Government of India Schemes (power related), including their progress and quality issues.

  b. Development of Sub-transmission and distribution network including regular operations

and maintenance of network - identifying further areas where strengthening is needed.

   c. Impact of the works on quality and reliability of power supply.

   d. Standards of Performance and consumer services quality of supply.

   e. Complaints and Grievance Redressal System.

   f. Any other relevant matter

- The order, addressed to the Additional Chief Secretary/Principal Secretary/ Secretary(Power/Energy) of all States/UTs, requests all the States/UTs to notify and ensure establishment of these District Electricity Committees, under intimation to this Ministry of Power.
- The order also states that it will be the responsibility of the Convenor and Member Secretary to conduct the meetings on regular basis and issue timely minutes.

Analytica

➤ The Union Government has been providing funds under different schemes for strengthening the Distribution Systems in the country.

➤ In the past five years almost 2 lac crore were provided under Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (lPDS), Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA), etc. to ensure universal access by electrifying every village and every hamlet and every household; and for setting up more substations, upgrading existing substations, for High Tension/Low Tension.Lines, Transformers etc. for strengthening the Distribution systems.

➤ Recently, the Govt. has approved a new scheme of 3 lac crores for further strengthening the Distribution Systems wherever necessary, and modernizing it to meet emerging challenges.

Transport and Marketing Assistance (TMA) scheme

News Excerpt

Centre has revised "Transport and Marketing Assistance" (TMA) scheme for Specified Agriculture Products.

Pre-Connect

- In February 2019, the Department of Commerce had introduced 'Transport and Marketing Assistance (TMA) for Specified Agriculture Products Scheme' to provide assistance for the international component of freight, to mitigate disadvantage of higher freight costs faced by the Indian exporters of agriculture products.
- The scheme was initially applicable for exports effected during the period from 01.03.2019 to 31.03.2020 and was later extended for exports effected up to 31.03.2021.
- Now the Department has notified 'Revised Transport and Marketing Assistance (TMA) for Specified Agriculture Products Scheme' for exports effected on or after 01.04.2021 up to 31.03.2022.
- The existing scheme will remain in operation for exports effected up to 31.03.2021.

Highlights

Following major changes have been made in the revised scheme:

➤ Dairy products, which were not covered under the earlier scheme, will be eligible for assistance under the revised scheme.

➤ Rates of assistance have been increased, by 50% for exports by sea and by 100% for exports by air.

➤ The Directorate General of Foreign Trade (DGFT) will shortly notify the procedure for availing assistance under the revised scheme.

➤ Enhanced assistance under the revised scheme is expected to help Indian exporters of agricultural products to meet rising freight and logistics costs.

Analytica

Agricultural Exports from India

✓ India's agrarian culture and varied regional climate have significantly contributed to the global

food basket.
- ✓ Indian curries, spices, snacks, and mangoes are known for their excellent quality across the globe.
- ✓ The total agriculture commodities export was US$ 17.19 billion between March 2020 and February 2021.
- ✓ India is the largest milk producer in the world. Milk production in the country is expected to reach 330 million tonnes (MT) by 2024.
- ✓ Indian agricultural/horticultural and processed foods are exported to more than 100 countries/regions, chief among them being the Middle East, Southeast Asia, SAARC countries, the EU, and the US.
- ✓ After remaining stagnant for the last three years, the export of agriculture and allied products during 2020-21 grew 17.34 per cent to $41.25 billion.

Recent Steps Taken by the Government to Boost Agri Exports

- **Agriculture Export Policy**: Ministry of Commerce and Industry introduced Agriculture Export Policy, 2018 with an aim to double farmers' income by 2022 by doubling agricultural exports from India and integrating Indian farmers and agricultural products in India to the global value chain. The export of agriculture is targeted at US$ 60 billion by 2022.
- **The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Ordinance, 2020:** This ordinance aims to allow intra-state and inter-state trade of farmers' produce beyond the physical premises of APMC markets and the state governments will be prohibited from levying market fee, cess, or levy outside APMC areas
- **The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Ordinance, 2020:** This ordinance sims to provide a framework on farming agreements, and will protect and empower the farmers to engage with agri business firms, processers, wholesalers, exporters, or large retailers.
- **The Essential Commodities (Amendment) Ordinance 2020:** Under this ordinance the central government will be able to regulate the supply of certain food items only under extraordinary circumstances (such as war and famine).
- **Agricultural and Processed Food Products Export Development Authority:** The Agricultural and Processed Food Products Export Development Authority (APEDA) plays a significant role in tapping India's agricultural strengths and works towards expanding the export potential of Indian agricultural and food products.

Pearl farming in tribal areas

News Excerpt

The Trifed (Tribal Co-operative Marketing Development Federation of India) recently inked an agreement with the Jharkhand-based PurtyAgrotech for the promotion of pearl farming in tribal areas. The Trifed operates under the Union

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ministry of tribal affairs. As part of the agreement, PurtyAgrotech pearls will be sold through 141 Tribes India outlets, apart from various e-commerce platforms.

Highlights

- PurtyAgrotech's centre will be developed into a Van Dhan Vikas Kendra Cluster (VDVKC). Besides, there is a plan to develop 25 such VDVKCs for pearl farming in Jharkhand.
- The breeding of oysters and development of pearls was a sustainable mode of business and can be easily practised by tribals who have access to nearby water bodies.
- The Trifed has also signed an MoU with e-grocery platform Big Basket to promote and sell natural 'Van Dhan' products.
- Pearl farming in India is gaining momentum, and many farmers have minted huge profits by doing this form of aquaculture business in the last few years.
- It can be managed with limited human resources and is one of the thriving farming businesses that yield outstanding profits with low investment and less labour.

Analytica

➢ In the past course of time, training for pearl farming was provided in the Central Institute of Fresh Water Aquaculture located in Bhubaneswar (Orissa). However, now various other institutes are involved in conducting training in the state.

➢ Popularly regarded as a natural masterpiece, the pearl is generated from the mollusk as well as the raising and production of a pearl. The entire process through which the generation of pearl takes place is called pearl culture.

➢ In the present course, the demand for pearl in the global market is increasing at an accelerating pace. There is plenty of its utilization in numerous forms, especially in the grocery realm.

➢ Due to the increasing population at an alarming rate, the stock of pearl is reducing. Pearl farming in India is a profitable business venture for farmers and farming business enthusiasts & is also too simple compared to different types of businesses in demand because there is no significant requirement for any food to form a pearl.

➢ Popular varieties of pearl are: Freshwater Cultured Pearl, Keshi Pearl, Natural pearl, Japanese Cultured Pearl, Seawater Cultured Pearl (salt water), Cultured Pearl &Mabe Pearl

➢ Also, they are available in various shapes.However, the demand for perfectly rounded & shiner Pearl is high and are more valuable. Usually, Seawater Cultured Pearl (salt water), Natural pearl, and Freshwater Cultured Pearl are cultivated more by the farmers.

➢ On a global level, Japan is considered as the major producer of pearls. Major pearl producing players throughout the world are- Japan, Australia, India, China, South Seas, Vietnam, UAE, Mexico, USA, Fiji, France, Philippines, Indonesia, Myanmar

Cost & Profits Associated with Pearl Farming in India

✓ In the current scenario, designer beads are getting good response in the Indian as well as international market, which get a good price.

✓ Huge amount of profits can be reaped by exporting pearls to the international market rather than sticking to the Indian market.

✓ After taking out the pearl from the oyster, the sale of oyster can be made in the market.

✓ Several decorative stuffs are prepared by the oyster.

✓ On a large scale, the work of extracting perfume oil from oysters' takes place in Kannauj, due to which oyster may also get sold in the local market on an immediate basis.

✓ The water of rivers, as well as ponds, is also purified by oysters, thereby controlling the problems associated with water pollution.

Conclusion

Pearl Farming in India holds an extensive scope for farmers who are looking for something big and productive in the current scenario. The demand for pearl is not confined to Indian boundaries. In the international market, there is a consistent growth in the demand for pearl giving wings to the pearl farming business. Hence, with adequate awareness generation and handholding desired outcomes can be achieved in pearl culture in India.

Sufficiency Economy Philosophy

News Excerpt

The COVID-19 pandemic is another unprecedented situation that has caused a tremendous suffering and loss of life, severe social and economic disruption, and a dramatic change in one's way of living. It has also slowed down the global effort to drive forward sustainable development and achieve the United Nations' Sustainable Development Goals (SDGs). As a dedicated advocate for global sustainability, Thailand believes that its homegrown development approach of "Sufficiency Economy Philosophy" (SEP) can serve as an alternative approach to achieving the SDGs and building back better without leaving no one behind amid the ongoing spread of COVID-19.

Sufficiency Economy Philosophy

• After the Asian financial crisis in 1997, His Majesty the late King Bhumibol Adulyadej introduced SEP, which has become Thailand's universally applicable development concept at

all levels in the society. His Majesty's reflections from decades of extensive tours and conversations with villagers across the country is culminated in this philosophy.

- SEP serves as a foundation, and compass for sustainability, based on three principles and two pillars.
  o The first is moderation, which entails producing and consuming within one's capacity and avoiding overindulgence.
  o The second principle is reasonableness, which is using one's mental faculties to examine the causes and consequences of actions on one's well-being, household and community.
  o The third is prudence, which refers to risk management in order to be prepared for impacts from any disruptions.
  o The two pillars are knowledge and ethics and values. While the former enables effective planning and execution of developmental activities, the latter enhances human development by emphasizing honesty, altruism, and perseverance, with creating active, engaged citizens, and promoting good governance as the ultimate goal.

- SEP is a philosophy that guides one's inner thinking to immunize oneself from external shocks and can be applied in any settings and at any levels.

- Sufficiency economy, nevertheless, does not imply that one has been complacent in life. One can consider going beyond one basic need as long as one's existing means and capacity are not exceeded.

- Indeed, the essence of SEP is to encourage oneself to be sensible and realistic. Most importantly, SEP can be further applied to any sectors and any areas of operations and at all levels, i.e. family, local community, business and public organizations.

- To concretise development efforts based on SEP, in the rural areas where most people are farmers, the "New Theory Agriculture" has been introduced. The initiative is to divide the land into sections for multiple purposes such as crops cultivation, livestock farming, fisheries, and water resources.

- This approach has greatly helped in ensuring sufficient resources for household consumption and reducing reliance on food imports. It has increased agricultural productivity, income generation, and living standards. The model's success has since been replicated around the kingdom and has improved the livelihoods of communities nationwide.

Application of SEP in times of COVID-19

➤ SEP has succeeded in alleviating Thailand to overcome many crises in the past, and once again has guided the way forward for Thai people and business in facing the impacts of COVID-19.

➤ Many people, particularly in the rural areas, were able to continue their way of lives in unprecedented times, illustrating the golden attribute of "self-immunity" that SEP has to offer.

➤ SEP has also inspired numerous projects around the world. The Thailand International Cooperation Agency (TICA) is Thailand's coordinator in forging development cooperation with international partners worldwide.

➤ TICA's SEP-based development models are designed to assist developing countries to tackle the issue of excessive dependence on foreign aid. The objective is to build resilient communities, beginning at the individual level by enhancing productivity within the limitations of existing income and resources.

➤ There are two main types of SEP projects overseas: 1) SEP Learning Centres, which serve as a comprehensive database, and community learning centre with a designated expert to provide guidance and 2) the development of SEP Sustainable Communities, which serve as role models on development.

➤ Examples:
  o In Lao PDR, Thai and Lao officials, have established Learning Centres for Sustainable Development in Agriculture.These centres maximise the potential of human resources by providing capacity building courses that cover the entire supply chain, such as farm and productivity management, and market analysis. Since agriculture is a vital sector in landlocked Lao PDR, strengthening its capacity in this sector will safeguard domestic food

security and enable farmers to sustain their livelihoods.

o In Bhutan, SEP practitioners assisted in the development of community products by localising Thailand's One Tambon (Sub-district) One Product (OTOP) scheme as One Gewog One Product (OGOP).Under the OGOP Model, a community learning centre on community-based tourism and a centre on sustainable community development were established, with an aim to empowering local authorities and communities. Similar projects are in progress in Sri Lanka, Bangladesh, Nepal, Cambodia, Vietnam and the Philippines.

Conclusion

To overcome the effects of COVID-19 pandemic, likewise the effort to achieve the SDGs, requires joint effort and concerted action, and SEP can play significant role in it. Through accumulating experiences for decades, Thailand has discovered its answer on how to pass on a sustainable world to our future generations through local empowerment. SEP could therefore be another practical and worthy development path that other nations can adapt to their specific contexts.

Settlement system made by SEBI

News Excerpt

Sebi recently allowed stock exchanges to start the T+1 system as an option in place of T+2.

Pre-Connect

T+1 Settlement

- According to a Sebi paper, a shortened cycle not only reduces settlement time but also reduces and frees up the capital required to collateralise that risk.
- T+1 also reduces the number of outstanding unsettled trades at any instant, and thus decreases the unsettled exposure to Clearing Corporation by 50%.
- The narrower the settlement cycle, the narrower the time window for a counterparty insolvency/bankruptcy to impact the settlement of a trade.
- Further, the capital blocked in the system to cover the risk of trades will get proportionately reduced with the number of outstanding unsettled trades at any point of time.
- Systemic risk depends on the number of outstanding trades and concentration of risk at critical institutions such as clearing corporations, and becomes critical when the magnitude of outstanding transactions increases.
- Thus, a shortened settlement cycle will help in reducing systemic risk

T+2 Settlement

➢ If an investor sells shares on Tuesday, settlement of the trade takes place in two working days (T+2). The broker who handles the trade will get the money on Thursday, but will credit the amount in the investor's account only by Friday. In effect, the investor will get the money only after three days.

➢ In T+1, settlement of the trade takes place in one working day and the investor will get the money on the following day. The move to T+1 will not require large operational or technical changes by market participants, nor will it cause fragmentation and risk to the core clearance and settlement ecosystem.

➢ In April 2002, stock exchanges had introduced a T+3 rolling settlement cycle. This was shortened to T+2 from April 1, 2003.

Highlights

✓ Sebi allowed stock exchanges to start the T+1 system as an option in place of T+2.

✓ If it opts for the T+1 settlement cycle for a scrip, the stock exchange will have to mandatorily continue with it for a minimum 6 months. T

✓ hereafter, if it intends to switch back to T+2, it will do so by giving one month's advance notice to the market.

✓ Any subsequent switch (from T+1 to T+2 or vice versa) will be subject to a minimum period.

✓ A stock exchange may choose to offer the T+1 settlement cycle on any of the scrips, after giving

at least one month's advance notice to all stakeholders, including the public at large.

Analytica

Why are foreign investors opposing it?

- Foreign investors have written to SEBI and the Finance Ministry about operational issues they would face while operating from different geographies — time zones, information flow process, and foreign exchange problems.
- Foreign investors will also find it difficult to hedge their net India exposure in dollar terms at the end of the day under the T+1 system.
- In 2020, SEBI had deferred the plan to halve the trade settlement cycle to one day (T+1) following opposition from foreign investors. According to an earlier schedule, the Sebi board was to decide on the issue at one of its board meetings in 2020.

The global scenario

- In February 2021, the US Depository Trust & Clearing Corporation (DTCC), the premier market infrastructure for the global financial services industry, released a two-year industry roadmap for shortening the settlement cycle for US equities to one business day after the trade is executed (T+1).
- DTCC highlighted the immediate benefits of moving to T+1, including cost savings, reduced market risk and lower margin requirements as well as the firm's plans for galvanising the necessary support for the project across a wide range of market participants.
- According to DTCC, in order to move to T+1, industry participants must align and agree to shorten the settlement cycle by implementing the necessary operational and business changes, and regulators must be engaged.
- Based on extensive industry engagement conducted by DTCC throughout 2020, early indications suggest market participants favour the move to T+1, especially during times of high volatility and stressed markets.
- Based on simulations detailed in the paper, DTCC estimates that a move to T+1 could bring a 41 per cent reduction in the volatility component of NSCC's margin.

Issues with Corporate Insolvency Resolution Process under IBC

News Excerpt

The Supreme Court recently ruled that Corporate Insolvency Resolution Process (CIRP) carried out under the Insolvency and Bankruptcy Code (IBC) must be completed within 330 days as laid down by the Code.

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Pre-Connect

- Prior to the commencement of the Insolvency and Bankruptcy Code, 2016 (IBC, 2016 or code), the legislative framework in India dealing with the insolvency and restructuring procedures of corporate entities, partnership firms and individuals was very complex and fragmented across multiple legislations viz. the Companies Act, 1956, the Sick Industrial Companies (Special Provisions) Act, 1985, the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 (SARFAESI Act), the Recovery of Debts due to Banks and Financial Institutions Act (RDDBFI Act), 1993, etc.
- The presence of multiple laws, forums and complexities resulted in delays in the timely resolution of the distressed entities, partnership firms or individuals, which further lead to the devaluation of the assets of the borrower, making insolvency negotiations redundant.
- The IBC 2016 has laid down a collective mechanism for resolution of insolvencies in the country by maintaining a delicate balance for all stakeholders to preserve the economic value of the process in a time bound manner.

What is IBC?

- Insolvency and Bankruptcy Code (IBC) 2016 was implemented through an act of Parliament. It got Presidential assent in May 2016.
- Centre introduced the IBC in 2016 to resolve claims involving insolvent companies.
- The bankruptcy code is a one stop solution for resolving insolvencies, which previously was a

long process that did not offer an economically viable arrangement. The code aims to protect the interests of small investors and make the process of doing business less cumbersome.

➢ IBC is intended to tackle the bad loan problems that are affecting the banking system.

➢ The IBC process has changed the debtor-creditor relationship. A number of major cases have been resolved in two years, while some others are in advanced stages of resolution.

➢ It provides for a time-bound process to resolve insolvency. When a default in repayment occurs, creditors gain control over debtor's assets and must take decisions to resolve insolvency. Under IBC, debtor and creditor both can start 'recovery' proceedings against each other.

Highlights of the SC Order

✓ The Supreme Court held that the adjudicating authority cannot allow modifications or withdrawals of Resolution Plans approved by the Committee of Creditors at the behest of the successful Resolution Applicant, once the plan is submitted to it.

✓ A Bench of Justices D Y Chandrachud and M R Shah ruled that the time limit can be extended only in exceptional circumstances as otherwise, the "open-ended process for further negotiations or a withdrawal, would have a deleterious impact on the Corporate Debtor, its creditors, and the economy at large as the liquidation value depletes with the passage of time."

✓ It asked the National Company Law Tribunal (NCLT) and the National Company Law Appellate Tribunal (NCLAT) to stick to this should therefore, while deciding IBC matters, respect the deadline keeping in mind the "effect of such delays on the insolvency resolution process".

✓ Bench said that judicial delay was one of the major reasons for the failure of the insolvency regime that was in effect prior to the IBC.

Bad Bank

News Excerpt

The Union Cabinet recently approved Rs 30,600 crore government guarantee for the National Asset Reconstruction Company (NARCL), thereby paving the way for operationalisation of bad bank.
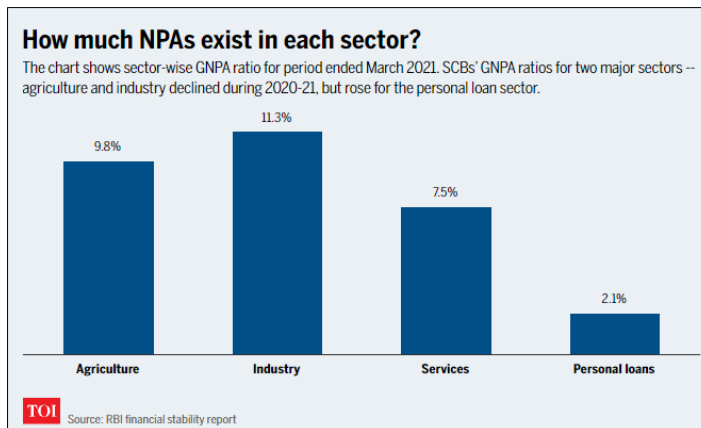
Highlights

• The proposal has come as a welcome move for the banking sector which has been reeling under the weight of bad loans.

• One of the key ideas behind formation of bad banks is to de-stress the balance sheets of the banks.

• Recently, the Indian Banking Association (IBA) moved an application to the Reserve Bank of India (RBI) for a licence to set up a Rs 6,000-crore NARCL.

What is a bad bank?

➢ A bad bank is a corporate structure that isolates risky assets held by banks in a separate entity. It is established to buy non-performing assets (NPAs) from a bank at a price that is determined by the bad bank itself.

➢ In Budget 2021-22, finance minister Nirmala Sitharaman had announced setting up of a bad bank as part of resolution of bad loans worth about Rs 2 lakh crore.

➢ As per the announcement made on Thursday, the bad bank or NARCL will pay up to 15 per cent of the agreed value for the loans in cash and the remaining 85 per cent would be government-guaranteed security receipts.

➢ The government guarantee would be invoked if there is loss against the threshold value.
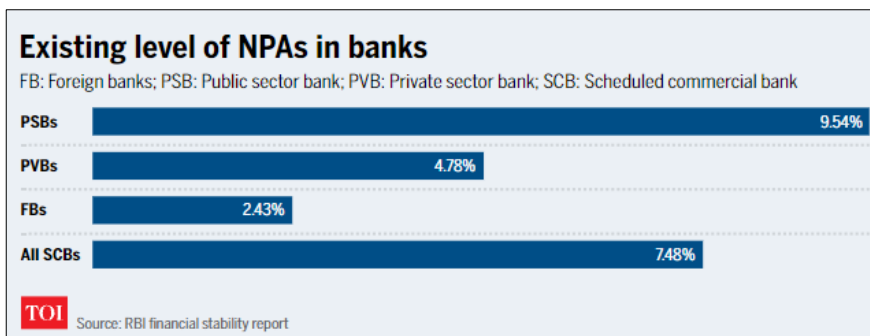
Advantages to Businesses, Consumers

✓ If a bank has high non-performing assets (NPAs), a large part of its profits would be utilized to cut losses.

✓ As a result, any bank with high NPAs is likely to become more risk averse and would be less willing to lend money to borrowers. It would become more difficult for businesses and consumers to take loans from banks, thereby impacting the overall robustness of the economy.

✓ Moreover, in India, a large portion of NPAs is with the government-owned public sector banks. In the past, the government had to infuse fresh capital to improve the financial health of PSBs. The government infusing fresh capital in PSBs means less money for other schemes.

How much NPAs exist in each sector?
The chart shows sector-wise GNPA ratio for period ended March 2021. SCBs' GNPA ratios for two major sectors -- agriculture and industry declined during 2020-21, but rose for the personal loan sector.

Agriculture	Industry	Services	Personal loans
9.8%	11.3%	7.5%	2.1%

TOI Source: RBI financial stability report

How much NPAs do banks have?

▪ As of March 2021, the total bad loans in the banking system amounted to Rs 8.35 lakh crore.

▪ According to Reserve Bank's financial stability report, the gross non-performing assets (GNPA) and net NPA (NNPA) ratios remained stable during the second half of 2020-21, amounting to 7.5 per cent and 2.4 per cent respectively in March 2021.

▪ A stress test conducted by RBI showed that GNPA ratio for scheduled commercial banks (SCBs) may jump from 7.48 per cent in March 2021 to 9.8 per cent by March 2022 under severe stressed condition.

Existing level of NPAs in banks
FB: Foreign banks; PSB: Public sector bank; PVB: Private sector bank; SCB: Scheduled commercial bank

PSBs	9.54%
PVBs	4.78%
FBs	2.43%
All SCBs	7.48%

TOI Source: RBI financial stability report

How much bad loans for NARCL?

➕ The value of bad loans being carved out of bank books for transfer to the NARCL is around Rs 2 lakh crore. About Rs 90,000 crore in bad loans will be transferred in the first phase. The guarantee of Rs 30,600 crore will cover the entire pool of Rs 2 lakh crore.

➕ The government guarantee will be valid for a period of five years and the condition precedent for invocation of the guarantee will be resolution or liquidation. To disincentivise delay in resolution, NARCL has to pay a guarantee fee which increases with the passage of time.
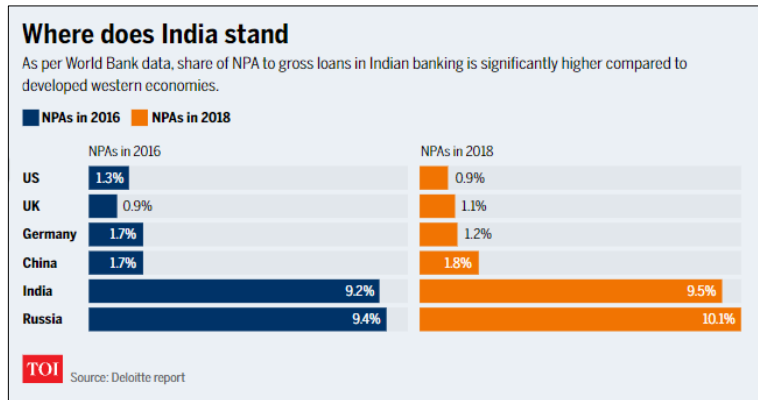
Comparison with global peers

As per World Bank data, share of NPA to gross loans in India is significantly higher compared to developed western economies. It also exceeds most other emerging economies. Please refer the pictographic for the details.

Capital adequacy ratio of 16%

o Further, the capital to risk-weighted assets ratio (CRAR) of SCBs increased by 130 bps from 14.7 per cent in March 2020 to 16 per cent in March 2021, with PVBs improving their ratios even further.

o CRAR measures a bank's financial stability by measuring its available capital as percentage of its weighted credit risk exposure.

o A higher CRAR shows that the bank is better capitalised to handle NPAs.

- o As per the financial stability report, under the baseline and the two stress scenarios, the system level CRAR held up well, moderating by 30 basis points between March 2021 and March 2022 under the baseline scenario and by 130 bps and 256 bps, respectively, under the two stress scenarios.
- o However, even though the level of CRAR reduces in severe stress condition but remains above the regulatory minimum of 9 per cent as of March 2022.

Where does India stand

As per World Bank data, share of NPA to gross loans in Indian banking is significantly higher compared to developed western economies.

■ NPAs in 2016 ■ NPAs in 2018

	NPAs in 2016	NPAs in 2018
US	1.3%	0.9%
UK	0.9%	1.1%
Germany	1.7%	1.2%
China	1.7%	1.8%
India	9.2%	9.5%
Russia	9.4%	10.1%

TOI Source: Deloitte report

India-Singapore linked payment systems

News Excerpt

The Reserve Bank of India (RBI) and the Monetary Authority of Singapore (MAS) recently announced a project to link their respective fast payment systems — Unified Payments Interface (UPI) and PayNow — to facilitate instant, low-cost, cross-border fund transfer. The linkage is targeted to be operationalised by July 2022.

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Pre-Connect

- UPI is India's mobile based, 'fast payment' system that facilitates customers to make round the clock payments instantly using a Virtual Payment Address (VPA) created by the customer.
- This eliminates the risk of sharing bank account details by the remitter. UPI supports both Person to Person (P2P) and Person to Merchant (P2M) payments as also it enables a user to send or receive money.
- PayNow is the fast payment system of Singapore which enables peer-to-peer funds transfer service, available to retail customers through participating banks and Non-Bank Financial Institutions (NFIs) in Singapore.
- It enables users to send and receive instant funds from one bank or e-wallet account to another in Singapore by using just their mobile number, Singapore NRIC/FIN, or VPA.

Analytica

Significance of the project

- ➢ The UPI-PayNow linkage will enable users of each of the two fast payment systems to make instant, low-cost fund transfers on a reciprocal basis without a need to get onboarded onto the other payment system.
- ➢ The UPI-PayNow linkage is a significant milestone in the development of infrastructure for cross-border payments between India and Singapore, and closely aligns with the G20's financial inclusion priorities of driving faster, cheaper and more transparent cross-border payments.
- ➢ The linkage builds upon the earlier efforts of NPCI International Private Ltd. (NIPL) and Network for Electronic Transfers (NETS) to foster cross-border interoperability of payments using cards and QR codes, between India and Singapore and will further anchor trade, travel and remittance flows between the two countries.
- ➢ This initiative is also in line with RBI's vision of reviewing corridors and charges for inbound cross-border remittances outlined in the Payment Systems Vision Document 2019-21.

G-20 and Financial Inclusion

- ✓ The G20 is a group comprised of the 20 most important industrial and emerging economies, serving as a central forum for international cooperation in economic and financial policies. It aims at strengthening and broader sharing the benefits of globalisation.

- ✓ With regard to these goals the term "financial inclusion" describes the pursuit of providing useful and affordable access to financial services to all individuals and businesses worldwide. As such, financial inclusion may contribute to economic growth and employment, may reduce inequality and could potentially increase financial stability.
- ✓ Since the 2009 Pittsburgh Summit, financial inclusion plays a major role on the G20 agenda.
- ✓ The G20 Leaders recognised financial inclusion as one of the main pillars of the global development agenda at the G20 Summit in Seoul (2010) and endorsed a Financial Inclusion Action Plan (FIAP) and principles for innovative financial inclusion.
- ✓ Subsequent to the Seoul Summit, the G20 launched the Global Partnership for Financial Inclusion (GPFI) in December 2010.
- ✓ The GPFI is the main coordinating and implementing mechanism for the FIAP and serves as an inclusive platform for G20 countries, non-G20 countries and relevant stakeholders for peer learning, knowledge sharing, policy advocacy and coordination.
- ✓ In particular, the GPFI helps countries implementing the G20 principles for innovative financial inclusion and aims at strengthening data for measuring financial inclusion.
- ✓ During the Chinese Presidency in 2016 the G20 approved the High Level Principles for Digital Financial Inclusion (HLP). The G20 member countries committed themselves to taking concrete actions to promote digital financial inclusion at their own country level, based on the specific circumstance of each country.
- ✓ Recently, the Global Partnership for Financial Inclusion met under the Italian G20 Presidency. More specifically, in 2021, the Group analysed the pandemic's impact on the financial inclusion of the most vulnerable sections of the population and of micro-enterprises, and tried to identify the action needed to bridge the gaps generated by the crisis to build more equitable and inclusive financial systems.

National Single Window System

News Excerpt

The government recently launched the much-awaited national single-window system for investors and businesses. The portal will integrate the existing clearance systems of the Centre and states.

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Highlights

- According to the Government, the single-window portal will become a "one-stop-shop" for approvals and clearances.
- It will enable obtaining approvals as well as clearances needed by investors, entrepreneurs, and businesses in India.
- As per the latest updates, the portalhosts approvals across 18 central departments and nine states. Another 14 central departments and five states will be added by December 2021.
- This move is considered as freedom from bureaucracy and from windows within windows. According to Government, this is a big step towards ease of doing business and ease of living.
- The platform will do away with the need for multiple applications across various portals. An investment proposal typically requires a bunch of approvals and clearances across various states and government departments. However, all approvals will still be needed. But solutions will be there at the click of a mouse through end-to-end facilitation.
- This would bring transparency, accountability and responsiveness in the ecosystem and all information will be available on a single dashboard.

INTERNATIONAL RELATION

India, Australia: 2+2 Ministerial Dialogue

News Excerpt

India and Australia recently held their inaugural 2+2 Ministerial Dialogue. Australian Minister of Foreign Affairs Marise Payne and Defense Minister Peter Dutton travelled to India for an in-person meeting. That the two countries have kickstarted this new format of engagement suggests the growing trust and comfort level between India and Australia.

Given that both New Delhi and Canberra have had to bear the brunt of increasingly belligerent Chinese behaviour, including the use of force against India and trade coercion against Australia, these fast-paced strategic developments are understandable.

Pre-Connect

- Indian Prime Minister Narenda Modi and Australian Prime Minister Scott Morrison met for a virtual summit in June 2020, at which the two sides elevated their relationship to a **Comprehensive Strategic Partnership (CSP).**
- The Australian foreign minister during a recent statement to the press said that the 2+2 dialogue is a direct result of the elevation of the relationship.
- Both the leaders highlighted the importance of advancing their shared objective of an open, free, prosperous and rules-based Indo-Pacific region, in line with India's increasing engagement in the Indo-Pacific region through the Indo-Pacific Oceans' Initiative and Australia's Indo-Pacific approach and Pacific Step-Up.
- It was decided that the 2+2 dialogue will be held at least once in two years to maintain the traction in the relationship.

Highlights

- Some of the major takeaways from the Australia-India Ministerial Dialogue include enhancing supply chain resilience and strengthening cooperation in the maritime domain.
- The latter that would enable deeper partnership between the two countries on a range of maritime-related themes such as maritime domain awareness, broadening linkages between maritime agencies, combating challenges like marine litter, and focusing on illegal, unreported and unregulated (IUU) fishing.
- The ministers also appreciated the presence of a liaison officer from Australia at the Information Fusion Centre – Indian Ocean Region, based in Gurgaon.
- The ministers used the opportunity to reinforce "their commitment to maintaining a free, open, inclusive and rules-based Indo-Pacific region" and emphasized the need for the South China Sea Code of Conduct, currently under negotiations between China and ASEAN, to be consistent with international law, especially the United Nations Convention on the Law of the Sea (UNCLOS).
- The ministers reiterated their commitment to strengthen their work through a number of trilateral and other minilateral platforms in the Indo-Pacific, including the Quad.
- Other areas that found prominent mention in the press statement include defense trade cooperation, including continued dialogue between the Defense Research and Development Organization (DRDO) of India and Defense Science and Technology Group of Australia, information sharing, and strengthening interoperability through augmented number of bilateral and multinational exercises.

Analytica

Recent Trends in Bilateral Relationship

- Australia-India relations have been improving for several years, but relations have seen a dramatic shift in the last couple of years, evident in the number of high-level engagements between the two sides.
- With worsening relations between India and China as well as Australia and China in recent

years, both New Delhi and Canberra have been realigning their interests and partners, and those connections will likely grow manifold in the coming years.

✓ After many years, Australia was finally invited back to the Malabar naval exercise last year. For Australia, even as the U.S. security alliance remains central to their security, Canberra has been expanding its Asian partnerships in the Indo-Pacific.

✓ India, for its part, long avoided taking sides between the U.S. and China. While Sino-Indian relations have been in trouble for several years, the Galwan confrontation in 2020 brought the relationship to an all-time low.

✓ India had attempted to reset and improve relations with China after the Doklam confrontation in 2017, though that went nowhere. The Indian response to Galwan has been very different and much tougher.

✓ As a result, India has decided to pursue closer strategic engagements with a number of like-minded partners in the Indo-Pacific, especially Australia.

✓ Australia has also seen more than its fair share of bullying behaviour from China, much of it because Morrison asked for an independent inquiry into the origins of the COVID-19 pandemic in April 2020.

✓ Since then, China has engaged in severe economic and trade coercive practices against

> **PEPPER IT WITH**
> ASEAN, UNCLOS, Indian Ocean region

Australia, targeting everything from barley, beef, seafood, wheat, and wine to coal, cotton, copper, education, and timber.

✓ Thus, experts believe that, augmented Australia-India ties within bilateral, trilateral, quadrilateral, and other minilaterals and multilateral institutions are a reality that is unlikely to slow down for the foreseeable future.

✓ The convergence of strategic interests in ensuring an Indo-Pacific order that is free of hegemonic and muscular policies is a glue that will bind India and Australia further in the coming years.

✓ The two will likely also expand their partnership both in pursuing strategic partnerships and thematic ones like supply chain resilience initiative.

Eastern Economic Forum

News Excerpt

Prime Minister delivered a video-address during the plenary session of the 6th Eastern Economic Forum (EEF) held on 3 September 2021 in Vladivostok. Indian PM was the Chief Guest for the 5th EEF in 2019, the first by an Indian Prime Minister.

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Pre-Connect

• The Eastern Economic Forum was established by decree of the President of the Russian Federation Vladimir Putin in 2015 to support the economic development of Russia's Far East and to expand international cooperation in the Asia-Pacific region.

• In the years since, the EEF has seen the participation of leaders from several countries including Japan, China, Mongolia and South Korea, among others.

Highlights

➢ Indian PM highlighted-

  o India's commitment as part of its "Act East Policy' of being a reliable partner of Russia in this regard.

  o The natural complementarities of India and Russia in the development of Russian Far East.

  o The importance of greater economic and commercial engagement between the two sides in line with the 'Special and Privileged Strategic Partnership'.

  o The importance of health and pharma sectors as important areas of cooperation that have emerged during the pandemic.

  o Other potential areas of economic cooperation including diamond, coking coal, steel,

timber etc.

➢ Recalling the visit of Chief Ministers of Indian states to EEF-2019, PM extended an invitation to Governors of the 11 regions of Russian Far East to visit India.

Analytica

Significance of Russia's Far East

✓ A vast region, the Russian Far East stretches from Lake Baikal, the world's largest freshwater lake, to the Pacific Ocean and comprises roughly a third of Russia's territory.

✓ Although it is rich in natural resources including minerals, hydrocarbons, timber and fish, it is an economically underdeveloped region. The region faces several challenges, including a harsh climate, sparse population, increasing outmigration, poor infrastructure and lacking connectivity. These have contributed to keeping the Russian Far East largely underdeveloped.

✓ The Russian Far East's underdevelopment has been a source of concern for Moscow. Experts believe that the far-flung region has a history of separatism and Moscow is understandably apprehensive that its underdevelopment will spark secessionist sentiments, which could be stoked by neighbouring powers, particularly China. These apprehensions prompted the Russian government's decision in 2006 to prioritize development of the Far East.

✓ In the wake of the Ukraine crisis in 2014, the U.S.-EU campaign to isolate Russia gathered momentum. Sanctions were imposed on Russia and it had to look elsewhere for markets, investment, and technology. These circumstances led to Russia pivoting toward Asia, with that turn Moscow's attention to its Far East became more pronounced.

India's Presence in the Far East

▪ While 2019 is the first time that India has participated in the EEF, it is not new to the Russian Far East. India opened a consulate in Vladivostok in 1992, the first country in the world to do so.

▪ In the decades since, its interest in the Far East region, especially its oil and gas reserves, has grown. Indeed, back in 2001 India's Oil and Natural Gas Corporation acquired a 20 percent stake in the Sakhalin reserves and over the last couple of years Indian companies have started announcing investments in the Russian Far East.

▪ In December 2017, for instance, Tata Power announced that it had secured a $4.7-million mining license for a thermal coal mine in the Kamchatka peninsula.

▪ Experts believe that in addition to providing India with access to resources, India's participation in the Russian Far East's development could pave the way for movement of Indian labour, both skilled and unskilled, to the region.Indian workers could benefit from employment in labour-intensive sectors like ship-building and mining in the Russian Far East.

▪ India and Russia are also looking to open a maritime route linking Vladivostok with the southern Indian city of Chennai. In addition to almost halving the distance and time taken for maritime cargo to move from India to Russia, the Chennai-Vladivostok route will provide India with an alternate to the Suez Route on which it currently depends for trade with Europe.

▪ Economic interests only partially explain Moscow-Delhi cooperation in the Russian Far East. Geopolitical and strategic calculations are strong drivers of the partnership as well.

- A larger footprint in the Russian Far East enhances India's presence and influence in China's immediate neighbourhood. Its use of the Chennai-Vladivostok maritime route would not only increase India's presence in the China-dominated South China Sea but it is also seen as a step toward countering China's Belt and Road Initiative (BRI), which has deepened Chinese influence and presence in India's neighbourhood.
- As for Russia, the role India can play as a potential balancer against China's overwhelming presence in the Russian Far East underlies Moscow's inclusion of India in the EEF.

The China Factor

- China accounts for nearly two-thirds of foreign direct investment that the Russian Far East has attracted over the past four years.
- Although Russia needs Chinese investment it is uneasy with Chinese projects as they often use only Chinese workers. This, and the illegal influx of Chinese nationals into the Russian Far East — which borders the heavily-populated Chinese provinces of Heilongjiang, Jilin, and Liaoning — together with the growing outmigration of Russians from the region, is altering the demographic composition of the Far East.
- Russians fear that in addition to triggering xenophobic tensions in the Far East, the influx of Chinese could pave the way for a "demographic invasion." Such fears are amplified by memories of the violent Sino-Soviet confrontations of the 1960s.
- Given such apprehensions it is possible that Russia views Indian capital and labour in the RFE as a way to offset China's overwhelming presence in the region.

Conclusion

o The India-Russia relationship in the Russian Far East is complementary. Indian analysts point out that while the region is labour-scarce, it is resource rich.

o The Russian Far East needs capital, technology and markets. Meanwhile, India is a country with a labour-surplus and a resource-deficit, in need of energy, mineral resources and farming land.

PEPPER IT WITH
South China Sea, Look East Policy, Free Trade Agreement

o Russia is in a position to meet Indian requirements and vice-versa. Experts believe that this bodes well for India-Russia cooperation in the Russian far East.

UNSC resolution on Taliban

News Excerpt

Recently, the United Nations Security Council, under India's presidency, adopted a resolution that gave de facto recognition to the Taliban as a state actor in Afghanistan.

Highlights

- The resolution, sponsored by France, UK and the US, was adopted with 13 members, including India, voting in favour, none against it. But permanent and veto-wielding members Russia and China abstained.
- The resolution, the first to be adopted after the Taliban's capture of Kabul, said the territory of Afghanistan is not to be used to threaten any country or shelter terrorists, and that the international community expects the Taliban to adhere to the commitments they made regarding the safe and orderly departure of Afghans and all foreign nationals from the country.
- The UNSC resolution named the Taliban five times, but did not condemn the grouping. Rather, it "noted" Taliban's "commitments" about "the safe, secure, and orderly departure of Afghans and all foreign nationals from Afghanistan".
- The resolution also stressed the importance of maintaining humanitarian access, upholding human rights, reaching an inclusive political settlement and combating terrorism.
- It did not, however, spell out any provision to punish the Taliban if they failed to allow such departures or follow the commitments.
- Russia's envoy to the UN said that the resolution wasn't specific enough about terror threats,

did not speak of the **"brain drain" effect** of evacuating Afghans and did not address the economic and humanitarian consequences of Washington freezing the Afghan government's US accounts following the Taliban takeover.

- China shared some of Russia's concerns and criticised the US for civilian casualties in a drone strike that American officials said hit a vehicle carrying multiple Islamic State suicide bombers. Beijing said the current chaos was a direct consequence of Western countries' "disorderly withdrawal".

- While France's proposal of "a **'safe zone'** in Kabul that will allow humanitarian operations to continue" was not part of the final resolution, the final text called upon the Taliban to allow "full, safe, and unhindered access" to the United Nations and other agencies to provide humanitarian assistance.

> **PEPPER IT WITH**
> UNSC, Safe house, Theocratic State

Note- For more details on US withdrawal from Afghanistan please refer to KSG Current Connect, July and August 2021.

India-Croatia Relations

News Excerpt

External Affairs Minister S Jaishankar recently had detailed exchanges on full range of bilateral cooperation, regional and global issues with his Croatian counterpart.

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Pre-Connect

- Croatia is a country located in the north-western part of the Balkan Peninsula. It is a small yet highly geographically diverse crescent-shaped country. Its capital is Zagreb, located in the north.

- Relations between India and Croatia have been friendly since the days of the former Yugoslavia (SFRY). Marshal Tito, a Croat, who ruled Yugoslavia for more than three decades, maintained close relations with the then Indian leadership. Nehru and Tito were also pioneers of the Non-Aligned Movement.

- Croatia dominated bilateral trade relations accounting for more than two-thirds of trade between India and the former Yugoslavia. This included large scale purchases of Croatian ships by India in the 1970s and 1980s.

- India recognized Croatia in May 1992 and established diplomatic relations with it on 9 July 1992.

- India-Croatia bilateral trade during Jan-Dec 2019 was at $185.98 million. Nearly 74% of this was Indian exports to Croatia.

- There is potential for increasing India's exports in segments such as textiles, leather, pharmaceuticals, basic chemical products, coffee, tea, industrial and electrical machinery. Opportunities also exist for India to use Croatia as a gateway to the South-East European markets using its major ports of Rijeka and Ploce.

- As regards investment in India, efforts are being made to encourage Croatia to partner in GOI's socio-economic schemes like 'Make in India', 'Smart Cities', 'Smart ICT', 'Digital India', etc. through cutting-edge technologies and investments, which can open up significant markets for India not only in India but also for export to South-East Asia, Central Asia and Africa.

- The "**Bilateral Economic Cooperation Agreement**" was signed in February 2017. It has given

an impetus to trade and investment ties. Pursuant to this agreement, the first India-Croatia Joint Business Council has been set up, comprising of leading corporate leaders and academics.

Highlights of the Recent Exchange of Dialogue

➢ India and Croatia shared a lot of common positions on issues like the Indo-Pacific, the situation in Afghanistan and the two countries' resolve to fight terrorism in all its forms and manifestations.

➢ There are a lot of opportunities in the pharmaceuticals, digital and infrastructure sectors. There are already companies from Croatia operating in India and some of them have secured some important contracts like in the railway sector. India is looking for an active cooperation in the defence sector as well.

> **PEPPER IT WITH**
> Bilateral Economic Cooperation Agreement, Non Cooperation Movement, Bandung Conference

➢ The two leaders discussed several topics of mutual interest, including EU-India relations, the situation in Afghanistan, economic and cultural cooperation and post-Covid recovery.

13th BRICS Summit

News Excerpt

Recently, Prime Minister of India chaired the 13th BRICS Summit virtually.

Pre-Connect

- The leaders of BRIC (Brazil, Russia, India, and China) countries met for the first time in St. Petersburg, Russia, on the margins of G8 Outreach Summit in July 2006.

- Shortly afterwards, in September 2006, the group was formalised as BRIC during the 1st BRIC Foreign Ministers' Meeting, which met on the sidelines of the General Debate of the UN Assembly in New York City.

- After a series of high-level meetings, the 1st BRIC summit was held in Yekaterinburg, Russia on 16 June 2009.

- BRIC group was renamed as BRICS (Brazil, Russia, India, China, South Africa) after South Africa was accepted as a full member at the BRIC Foreign Ministers' meeting in New York in September 2010.

- The BRICS (Brazil-Russia-India-China-South Africa) brings together five of the largest developing countries of the world, representing 41% of the global population, 24% of the global GDP and 16% of the global trade.

- BRICS countries have been the main engines of global economic growth over the years. Over a period of time, BRICS countries have come together to deliberate on important issues under the three pillars of political and security, economic and financial and cultural and people to people exchanges.

Highlights

➢ The theme of the Summit, chosen by India, was, **BRICS@15: Intra-BRICS Cooperation for Continuity, Consolidation and Consensus.**

➢ The Summit saw the participation of all other BRICS Leaders.

➢ Prime Minister expressed his appreciation for the cooperation received from BRICS partners during India's Chairship this year, which allowed the achievement of several new initiatives. These included the first **BRICS Digital Health Summit**; the first BRICS Ministerial Joint Statement on multilateral reforms; a **BRICS Counter-Terrorism Action Plan**; an Agreement on cooperation in field of remote-sensing satellites; a virtual BRICS vaccine Research & Development Centre; BRICS Alliance on Green Tourism, etc.

➢ India called for enhanced BRICS cooperation under the motto of 'Build-back Resiliently, Innovatively, Credibly and Sustainably'.

➢ Elaborating on these themes, Prime Minister stressed the need for accelerating 'build-back' by enhancing speed and accessibility of vaccination, creating 'resilience' by diversifying pharma

and vaccine production capacities beyond the developed world, fostering 'innovation' by creatively using digital tools for public good, ensuring reform of multilateral institutions to enhance their 'credibility', and promoting 'sustainable' development by articulating a common BRICS voice on environmental and climate issues.

➢ The leaders also discussed important regional and global issues, including recent developments in Afghanistan. There was convergence of views on the threat posed by growth of terrorism and extremism, and all BRICS partners agreed to accelerate implementation of the BRICS Action Plan on Counter-Terrorism.

➢ At the conclusion of the Summit, the leaders adopted the 'New Delhi Declaration'.The need to contribute to fostering an inclusive intra-Afghan dialogue so as to ensure stability, civil peace, law and order in the countrywas emphasized in the declaration.

➢ The 'New Delhi Declaration', also called for addressing the humanitarian situation in Afghanistan and urged the need to uphold rights of women, children and minorities.

Significance of BRICS for India

✓ New Delhi has often equated BRICS with its participation in other "Western-led" groupings such as the Quad, in order to signal to domestic constituencies that its commitment to strategic autonomy and multi-aligned foreign policy remains intact.

✓ The BRICS also allows India and China to modulate their rivalry within the setting of a small grouping, even when bilateral relations remain rocky. This was clear during the Doklam standoff of 2017, when both sides remained engaged through BRICS throughout the entirety of the crisis; this has also been the case so far during the ongoing Ladakh standoff.

✓ Groupings like the BRICS and the SCO afford both India and China the opportunity to "decouple" their strategic contest from the other dimensions of the relationship.

✓ Role of Russia is also significant. As close observers of the India-China standoff in Ladakh will attest, Moscow continues to play an important though discreet role in bringing both sides to the negotiating table. India's dependence on Russia weaponry is deep enough for New Delhi to be not able to offend Russian sensibilities directly.

✓ As India's External Affairs Minister S. Jaishankar recently described it, BRICS provides India a transcontinental reach by virtue of Brazil and South Africa's presence.

PEPPER IT WITH
New Development Bank, Contingent Reserve Arrangement, Brasilia Declaration

✓ India is a proudly revisionist power when it comes to the extant structure of international organizations and the United Nations system. It continues to maintain that the international system does not recognize the country's economic and political heft and demands top-down reform, beginning with the U.N. Security Council (UNSC) where it seeks permanent membership. Events from the past reveal that reform of the international multilateral architecture remains the key political issue for the BRICS.

✓ New Delhi is not naive enough to believe that China, for example, would substantially advocate a greater role for India especially where it matters – the UNSC. But that said, the BRICS' repeated calls for reform boosts India's own assertions in this direction, acting as a multiplier to the country's own demands for reform.

The security grouping AUKUS

News Excerpt

The United States, United Kingdom, and Australia announced a new defence deal on September 16, under which America and Britain will help Australia deploy nuclear-powered submarines in the Pacific region.

Highlights

• Australia's Prime Minister said that the "new enhanced trilateral security partnership between

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Australia, the United Kingdom, and the United States", named "AUKUS", will be a partnership where technology, scientists, industry, defence forces are all working together to deliver a safer and more secure region that ultimately benefits all.

- The nuclear-powered submarines will give Australia naval heft in the Pacific, where China has been particularly aggressive. While the US and Britain have had the capability for decades, Australia has never had an n-sub.

- China has nuclear-powered submarines, as well as submarines that can launch nuclear missiles. The three signatories to the AUKUS deal have made it clear though, that their aim is not to arm the new subs with nuclear weapons.

- China has been one of Australia's biggest trading partners, but the relationship has soured over the last few years. It was in consideration of Chinese sensibilities that Australia had pulled out of the Malabar Naval Exercise with the US, India, and Japan after participating in the 2007 edition (of which Singapore too, was part).

- Australia came back to Malabar in 2020, which marked the first time in 13 years that the navies of the four Quad nations war-gamed together.

- This is primarily because a nuclear-powered submarine gives a navy the capability to reach far out into the ocean and launch attacks.

- Unlike conventional submarines, which are generally considered helpful for defensive purposes, the ability of a nuclear-powered submarine to go long distances, at a higher speed, without being detected gives a nation the ability to protect its interests far from its shores.

- In the context of the AUKUS agreement, nuclear-powered submarines will give the Royal Australian Navy the capability to go into the South China Sea, where China is increasingly getting aggressive, to protect its assets and conduct patrols — even though this has not been spelt out by the three countries.

- The US has in the past shared its nuclear propulsion technology only with the UK, in accordance with the nuclear power sharing arrangement that the two countries have had since 1958.

Analytica

Importance of Nuclear Submarines

➢ A nuclear-powered submarine is classified as an "SSN" under the US Navy hull classification system, wherein 'SS' is the symbol for submarine, and 'N' stands for nuclear. A nuclear-powered submarine that can launch ballistic missiles is called "SSBN".

➢ Conventional diesel-engine submarines have batteries that keep and propel — though not very fast — the vessel underwater. The life of these batteries can vary from a few hours to a few days.

➢ The newer Air-Independent Propulsion (AIP) submarines have additional fuel cells that allow them to stay underwater for longer and move faster than the conventional vessels. However, the fuel cells are used only at strategic times, when the endurance to remain submerged is required.

➢ Both conventional and AIP subs need to come to the surface to recharge their batteries using the diesel engine. The diesel engine also propels the vessel on the surface. However, the fuel cells of AIP can only be charged at on-land stations, not while at sea.

Response of the France
❖ The deal has complicated the relations between France and Australia, and also France and the US.
❖ France has called it a "stab in the back" because, back in 2016 — Australia had signed a contract to buy 12 Attack-class submarines from the French shipbuilder Naval Group worth nearly $90 billion. The defence and foreign ministers of Australia had "reconfirmed" the deal to France just two weeks back before the formation of AUKUS.
❖ France is also outraged that it was not even informed or consulted about the decision and the new agreement before they were announced.

➢ The great advantage of an SSN is that its nuclear-powered propulsion gives the submarine a

near infinite capacity to stay dived. Since it is propelled by a nuclear-powered engine rather than by batteries, it does not have to emerge on the surface at all, except to replenish supplies for the crew.

➢ SSNs are also able to move faster underwater than the conventional submarines. Added together, these advantages allow a navy to deploy these submarines quicker and at farther distances.

Significance of the Deal

✓ Although the leaders of these three countries did not say so, the deal is seen as a step towards curtailing China, which has made significant aggressive manoeuvres in the Pacific region, especially in and around the South China Sea, where it has expansive territorial claims.

✓ In the aftermath of the Afghan rout, it is a powerful signal from the US that it is still in the game as the most important world power, that it is not withdrawing into a domestic shell, and that the traditional Anglo-Saxon alliance that has fought several wars on the same side for over a hundred years, is in robust health.

✓ AUKUS joins the ANZUS and Five Eyes, two other security alliances in the Indo-Pacific.

✓ With the agreement for the transfer of nuclear-powered submarines (different from nuclear-armed submarines) to Australia, this alliance, quite unlike the Quad, is a clearly stated security/military alliance in the Indo-Pacific.

✓ Like the Quad, AUKUS is aimed at protecting the partners' strategic interests in a region that spans two oceans and 38 countries, where China's ambitions and assertiveness are challenging the existing status quo.

✓ It marks a new low in Australia-China relations, and the ripples of this will be felt across the region. China is Australia's biggest trading partner with a two-way trade of nearly US $200 billion, the largest buyer of its iron ore, natural gas and coal.

✓ The US decision to transfer closely held military nuclear capability to Australia is not just expanding nuclear co-operation for strategic objectives, it is also a message to China that Washington could one day do the same for other countries in the region. Beijing is more rattled by AUKUS than by Quad.

Nuclear Powered Submarines- An Indian Scenario

▪ India is among the six nations that have SSNs. The other five are the US, the UK, Russia, France and China.

▪ India has had the capacity since it got the Soviet-built K-43 Charlie-class SSN in 1987. Commissioned with the Red Fleet of the USSR in 1967, it was leased to the Indian Navy, and was rechristened INS Chakra. The submarine was decommissioned in 1991.

▪ In 2012 India got another Russian SSN on a 10-year lease, called INS Chakra 2.

▪ In the mean time, India was working on building its own SSN, and the first Indian nuclear submarine, the INS Arihant, was commissioned in 2016. A second Arihant-class submarine, INS Arighat, was secretly launched in 2017, and is likely to be commissioned soon.

▪ After it demonstrated the capability to launch nuclear weapons in 2018, the INS Arihant is now classified as a Strategic Strike Nuclear Submarine or SSBN, which means it is a nuclear-powered ballistic submarine.

▪ INS Arihant is important because it completes India's nuclear triad, which means that the country has the capacity to launch nuclear missiles from land, aircraft, and submarine.

Significance of the Deal for India

✚ For India, Australia's willingness to take on the role of the US/West's sword arm in the region — an American military base on Australian soil to maintain and service the submarines is now inevitable — is a welcome development as this is a move to contain China.

PEPPER IT WITH
The Treaty on the Prohibition of Nuclear Weapons, The nuclear Non-Proliferation Treaty, Strategic Arms Reduction Treaty, Strategic Offensive Reductions Treaty

✚ As the only country in the Quad with a long, and recently turned hot land border with China, India now has a little less to worry about on the maritime front with AUKUS in play.

↓ It also buys Delhi more time to beef up the country's own naval capabilities.

India – United Arab Emirates

News Except

Recently, India and UAE have formally launched negotiations on the India-United Arab Emirates Comprehensive Economic Partnership Agreement (CEPA).

Highlights

- The talks are aimed at improving bilateral economic relations, including expanding the existing trade and investment relationship.
- Looking to build on the progress made by both countries under the Comprehensive Strategic Partnership signed in 2017; both countries expressed a desire to reach a mutually beneficial economic deal.
- Both sides will aim to conclude negotiations by December 2021 and sign a formal agreement in March 2022 after the completion of internal legal procedures and ratification.
- Both countries emphasized that CEPA will create new jobs, raise living standards, and provide wider social and economic opportunities in both nations.
- A new strategic economic agreement is expected to increase bilateral trade in goods to USD 100 billion within five years of the signed agreement and increase trade in services to USD 15 billion.

Analytica

A Glance at India-UAE Relationship

➢ The UAE is currently India's third-largest trading partner with bilateral trade in 2019/2020 valued at USD 59 billion.
➢ The UAE is also India's second-largest export destination after the US, with exports valued at approximately USD 29 billion in 2019-2020.
➢ India was the UAE's second-largest trading partner in 2019, with bilateral non-oil trade valued at USD 41 billion.
➢ The UAE is the eighth-largest investor in India, having invested USD 11 billion between April 2000 and March 2021, while investment by Indian companies in the UAE is estimated to be over USD 85 billion.
➢ India's major exports to the UAE include petroleum products, precious metals, stones, gems and jewellery, minerals, food items such as cereals, sugar, fruits and vegetables, tea, meat, and seafood, textiles, engineering and machinery products, and chemicals.
➢ India's top imports from the UAE include petroleum and petroleum products, precious metals, stones, gems and jewellery, minerals, chemicals and wood and wood products.
➢ India imported USD 10.9 billion of crude oil from the UAE in 2019-2020.

India-US Bilateral Meet

News Excerpt

Indian Prime Minister along with his counterparts from Australia and Japan recently attended the first in-person meeting of Quad leaders hosted by US President Joe Biden and said that he firmly believed that the grouping of four countries would act as a "**force for global good**" and ensure peace and prosperity in the Indo-Pacific as well as the entire world.

Pre-Connect

- The Quadrilateral Security Dialogue (or Quad, of India, the United States, Australia and Japan) began as a coordination mechanism to respond to the humanitarian crisis in the aftermath of the 2004 Indian Ocean Tsunami that killed many people and displaced nearly two million others.
- It has since then morphed into one of the world's most significant forums whose work could have important ramifications to global geopolitics. The Quad's journey has been far from

smooth, from its birth and early—some say, ignominious—demise in 2007, to its revival in 2017.

- In November 2017, India, Japan, the US and Australia gave shape to the long-pending proposal of setting up the Quad to develop a new strategy to keep the critical sea routes in the Indo-Pacific free of any influence, amidst China's growing military presence in the strategic region.

- India, the US and several other world powers have been talking about the need to ensure a free, open and thriving Indo-Pacific in the backdrop of China's rising military manoeuvring in the region.

- China claims nearly all of the disputed South China Sea, though Taiwan, the Philippines, Brunei, Malaysia and Vietnam all claim parts of it. Beijing has built artificial islands and military installations in the South China Sea.

- Each of the Quad's members followed their own paths to support the grouping: India and Japan clashed with China over disputed territories; Australia reckoned with the influence the East Asian power had come to exercise over its politics and economy; and the United States came to terms with the challenges posed by China to American interests in Asia.

- A decade after Quad 1.0 dissipated, these four nations found themselves ready to reassemble in order to pursue common goals: a rules-based international order, freedom of navigation, and the peaceful settlement of territorial disputes.

Highlights

➢ Opening the summit, President Biden said the four democracies have come together to take on common challenges from Covid to climate.

➢ Ahead of the summit, the White House said that the Quad leaders would announce a new working group on space, a supply chain initiative and a 5G deployment and diversification effort apart from discussing issues like challenges in the Indo Pacific, climate change and Covid-19 pandemic during their historic meeting.

➢ Quad leaders are also planning to roll out vaccine deliverables and announce a series of measures in the field of healthcare and infrastructure sector.

Analytica

Significance of the QUAD

✓ The rise of the Quad signals the acceptance, both within and beyond the member countries, of the "Indo-Pacific" as a strategic concept.

✓ Starting with then Japanese Prime Minister Shinzo Abe's "Confluence of the Two Seas" speech before the Indian parliament in 2007, the traditional understanding of what constituted the Asia-Pacific region started to change.

✓ Today the Quad represents a maturation in thinking by major powers in the region. For Japan and the US, their traditional understanding of "security" has expanded beyond the narrow confines of Northeast Asia; the US has declared that its sphere of interest now stretches "from Hollywood to Bollywood".

✓ For India, its membership in the Quad represents an evolution in strategic thinking that began with its Look East policy in the early 1990s. Australia, too, has realised that the Indian Ocean, and not just the Pacific Ocean, is critical to its national interest.

✓ In pursuit of their goals, the Quad has intensified its military activities in recent years—and this has not escaped global attention.

✓ The navies of all four nations participate in the high-profile Malabar exercises. At the same time, bilateral military ties, in the form of exercises and defence agreements, have heightened as well. Equally important, high-level 2+2 dialogues between member nations have become a regular feature of the diplomatic calendar.

✓ To be sure, however, the members of the grouping realise that while security deterrence and political coordination forms a key component of their *raison d'etre,* it is not adequate. They will need to develop a more broad-ranging approach to the key challenges facing the region, if they

Page 67

wish to build an effective coalition to safeguard values that undergird the regional order.

Challenges

- The future is not without challenges. India's massive pandemic crisis, especially at the peak of its second wave in April and May 2021, led many to wonder whether the Quad could deliver on its ambitious vaccine production goals.
- Similarly, on climate action, observers have questioned whether the grouping can add to the existing multilateral frameworks to combat what may be humanity's greatest challenge in contemporary history.
- In the realm of technology, members are divided by disagreements over data localisation.
- The Biden Administration's withdrawal from Afghanistan, which may spawn the rise of terror networks in the troubled nation, may undercut the Quad's joint commitment to combating terror besides raising questions about America's willingness to recommit resources to the grim task of dismantling the terror networks it believed had been already defeated.
- Further, in the absence of a cohesive economic strategy that seeks to build cohesive and secure supply chains, the Quad risks standing on only one leg in a region that cares deeply about economic integration and statecraft.
- Most importantly, the Quad must convince deeply ambivalent nations, especially in Southeast Asia, that it offers partners more than just military power and security.

Way Forward

- Shifting of global economic power from the West to the East, especially Asia and the growing geo-strategic and geo-political importance of the Indo-Pacific region has generated cooperation and competition among the developed and developing economies of the world.

PEPPER IT WITH
South China Sea Arbitration case, Freedom of navigation operations

- It is a reality that the Indo-Pacific is evolving new trends and issues that offer unique opportunities and intimidating challenges to the nations, including India.
- To make the Indo-Pacific a free, stable and secured zone is not the job of one nation only; cooperation among all the stakeholders is a must.
- Thus, in the era of complex interdependence, QUAD can prove itself as a successful case study for achieving its desired outcomes across varied range of issues in utmost dignified manner in coming future.
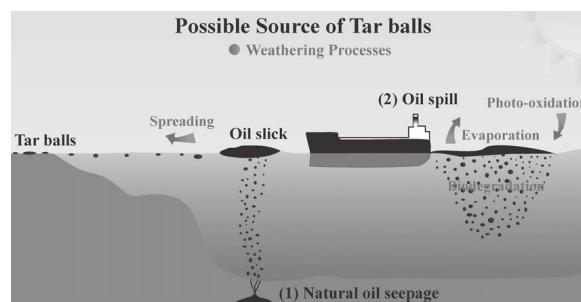
ENVIRONMENT

Tarball

News Excerpt

Recently, at the coast of South Mumbai, the black oil-emanating balls were seen. Earlier this month, several popular beaches in Goa were covered with the black sticky carpet (Tarballs).

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About Tarball

- Tarballs are dark-coloured, sticky balls of oil that form when crude oil floats on the ocean surface.
- Tarball is often formed when crude oil is released into marine environment; different physical, chemical, and biological processes interact to form solid to semi-solid tarballs.
- Some physical processes such as weathering and chemical and biological processes such as UV light degradation and biodegradation by microbes contributes to the formation of tarballs.
- Due to certain processestarballsare contrast different from and microbes. Some of the balls are as big as a basketball while others are smaller globules.

Possible Source of Tar balls
Weathering Processes
(2) Oil spill
Photo-oxidation
Spreading
Oil slick
Evaporation
Tar balls
(1) Natural oil seepage

- Tarballs can attract various heavy metals, including nickel, copper, and cobalt, to their surfaces. Due to different weathering processes, tarballs can accumulate high concentrations of heavy hydrocarbons, organic compounds that only contain carbon and hydrogen, such as polycyclic aromatic hydrocarbons (PAH).
- Discharge from municipal waste, oil-well blowouts, deliberate and accidental release of bilge and ballast water from ships are among the main factors driving the formation of these pollutants.
- These petroleum blobs also affect marine biodiversity in several ways, such as disturbing turtle habitats. This in turn, augments the impact on humans who consume marine fish.

Analytica

➢ **Relation with Monsoon**
- o It is being said that when the oil comes from the large cargo ships in the deep sea and gets pushed to the shore as tarballs during monsoon due to wind speed and direction.
- o The entire oil spill in the Arabian Sea eventually gets deposited on the western coast in the form of tarballs in the monsoon season when wind speed and circulation pattern favour transportation of these tarball.

➢ **Impacts**
- o Tarballs'spollutantslargely affect pollutants on coastal economies and the overall ecosystem. One of the major concerns regarding these particles is the potential for economic losses. Tarballs washed ashore on beaches will negatively affect local economies because tourists will be offended by the petroleum-like odor.
- o Sticky tarballs can get caught in fishing nets, making them difficult to clean and a nuisance for local fisheries.

> **Hydrophobic cotton for oil-spill**
> ❖ IIT-Guwahati has developed super-hydrophobic cotton which can effectively absorb both heavy and light oils. It is easy to prepare, cost-effective and recyclable.
> ❖ It is a novel, highly porous and water-repellent super-hydrophobic cotton composite material, which can absorb oil selectively from an oil-water mixture.
> ❖ The applications of this cotton includes cleaning of the spilled oil from river, sea or ocean waterduring oil transportation with high efficiency and large absorption capacity, thus reducing environmental water pollution.

o Since,tarballs can attract heavy metals and PAH's, they could contribute to causes of cancer if ingested by marine animals.

Way Forward

✓ Despite having several legal provisions on the protection of the environment, the weaker implementation had to be plugged and effective enforcement on pro-active basis has to be followed.

PEPPER IT WITH
Black Carbon, Oil Spill, Bio-remediation, in-situ conservation, calorific Value

✓ Lawmakers must take up environmental issues as a top-priority, apart from the comprehensive and collective efforts of the vigilant citizens, activists and environmentalists.

✓ Government regulations on licensing, oil filling at designated ports must be thoroughly followed and commissions must be set up for specifically dealing with coastal management.
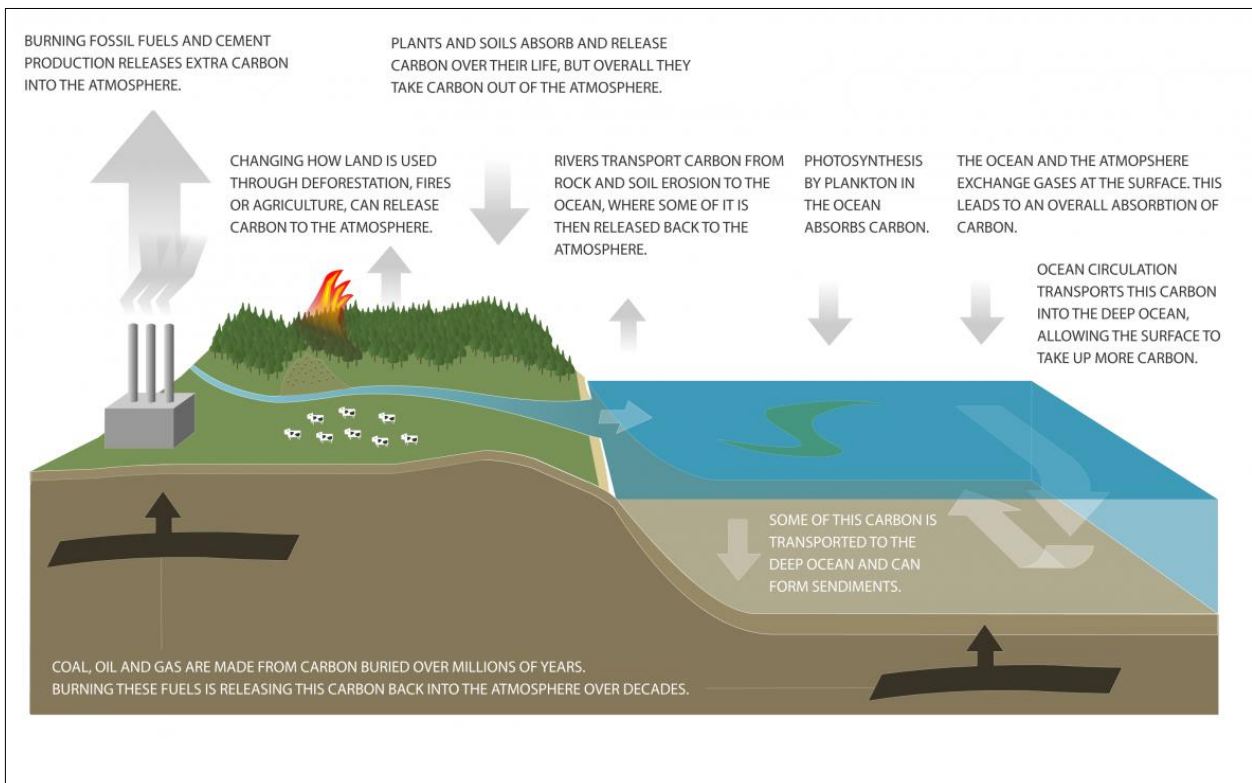
Land Sink, Carbonand Climate Crisis

News Excerpt

Recently, Scientist had opinioned that natural sinks land and oceans will mop up fossil fuel emissions. The UN General Assembly declared 2021-2030 as the UN Decade on Ecosystem Restoration to prevent, halt and reverse the degradation of ecosystems worldwide.

Pre-Connect

• A carbon sink is anything that absorbs more carbon from the atmosphere than it releases – for example, plants, the ocean and soil.

• Land is both a source and a sink of greenhouse gases (GHGs) and plays a key role in the exchange of energy, water and aerosols between the land surface and atmosphere.

About Land Sink

➢ According to various report, Land sinks absorb around 29% of the carbon dioxide emissions pumped into the atmosphere each year.

➢ The soils are, in large part, organic matter—once-living organisms, now decomposing—making

them an enormous storehouse of carbon. Land can therefore be a powerful carbon sink, returning atmospheric carbon to living vegetation and soils. While the majority of heat-trapping emissions remain in the atmosphere, land sinks currently return 26% of human-caused emissions to Earth.

➢ About 56 per cent of the carbon dioxide (CO_2) emitted by humans is absorbed by the oceans and land — about 30 per cent by land and the rest by oceans.

➢ Land—forests, grasslands and wetlands — will play a critical role in the world's desperate fight against climate change. These ecosystems act as sinks (absorb) and remove a part of the CO_2 emitted through human activities like burning fossil fuels in the atmospehre.

➢ But there are complications. The fact is that land is also a source of emissions — burning of forests and other disturbances add CO_2 to the atmosphere.

➢ Land use accounted for 13 per cent of anthropogenic $C0_2$ emissions during 2007-2016, according to the Special Report on Climate Change and Land 2019 (SRCCL) by The Intergovernmental Panel on Climate Change (IPCC).

➢ In 2011, the IUCN launched the Bonn Challenge "to restore 150 million hectares of the world's degraded and deforested lands by 2020 and 350 million hectares by 2030", where countries and organisations made pledges in 'million hectares' of forested land to be restored.

➢ This restoration will increase the absorbing capacity means, the overall sinks to absorb the carbon from Atmosphere.

Analytica

✓ Increased heat levels attributes to the moisture stress in forests and leading to widespread burning. If forests are being cut for different economic activities, reducing their role as sinks for the CO_2 released from fossil fuel burning. On the other hand, as temperatures increase, the forests will shrink further.

✓ Human-induced factors such as deforestation and natural factors such as climate variability in sunshine, temperature and rainfall can cause a variation in the strength of the land carbon sink.

PEPPER IT WITH
UNCCD, Carbon Trap, Carbon capture, Carbon Sequestration, Soil tilling

✓ The world would not be able to cope with GHG emissions at the scale needed to avert a temperature rise of 1.5°C over pre-industrial levels. To increase more trapping of carbon and reduction in emissions, growing trees would be the solution.

Way Forward

✚ Climate smart solutions have to be adopted which enhance land-based sinks cluster around waste and diets, ecosystem protection and restoration, improved agriculture practices, and prudent use of degraded land.

✚ Degraded lands and Wastelands can be put to use in ways that revive productivity, increase biomass, and promote soil carbon sequestration.

Sand and Dust Storms Risk Assessment

News Excerpt

Recently, the Economic and Social Commission for Asia and the Pacific (ESCAP) releases a risk assessment regarding Sand and Dust Storms.

Key Points

• More than 500 million people in India and more than 80 per cent of the populations of Turkmenistan, Pakistan, Uzbekistan, Tajikistan and Iran are exposed to medium and high levels of poor air quality due to sand and dust storms, according to a new report.

• Sand and dust storms are common meteorological hazards in arid and semi-arid regions.

• The report identified 'east and northeast Asia', 'south and southwest Asia', 'central Asia' and the 'Pacific' as the four main sand and dust storm corridors of Asia-Pacific. The region is the second-largest emitter of mineral dust.

• Very high dust deposition also occurs in the Himalaya-Hindu Kush mountain range and the Tibetan Plateau, the so-called 'third pole' that are the sources for fresh water for more than 1.3
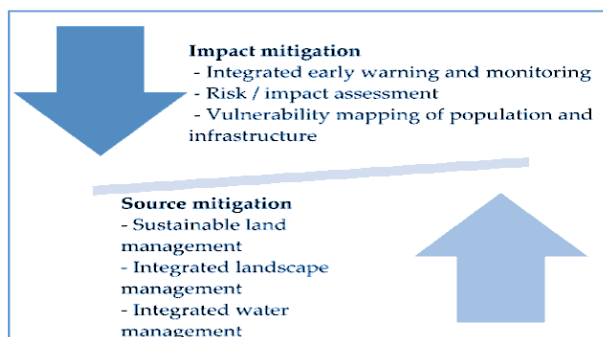
billion people in Asia.

- The deposition of dust on glaciers induces a warming effect, increasing the melting of ice, with direct and indirect impacts on society through numerous issues, including food security, energy production, agriculture, water stress and flood regimes.

Sand & Dust Storms impacts on SDG

➢ Sand and dust storms are detrimental for human health, ecosystems and diverse socio-economic sectors.

➢ A significant part of the dust emission is the consequence of human-induced factors, such as poor agricultural practices or land and water mismanagement.

➢ Sand and dust storms directly affect 11 of the 17 United Nations-mandated sustainable development goals (SDG): Ending poverty in all forms Ending hunger Good health and well-being Safe water and sanitation Affordable and clean energy Decent work and economic growth Industry innovation and infrastructure Sustainable cities and communities Climate action Life below water Life on land.

Impacts of Sand and Dust

Sector	Disruption	Damage
Human Health	Short-term impact on human health	Asthma; bronchitis; emphysema; silicosis
Energy	Reduction in the efficiency of solar power plants, cost of cleaning, industries power stations	Sandblast/erosion of solar power plants, wind turbines and other energy equipment, damage to wind-generated electricity equipment
Transport – Aviation	Disruption to services for goods and passengers	Aircraft engine damage due to erosion; loss due to flight cancellation and delay
Agriculture	Solar radiation reduction; crops growth	Irrigation canal blockage; reduction in soil quality; soil loss (source area); decline in water quality; damage to agricultural equipment; damage to agricultural crop grows
Environment	Solar radiation changes	Glacier melt with impacts on water availability

Impact mitigation
- Integrated early warning and monitoring
- Risk / impact assessment
- Vulnerability mapping of population and infrastructure

Source mitigation
- Sustainable land management
- Integrated landscape management
- Integrated water management

Conclusion

Sand and dust storms are a transboundary meteorological hazard, therefore, it is very important to enhance national, regional and international cooperation and partnerships to observe, predict, mitigate and cope with the adverse effects of sand and dust storms, and seek support from UN agencies to meet the relevant SDGs.

State of the World's Trees report

News Excerpt

The Botanic Gardens Conservation International (BGCI) launched the State of the World's Trees Report.

Key Highlights of the Report

- According to the State of the World's Trees report 17,500 tree species - some 30% of the total - are a risk of extinction, while 440 species have fewer than 50 individuals left in the wild.
- Almost a third of the world's tree species are at risk of extinction, while hundreds are on the brink of being wiped out.
- Overall the number of threatened tree species is double the number of threatened mammals, birds, amphibians and reptiles combined, the report said.
- Around 11% of the flora or plant life of every country was made up of threatened species.
- Among the most at-risk trees are species including magnolias and dipterocarps – which are commonly found in Southeast Asian rainforests. Oak trees, maple trees and ebonies also face threats.
- Many of varieties of trees in the world's top six countries for tree-species diversity are at risk of extinction. The greatest single number is in Brazil, where 1,788 species are at risk. The other five countries are Indonesia, Malaysia, China, Colombia and Venezuela.
- There were also 27 countries that had no threatened species of trees.

Report &State of Tress in India

- ✓ Around 18% of India's tree species stare at the possibility of extinction. India has 2,603 tree species, of which 650 are endemic or native to certain parts of the country; and 469 of them are threatened.
- ✓ India is known for its rich biological diversity due to the presence of large numbers of plant and animal species. It is one of the top-ranking, mega-diverse countries of the world.
- ✓ As per the ISFR 2019, the top five states in terms of increase in forest cover are Karnataka (1,025 sq. km.), Andhra Pradesh (990 sq. km.), Kerala (823 sq. km.), Jammu & Kashmir (371 sq. km.) and Himachal Pradesh (334 sq km).
- ✓ India's 1.34 billion people exert a heavy pressure through encroachment, raising commercial plantations and other developmental activities. Due to anthropogenic activities like excessive harvesting and habitat destruction, many of the economically important tree species are under serious threat.
- ✓ The main threats to tree species are forest clearance for various projects; other forms of habitat loss including exploitation for timber, medicine, etc. and the spread of invasive pests and diseases.
- ✓ Out of the 387 Indian plants listed under the International Union for Conservation of Nature's Red List, 77 have been enlisted as 'critically endangered', six are 'extinct' and two are 'extinct' in the wild.

> **5-country biosphere reserve**
> - ❖ UNESCO declares world's first 5-country biosphere reserve in 'Amazon of Europe'.
> - ❖ The 1-million hectare 'Mura-Drava-Danube' is the now the largest riverine protected area in Europe.
> - ❖ The biosphere reserve covers 700 kilometres of the Mura, Drava and Danube rivers and stretches across Austria, Slovenia, Croatia, Hungary and Serbia.
> - ❖ The aim is to revitalise 25,000 km of rivers and protect 30 per cent of the European

> **PEPPER IT WITH**
> United Nations Forum on Forests, Million Tree Challenge, Convention on biological Diversity

Way Forward

A systematic species recovery programme is the need of the hour. Firstly, there is need to extend the protected area coverage for endangered and vulnerable tree species that are currently not-well represented in protected areas. There is dire need to increase availability of Government and NGO's effort in terms of funding. Moreover, Social tree planting schemes, and ensure the targeted

planting of threatened and native species has to be carried out.

Weather Disaster Report: WMO

News Excerpt

Recently, the World Meteorological Organization (WMO) says that the number of disasters, such as floods and heatwaves, driven by climate change have increased fivefold over the past 50 years, killing more than 2 millions people.

Pre-Connect

According to the agencies' Atlas of Mortality and Economic Losses from Weather, Climate and Water Extremes, from 1970 to 2019, these natural hazards accounted for 50 per cent of all disasters, 45 per cent of all reported deaths and 74 per cent of all reported economic losses.

> **The Coalition for Disaster Resilient Infrastructure (CDRI)**– established in 2019 under the leadership of the Government of India and with the support UNDRR is a multi-stakeholder global partnership of national governments, UN agencies and programmes, multilateral development banks , the private sector, and academic institutions. CDRI aims to promote the resilience of infrastructure systems to climate and disaster risks, thereby ensuring sustainable development. It seeks to rapidly expand the development and retrofit of resilient infrastructure to respond to the Sustainable Development Goals imperatives of expanding universal access to basic services, enabling prosperity and decent work.

Key findings

- It surveys some 11,000 disasters occurring between 1979-2019, including major catastrophes such as Ethiopia's 1983 drought, which was the single most fatal event with 3,00,000 deaths, and Hurricane Katrina in 2005 that was the most costly, with losses of $163.61 billion.
- Economic losses are mounting as exposure increases. But, behind the stark statistics, lies a message of hope. Improved multi-hazard early warning systems have led to a significant reduction in mortality.
- Of the top 10 disasters, droughts proved to be the deadliest hazard during the period, causing 650,000 deaths, followed by storms that led to 577,232 deaths; floods, which took 58.700 lives; and extreme temperature events, during which 55,736 died.
- Meanwhile, economic losses have increased sevenfold from the 1970s to the 2010s, going from an average of $49 million, to a whopping $383 million per day globally.
- Storms, the most prevalent cause of damage, resulted in the largest economic losses around the globe.
- Three of the costliest 10 disasters, all hurricanes that occurred in 2017, accounted for 35 per cent of total economic disaster losses around the world from 1970 to 2019.
- In the United States, Hurricane Harvey caused $96.9 billion in damage, Maria in the Caribbean 69.4 billion, and Irma $58.2 billion in Cape Verde.
- More than 91% of the 2 million deaths occurred in developing countries, the report said, noting that only half of the WMO's 193 members have multi-hazard early warning systems.

The Atlas by region from 1970 to 2019

Continents	Recorded disasters	Lives loss	Economic losses	Most Prevalent Disasters
Africa	1,695	721,747	$5 billion	Floods and Draught

Asia	3,454	975,622	$2 trillion	45% Floods and 36% storms
South America	The top 10 recorded disasters in the region accounted for 60 per cent	34,854	$39.2 Billion	Floods were responsible for 59 per cent of disasters, 77 per cent for lives lost and 58 per cent of economic loss for the region.
North America, Central America & the Caribbean	The region accounted for 18 per cent of weather-, climate- and water-related disasters	The region suffered 74,839 deaths	$1.7 trillion economic losses.	Storms were responsible for 54 per cent and floods, 31 per cent of recorded disasters.,
South West Pacific	The region recorded 1,407 disasters	65,391 deaths,	$163.7 billion in economic losses.	45 per cent of these disasters were associated with storms and 39 per cent with floods.
Europe	1,672 recorded disasters	159,438 lives	$476.5 billion in economic damages.	Although 38 per cent were attributed to floods and 32 per cent to storms,

Climate Change footprints

➢ The number of weather, climate and water extremes are increasing and will become more frequent and severe in many parts of the world as a result of climate change.

➢ More water vapor in the atmosphere has exacerbated extreme rainfall and flooding, and the warming oceans have affected the frequency and extent of the most intense tropical storms.

➢ The Atlas clarifies that the attribution of drought events to anthropogenic, or human, factors, is not as clear as for heatwaves because of natural variability caused by large oceanic and atmospheric oscillations, such as El Niño climate pattern.

➢ However, the 2016-2017 East African drought was strongly influenced by warm sea-surface temperatures in the western Indian Ocean to which human influence contributed.

➢ Climate change has also increased extreme sea level events associated with some tropical cyclones, which have increased the intensity of other extreme events such as flooding and associated impacts.

➢ This has augmented the vulnerability of low-lying megacities, deltas, coasts and islands in many parts of the world.

➢ Moreover, an increasing number of studies are also finding human influence exacerbating extreme rainfall events, sometimes in conjunction with other major climate influences.

What need to be done?

✓ Only half of WMO's 193 member countries have multi-hazard early warning systems and severe gaps in weather and hydrological observing networks exist in Africa, some parts of Latin America and in Pacific and Caribbean island States.

✓ More lives are being saved thanks to early warning systems, but it is also true that the number of people exposed to disaster risk is increasing due to population growth in hazard-exposed areas and the growing intensity and frequency of weather events.

PEPPER IT WITH
SENDAI Framework, Yokohama Strategy, World Congress on Disaster Management

✓ More international cooperation is needed to tackle the chronic problem of huge numbers of people being displaced each year by floods, storms and drought.

✓ We need greater investment in comprehensive disaster risk management to ensure that climate change adaptation is integrated in national and local disaster risk reduction strategies.

✓ It is further recommends countries to review hazard exposure and vulnerability considering a changing climate to reflect that tropical cyclones may have different tracks, intensity and speed than in the past.
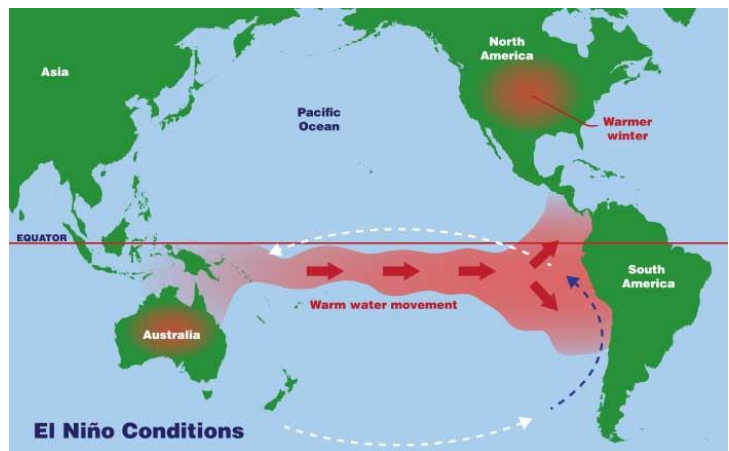
Impact of El Niño and La Niña

News Excerpt

A recent super-computing led modeling suggested that climate change can cause extreme and more frequent El Niño and La Niña events.

Pre-Connect

- El Niño is the warming phase of water temperatures around the Pacific Equator. During normal weather patterns around the Equator, trade winds carry warm water from the tropical areas of the Pacific Ocean. Moving west, the winds distribute warm water from the Eastern Pacific into the cooler areas of the ocean.

- During El Niño, those winds weaken, and the east-west travel of warm water stops. The winds reverse and carry warm water back east, which makes the warm part of the Pacific Ocean even warmer.

- La Niña is the opposite of El Niño: an intensification of normal weather patterns. This causes ocean surface temperatures to cool down as winds strengthen and blow warm water towards the west.
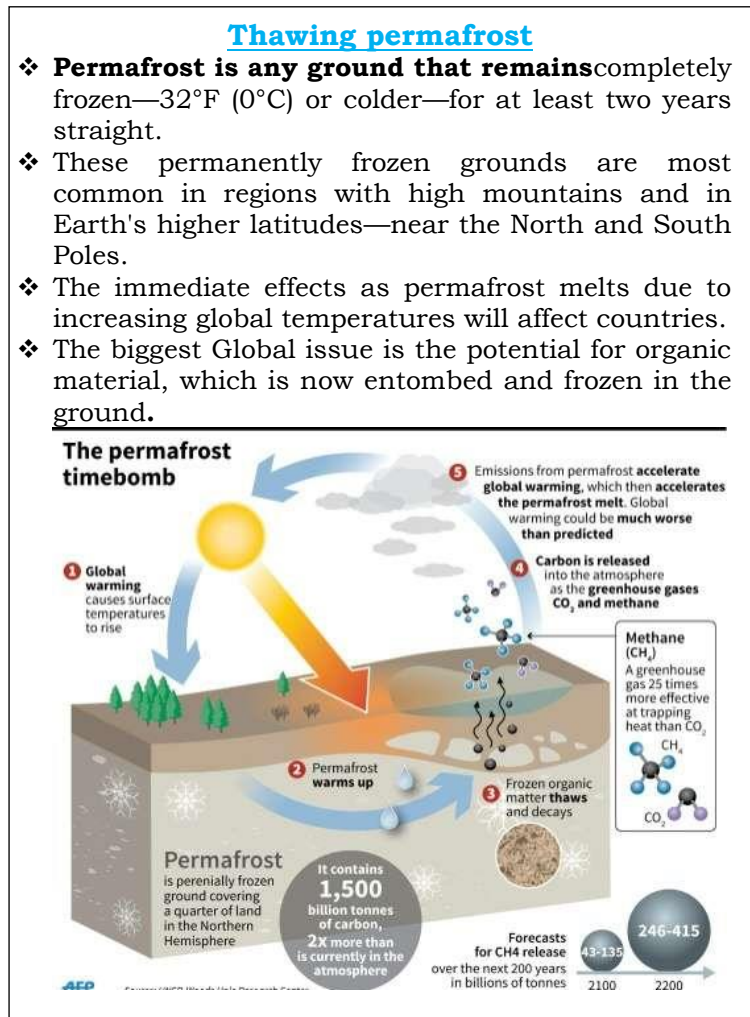
About latest Findings

➢ Increasing atmospheric carbon dioxide can cause a weakening of future simulated El Nino-Southern Oscillation (ENSO) sea surface temperature variability. The intensity of the ENSO temperature cycle can weaken as CO_2 increases.

➢ Future El Niño events will lose heat to the atmosphere more quickly due to the evaporation of water vapour. Also, in the future there will be a reduced temperature difference between the eastern and western tropical Pacific, inhibiting the development of temperature extremes during the ENSO cycle.

PEPPER IT WITH
Peru Current, Benguela current, humboldt current, Upwelling, Downwelling, off-shore winds

➢ There can be a weakening of Tropical Instability Waves (TIWs) in the projected future which can cause a disruption of the La Niña event. TIWs are a dominant feature of monthly variability in the equatorial Pacific and Atlantic Ocean.

Impacts of El Niño And La Niña

✓ El Niño and La Niña affect not only ocean temperatures, but also how much it rains on land. Both circulation's have impact on other global cycles.Typically, El Niño and its warm waters are associated with drought, while La Niña is linked to increase flooding.

✓ El Niño and La Niña have the greatest impact on countries around the equator. This includes Central and South America, the Caribbean, Southeast Asia, and Eastern and Southern Africa. In other words, they hit some of the world's poorest regions the hardest.In areas like the Sahel or the Horn of Africa, communities are already working challenging land.

✓ An El Niño-induced drought worsened the food security situation.

✓ In India, El Niño is associated with drought or weak monsoon, while La Niña is associated with strong monsoon and above average rains and colder winters.

✓ ENSO affects crop production because it disrupts normal weather patterns. More specifically, El Niño creates water shortages and La Niña creates water abundance, including flooding. Water shortages reduce crop planting areas, delay planting seasons, and generally lower crop yields.

✓ El Niño could reduce the upwelling of cold water off the coast. When this happens, fish either die or migrate into areas where they'll find more to eat. With the fish gone, sea birds that depend on them may die or go elsewhere. Kelp forests are often destroyed by storms and ocean swells.

Thawing permafrost

❖ **Permafrost is any ground that remains**completely frozen—32°F (0°C) or colder—for at least two years straight.

❖ These permanently frozen grounds are most common in regions with high mountains and in Earth's higher latitudes—near the North and South Poles.

❖ The immediate effects as permafrost melts due to increasing global temperatures will affect countries.

❖ The biggest Global issue is the potential for organic material, which is now entombed and frozen in the ground**.**

Analytica

▪ While El Niño and La Niña do impact global climate patterns; however, they neither affect all regions nor do are their impacts in a given region the same. In many locations, especially in the tropics, La Niña (or cold episodes) produces roughly the opposite climate variations from El Niño. For instance, parts of Australia and Indonesia are prone to drought during El Niño but are typically wetter than normal during La Niña.

▪ The impacts of each La Niña event are never exactly the same. They depend on the intensity of the event, the time of year when it develops and the interaction with other climate patterns.

Way Forward

It is important to consider the role of factors like—Indian Ocean Dipole with regarding to El Nino and La Nina to explore the local impacts on India and its coastline. Researchers, scientists and meteorologists should explore and relate this study in India context.

DeeparBeel

News Excerpt

Recently, the Ministry of Environment, Forest and Climate Change notified the eco-sensitive zone of the DeeparBeel Wildlife Sanctuary on the south-western edge of Guwahati.
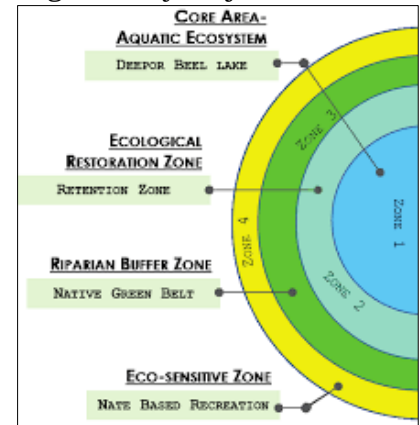
Pre-Connect

- DeeparBeel is one of the largest freshwater lakes in Assam and the State's only Ramsar site besides being an important Bird Area.
- DeeparBeel constitutes anexceptional habitat for aquatic flora and avian fauna.
- It has both biological and environmental importance besides being the only major storm-water storage basin for Guwahati city. It provides a means of livelihood for a number of local inhabitants.

About Eco-Sensitive Zone

- ➢ Eco-Sensitive Zones or Ecologically Fragile Areas are areas within 10 kms around Protected Areas, National Parks and Wildlife Sanctuaries.
- ➢ In case of areas with are considered to be sensitive corridors, connectivity and ecologically important patches, crucial for landscape linkage, even area beyond the 10 km width can also be included in the eco-sensitive zone.
- ➢ The basic aim in setting up Eco-Sensitive Zones is to minimize the negative impacts of certain activities by creating a "shock absorber" for the fragile ecosystem encompassing the protected areas like National Parks and Wildlife Sanctuaries.
- ➢ It acts as a transition zone for areas which has less protection to areas which has high protection.
- ➢ In the Eco-Sensitive zones, activities like industries which causes pollution Commercial mining, saw mills, establishment of major hydroelectric projects (HEP), commercial use of wood, Tourism, discharge of effluents or any solid waste or production of hazardous substances are all prohibited.
- ➢ Some of the activities are regulated likefelling of trees, establishment of hotels and resorts, commercial use of natural water, erection of electrical cables, drastic change of agriculture system, e.g. adoption of heavy technology, pesticides etc., widening of roads.

Features of Eco - Sensitive Zones	Biologically and ecologically rich, valuable and unique
	Largely irreplaceable if dystroyed
	High value to human societies
	Maintain the cological stability of the area
	Conserve biological diversity

- ➢ In the Eco-Sensitive zones, activities like ongoing agricultural or horticultural practices, rainwater harvesting, organic farming, use of renewable energy sources, adoption of green technology for all activities are permitted.

Issues with DeeparBeel

- ✓ DeeparBeel's water has become toxic and it has lost many of its aquatic plants that elephants would feed on.The wetland has for decades been threatened due to garbage dump, and encroachment from human habitation and commercial units.
- ✓ DeeparBeel is facing immense biotic pressure by way of human settlements and ever-increasing development activities.

Way Forward

For the effective conservation new techniques, awareness about overexploitation of resources and its adverse impacts should be disseminated among masses. Government, civil societies and stakeholders must collaborate with each other for balancing sustainable development.

PEPPER IT WITH
Ramsar wetland,National lake conservation programme, Wetland conservation rules

Land-use for renewable energy in India

News Excerpt

Recently, Institute for Energy Economics and Financial Analysis (IEEFA) released'renewable energy and land use in India by mid-century' report.IEEFA examines energy markets, trends and policies.

Key Points of the Report

- In India, around 50,000-75,000 square kilometres of land will be used in 2050 for solar energy generation and for an additional 15,000-20,000 sq km for wind energy projects.
- The report states that India will use significant stretches of land by 2050 to install renewable energy generation capacities.
- In India, electricity generation has to compete with alternative uses for land such as agriculture, urbanisation, human habitation and nature conservation.

> **PEPPER IT WITH**
> EIA, Green Industries, S1olar and Wind Energy, GHGs, International Solar alliance

- Properly managed renewable generation can co-exist with other land uses, and, unlike coal-based power, it does not fundamentally change land during use or following its ultimate decommissioning.
- The resulting land cover changes, including indirect effects, will likely cause a net release of carbon up to 50 grams of carbon dioxide per kilowatt-hour (gCO2 / kwh).
- The amount of carbon release will depend on the region, scale of expansion, solar technology efficiency and land management practices at solar parks.

Effect on Ecosystems

Land use for renewable energy may put a pressure on ecosystems. Changing of land use may lead to the freeing of carbon which is captured in soil. Generally the terms zero impact areas, barren land, unused land or the official designation of wasteland imply that such areas have no value.

Way Forward

In order to save land there is need to promote the offshore wind, rooftop solar, and solar on (mostly artificial) water bodies where net environmental benefits can be assured.Protection of farmland is essential, renewable sector could secure benefits to farmers and reduce pressure on other types of land.

Air Pollution Standards

News Excerpt

Recently, the World Health Organisation (WHO) has revised its global pollution standards.

About New Global Air Quality Guidelines (AQGs)

- The World Health Organization (WHO) in it's first-ever update since 2005 has tightened global air pollution standards.
- The new guidelines reflect an overwhelming scientific consensus that countries need to more aggressively limit air pollution and protect everyone's health.
- The annual PM 2.5 (respirablepollution particles) guideline from 10 micrograms per cubic metres to 5 micrograms per cubic metres and the 24-hour PM 2.5 limit from 25 micrograms per cubic metres to 15 micrograms per cubic metres. The earlier limit was 10 micrograms per cubic metre annually and 25 micrograms per cubic metre in a day.
- WHO tightened norms for five other pollutants based on recent evidence of health impacts associated with them.
- WHO also tightened the limits for gaseous air pollutants like nitrogen dioxide that are produced during the burning of fossil fuel.
- Other recommendations are– the ozone levels average should not exceed 100 micrograms per

cubic metre, nitrogen oxide should not exceed 25 micrograms per cubic metre, sulphur dioxide should remain below 40 micrograms per cubic metre and carbon monoxide levels should not exceed more than 4 micrograms per cubic metre over the same time period.

AQG's Impact on India

➢ The WHO's new air quality benchmarks would make a call for policymakers in India.

➢ This revision in pollution standards put pressure on India to align its national Air quality standard in accordance with the WHO's new standard. Moreover, Air quality in India has deteriorated significantly over the past two decades, and today, air pollution is the second largest risk factor contributing to the country's disease burden.

> **PEPPER IT WITH**
> Ramsar wetland, National lake conservation programme, Wetland conservation rules

➢ While these guidelines are not legally binding, But India may base their own standards on the WHO measures. The new recommendations for air quality standards may represent a turning point in the way we approach air pollution globally

➢ The move doesn't immediately impact India as the National Ambient Air Quality Standards (NAAQS) don't meet the WHO's existing standards.

Analytica

New Global Standard v/s India's Air Quality Standard

✓ India's air quality standards were way short of WHO norms even before. The new thresholds will sharpen these differences.

✓ India's annual average PM 2.5 standard, for instance, is now eight times below the WHO's benchmark.

✓ Much of the gap is due to the geographical and meteorological factors that contribute to a high base pollution load in several parts of the country.

WHO's AQG

Pollutant	Averaging time	2005 AQGs	2021 AQG level
PM$_{2.5}$, µg/m³	Annual	10	5
	24-hourª	25	15
PM$_{10}$, µg/m³	Annual	20	15
	24-hourª	50	45
O$_3$, µg/m³	Peak seasonᵇ	–	60
	8-hourª	100	100
NO$_2$, µg/m³	Annual	40	10
	24-hourª	–	25
SO$_2$, µg/m³	24-hourª	20	40
CO, mg/m³	24-hourª	–	4

India's AQI

AQI Value Of Index	Levels of Health Concern	PM$_{2.5}$ Conc. (µg/m³)	PM$_{10}$ Conc. (µg/m³)	Daily AQI Color	Air Pollution Level
0–50	Good	0–12	0–54	green	Level 1
51–100	Moderate	12.1–35.4	55–154	yellow	Level 2
101–150	Unhealthy for sensitive groups	35.5–55.4	155–254	orange	Level 3
151–200	unhealthy	55.5–150.4	255–354	Red	Level 4
201–300	Very unhealthy	150.5–250.4	355–424	Purple	Level 5
301 and Higher	Hazardous	250.5–Higher	425–Higher	Maroon	Level 6

✓ India's NAAQs — last revised in 2009 — specify an annual limit of 60 microgram per cubic metre for PM 10 and 100 for a 24-hour period.

✓ Similarly it's 40 for PM 2.5 annually and 60 on a 24-hour period.

✓ There are also standards for a host of chemical pollutants including sulphur dioxide, lead and nitrogen dioxide.

✓ Integrating the top 10 cities from WHO's most polluted cities' list, 122 non-attainment cities were identified for NCAP, which did not meet India's National Ambient Air Quality Standards (NAAQS) in 2011-15.

✓ The Central Pollution Control Board is reportedly working on framing revised guidelines. Even though complete compliance with them might be difficult, the CPCB cannot afford to ignore the WHO's new

Better standards
The World Health Organization (WHO) has updated its global air pollution standards from the limits set in 2005. A look at how it compares with India's National Ambient Air Quality Standards (NAAQS) last revised in 2009

Figures in g/m3

	WHO (2005)	WHO (updated)	India (NAAQS)
PM2.5 annual mean	10	5	40
PM2.5 24-hour mean	25	15	60
PM10 annual mean	20	15	60
PM10 24-hour mean	50	45	100

benchmarks.

Measures taken by Government

+ The National Clean Air Programme (NCAP) in the country has aimed to reduce 20-30% of PM2.5 and PM10 concentrations recorded in 2017 by 2024.

+ The Supreme Court in 2017 mandated the Central Pollution Control Board to come up with an emergency, comprehensive action plan, which was mapped out and submitted. The Graded Response Action Plan was introduced to the city of Delhi and the National Capital Region.

+ The programme is referred to as a 'graded' plan, as it functions according to stages. There are specific actions to be taken for certain pollution concentration levels, which can bring about a gradual form of pollution control.

+ The Central Government has notified a Comprehensive Action Plan (CAP) in 2018 identifying timelines and implementing agencies for actions identified for prevention, control and mitigation of air pollution in Delhi and NCR.

+ SAMEER app has been launched wherein air quality information is available to public along with provision for registering complaints against air polluting activities. Air quality information collection and dissemination are done from a centralized location. It provides real time air quality status to all stakeholders.

Ministry	Initiative
Ministry of Power	A reduction in PM emissions by coal power plants, and in energy consumption by energy-intensive industries.
Ministry of Environment	Setting emission standards for the brick manufacturing industry and facilitating management of agricultural residues to reduce stubble burning.
Ministry of Road Transport and Highways Ministry of Petroleum and Natural Gas	Stricter vehicle emissions regulation and upgrading of vehicles to more fuel-efficient standards.
Ministry of Urban Development	enhancing availability of public transport.

Impacts of Air Pollution

o Ambient air pollution poses grave, multi-faceted risks to India's prospects for achieving its development goals.

o It would lead to a rapid increase in public health expenditure, diminished labour productivity, and reduced agricultural yields.

o The economic cost of air pollution to the Indian economy is more than US$150 billion a year.

o People living in high-pollution cities are more likely to have compromised respiratory and cardiac issues. Women including child are most vulnerable due to the Air pollution and increased level of PM2.5. For instance-PM2.5 pose the greatest health risk, as they are minuscule and can get deep into a person's lungs and bloodstream.

o Exposure to fine particles can affect lung function and worsen medical conditions such as asthma and heart disease.

o Long-term exposure to fine particulate matter has been linked with an increased rate of chronic bronchitis, reduced lung function, and increased mortality from lung cancer and heart disease.

> **PEPPER IT WITH**
> PM2.5, PM 10, Brown Carbon, Black Carbon, Ozone pollution, Sameer App

o The economic loss attributable to air pollution as a percentage of state gross domestic product (GDP) was the highest in Uttar Pradesh (2.15 per cent), Bihar (1.95 per cent), Madhya Pradesh (1.70 per cent), Rajasthan (1.70 per cent), and Chhattisgarh (1.55 per cent). These states have a relatively low per-capita GDP.

o The terrestrial ecosystem is widely affected by ground air pollution. The ill-effects include respiratory and pulmonary disorders in animals and humans. The effects on the marine ecosystem include acidification of lakes and eutrophication in aquatic food.

o The ill-effects of air pollutant emissions could impact the biological diversity. For instance-Nitrogen deposition on plant is the result of air pollution.

Conclusion

The air pollution crisis will require innovative, collaborative solutions from public, private, and civil society stakeholders. Institutions, governments, philanthropies, and members of the academe have been fighting the battle for clean air for decades; it is time to tap into the power of a multi-stakeholder framework to hurdle this challenge.

As India begins to direct resources towards addressing the post-pandemic economic crisis, policymakers should display political and economic commitment towards addressing the multi-dimensional impact of air pollution.

Sea Cucumber

News Excerpt

The Indian Coast Guard (ICG) has seized two tonnes of sea cucumber. It is a marine species.

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About Sea Cucumber

- Sea cucumbers are marine invertebrates that live on the seafloor found mostly in tropical regions.

- Sea cucumber has unusual oblong shape that resembles a fat cucumber. There are about 1,250 species of sea cucumber.They are crucial to maintain the balance of ocean habitats.

Role in Coral Reef's health

➢ Sea Cucumber an integral part of the coral ecosystem as one of the main by-products of the sea cucumbers digestion of sand is calcium carbonate and this is essential for the survival of the coral reefs.

➢ They act like garbage collectors of the ocean world, and they recycle nutrients, thus playing an important role in keeping coral reefs in good condition.

Protection Status

✓ Due to the instances of illegal trading and smuggling since the species is high in demand across south-east Asia, mainly China, for food and traditional medicine.

✓ In 2020, the Lakshadweep Islands administration created the world's first conservation area for sea cucumbers.

✓ Sea cucumber is under schedule I of Wildlife Protection Act, 1972.

✓ IUCN Red List: Brown Sea Cucumber (Endangered), Blackspotted Sea Cucumber (Least Concern), Blue Sea Cucumber (Data Deficient), etc.

Ammonium Nitrate rules

News Excerpt

Recently, the government has amended rules for storage and handling of ammonium nitrate to improve public safety.

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Pre-Connect

- The Explosives Act, 1884, define ammonium nitrate as the compound with formula NH_4NO_3 including any mixture or compound having more than 45% ammonium nitrate by weight including emulsions, suspensions, melts or gels but excluding emulsion or slurry explosives and non explosives emulsion matrix and fertilizers from which the ammonium nitrate cannot be separated.

- It is illegal in India to Storage ammonium nitrate in large quantities in populated areas.

- To carry out manufacturing of ammonium nitrate, an Industrial licence is required under the Industrial Development and Regulation Act, 1951. A license under the Ammonium Nitrate

Rules, 2012 is also required for any activity related to ammonium nitrate.

- It is classified as an oxidising content (Grade 5.1) under the United Nations classification of dangerous goods.

About New Rules

➢ In India, the manufacture, conversion, bagging, import, export, transport, possession for sale or use of ammonium nitrate is covered under The Ammonium Nitrate Rules, 2012.

➢ The rules require that ammonium nitrate received at ports be transferred to storage houses 500 metres beyond the port area.

➢ The rules also permit the auction of seized lots of ammonium nitrate to ensure safe and speedy disposal besides requiring that Ammonium Nitrate be imported in bagged form only.

➢ The amendments include provision for adequate fire-fighting facilities in storage and handling areas, improvement of flooring in storage and handling areas. This will reduce the handling of loose chemicals at port and therefore enhance safety.

SCIENCE & TECHNOLOGY

Blue Straggler

News Excerpt

Blue stragglers, a class of stars on open or globular clusters that stand out as they are bigger and bluer than the rest of the stars, have intrigued scientists who have for long probed their origin.

What are blue stragglers?

*   Blue stragglers are a class of stars that stand out as they are bigger and bluer than the rest of the stars.
*   These are unusually hot and bright stars found in the cores of ancient star clusters known as globulars.
*   A clue to their origin is that they are only found in dense stellar systems, where distances between stars are extremely small (a fraction of a light year).
*   Allan Sandage (an astronomer with Carnegie Observatories in Pasadena,California) discovered blue stragglers in the globular cluster M3 in 1952-53.
*   Most are located at least several thousand light-years away from the sun, and most are around 12 billion years old or more.
*   Omega Centauri is the Milky Way's largest and brightest globular.

Highlights

➢ Indian researchers found that half of the blue stragglers in their sample are formed through Mass transfer from a close binary companion star.
➢ One third stragglers are likely formed through collisions of 2 stars. and
➢ The remaining stragglers are formed through interactions of more than 2 stars.

How is blue straggler different from others?

✓ Blue straggler stars violate standard theories of stellar evolution.
✓ A bunch of stars born at the same time from the same cloud forms a star cluster.
✓ Under standard stellar evolution, as time passes, each star evolves differently depending on its mass, in which all stars born at the same time should lie on a clearly defined curve in the Hertzsprung-Russell diagram. Hertzsprung-Russell diagram plots the temperature of stars against their luminosity or the colour of stars against their absolute magnitude. It shows a group of stars in various stages of their evolution.
✓ In case of blue straggler, they evolve and move off the main sequence creating a bend in their track, known as the turnoff. Since blue stragglers often lie well off this curve, they may undergo abnormal stellar evolution. They appear to be lagging behind most of the other stars in the cluster in its evolution toward a cooler, reddish state.

> **PEPPER IT WITH**
> Black Holes, Neutron Stars, Red Dwarf Stars

✓ For further study, Ultraviolet Imaging Telescope on AstroSat, India's first dedicated space observatory, as well as the 3.6 m Devasthal Optical Telescope in Nainital will be used.
✓ The study will help improve understanding of these stellar systems to uncover exciting results in studies of large stellar populations, including galaxies.

Coronal Mass Ejection (CME)

News Excerpt

A team of scientists from the Indian Institute of Astrophysics (IIA), an autonomous institute of the Department of Science & Technology (DST), Government of India, along with their collaborators, used data from their radio telescopes to measure the magnetic field and other physical conditions of the plasma in a CME detected on 1 May 2016.

Pre-Connect

- The Sun is an extremely active object, spewing out vast quantities of gas in many violent events and the corona is a region of very high temperatures, strong magnetic fields, and violent plasma eruptions. A class of such eruptions are Coronal Mass Ejections (CMEs).
- CMEs are the most powerful explosions happening in our solar system. When a really strong CME blows past the Earth, it can damage the electronics in our satellites and disrupt radio communication networks on Earth.
- Hence astronomers regularly study these events. This field of research helps to understand Space Weather.
- Though CMEs can occur anywhere on the Sun, it is primarily those which originate from regions near the centre of the visible solar surface (called the photosphere) are significant for the study.
- These CMEs are usually studied in visible light, but because the disc of the Sun is so much brighter, scientists can detect and follow these CMEs only when they have travelled beyond the Sun's surface.However, radio observations of the thermal emission, like in aforementioned study, allows one to study the CMEs right from the surface itself.
- Knowing the source region of the CMEs, the associated magnetic field, and their kinematics in the region up to seven lakh kilometers either above the solar surface or off its limb, are important to fully understand the characteristics of the CMEs in a holistic manner.

Highlights

- Indian Scientists, along with international collaborators, have measured the magnetic field of an eruption from the Sun's atmosphere (by observing the weak thermal radio emission associated with the erupted plasma for the first time), offering a rare peek to the interior of the Sun.
- Results were found with the help of radio telescopes of IIA in Gauribidanur, Karnataka, along with some space-based telescopes that observed the Sun in extreme ultraviolet and white light and was caught when the base of its activity was just behind the visible limb of the Sun.

> **PEPPER IT WITH**
> Solar Wind, The Solar Corona

- This allowed the researchers to detect a much weaker radio emission called thermal (or blackbody) radiation from the plume of gas that was ejected in the CME.
- They were also able to measure the polarisation of this emission, which is indicative of the direction in which the electric and magnetic components of the waves oscillate.
- Using this data, they then calculated the physical properties of the ejected plasma as well.

Solar DC Cooking System

News Excerpt

Taking a small step in realizing the dream of a 'Pollution-Free India', the CSIR-CMERI has recently developed a Solar DC Cooking System.

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Highlights

- The Solar DC Cooking System is a solar energy-based cooking system that includes a solar PV panel, charge controller, battery bank, and cooking oven.
- The technology offers a clean cooking environment, invertor-free direct operation, fast and uniform heating, and the ability to reduce 1 tonne of CO2 (Carbon Dioxide) per year /household.

Significance of Solar Cooking

Household air pollution from cooking fires in the home is a leading cause of respiratory disease, which kills many precious lives each year. Harnessing free solar energy for cooking will make drinking water safe, improve health, build resilient families, break the cycle of poverty, empower

women and children and boost local economies as solar cookers do not produce any smoke.

Is Solar Power AC or DC?

Solar photovoltaic technology works on DC power. Solar panels generate direct current when the sun shines on panels, causing electrons to move and create current, thus, the current is direct as all of the electrons flow in the same direction.

Advantages of Solar DC Cooking System

➢ In comparison to conventional solar-based cooking systems, which lose efficiency due to AC-DC conversion, the CSIR-CMERI designed Solar DC Cooking System has a 20-25 % higher efficiency and is more cost effective.

➢ The Micro-Industries could benefit from the basic technology design because it enables ease-of-manufacturing and gives a significant economic opportunity. There is a chance that job prospects will improve as the popularity of technology grows.

➢ Even if the use of LPG releases carbon dioxide, this system will significantly reduce carbon dioxide emissions. When the technology is out in the market, it would cost between Rs 65,000 and Rs 70,000. If government subsidies are offered, the price of the product will be significantly reduced, similar to other Solar Energy-based items.

> **PEPPER IT WITH**
> International Solar Alliance, PM KUSUM, Gram Ujala Program

➢ Widespread use of the CSIR-CMERI-developed Solar DC Cooking System could help India meet its aim of 200 GW of solar energy, as envisioned by the Prime Minister Narendra Modi, as well as saving 290 million tonnes of CO_2(Carbon Dioxide) emissions.

INSPIRESat-1 CubeSat

News Excerpt

INSPIRESat-1 CubeSat, is a satellite which is ready to get launched. It is developed under the International Satellite Program in Research and Education (INSPIRE), by the Indian Institute of Space Science and Technology (IIST).

Highlights

• The small satellite that weighs less than 10 kg will be launched aboard an upcoming Polar Satellite Launch Vehicle (PSLV) mission of the Indian Space Research Organisation (ISRO).

• INSPIRESat-1 is a collaborative effort by the Laboratory for Atmospheric and Space Physics (LASP) at the University of Colorado Boulder in the U.S., the National Central University, Taiwan, and the Nanyang Technological University in Singapore, apart from the IIST.

• The satellite, which will be placed in a low earth orbit, is equipped with a Compact Ionosphere Probe for studying the earth's ionosphere. A constellation of earth and space-weather observation satellites is envisaged under the INSPIRE programme.

• IIST students were responsible for the design and development of the onboard computer and the electrical power supply for INSPIRESat-1.

> **PEPPER IT WITH**
> INSPIRE Scheme, YUVIKA Program

What is INSPIRE Programme?

➢ The International Satellite Program in Research and Education (INSPIRE) is a consortium of global space universities formed to advance space science and engineering, spearheaded by CU Boulder--LASP.

➢ Each INSPIRE small satellite will proceed from concept to flight in three years, providing the opportunity for undergraduate and graduate student involvement in small--satellite design, building, testing, and operations.

➢ INSPIRE brings science, engineering, and management to campuses across the globe. The INSPIRE program aims to provide a constellation of Earth and space weather--observing satellites.

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Landsat 9

News Excerpt

The Landsat 9 is an earth monitoring satellite which was successfully launched on September 27 from Vandenberg Space Force Base in California. It is a joint mission of NASA and the US Geological Survey (USGS).

Pre-Connect

- The first Landsat satellite was launched in 1972 and since then, Landsat satellites have collected images of our planet and helped understand how land usage has changed over the decades.
- In 2008, it was decided that all Landsat images will be free and publicly available and the policy has helped scores of researchers, farmers, policy analysts, glaciologists, and seismologists. Landsat images have been used to study the health of forests, coral reefs, monitor water quality and melting glaciers.

Highlights

➢ The Landsat 9 joins Landsat 8 that was launched in 2013 and the satellites together will collect images of Earth's surface. It takes 8 days to capture the whole Earth.

➢ Landsat 9 carries instruments similar to the other Landsat satellites, but it is the most technologically advanced satellite of its generation. It can see more colour shades with greater depths than the previous satellites, helping scientists capture more details about our ever-changing planet.

➢ The instruments aboard Landsat 9 are the Operational Land Imager 2 (OLI-2) and the Thermal Infrared Sensor 2 (TIRS-2). They will measure different wavelengths of light reflected off the Earth's surface.

➢ OLI-2 can see the light that we can't see too. It captures sunlight reflected off Earth's surface and studies the visible, near-infrared, and short wave infrared portions of the spectrum.

➢ TIRS-2 has a four-element refractive telescope and photosensitive detectors that capture thermal radiation and help study the Earth's surface temperature.

➢ As the satellite orbits, these instruments will take pictures across 185 kilometers and each pixel will represent an area of about 30 meter X 30 meter.

➢ Landsat satellites make contact with a ground station every few hours and offload its data.

How will the satellite help monitor climate change?

✓ If a forest is affected by drought, it will be seen in Landsat images and can help the researchers decode the areas at risk. Similarly, during a wildfire, the Landsat images will capture the plumes of smoke and help study the extent of a burning. The satellite images can also help recovery experts plan sites for replanting.

✓ Landsat images can also help identify water bodies affected by potentially harmful algal blooms. According to NASA, scientists are now developing computer programs that would use Landsat and other satellite data to automatically warn lake recreation managers when blooms pop up.

✓ Landsat images have helped glaciologists study the melting ice sheets of the Antarctic and Arctic regions. The images can help track cracks in the glaciers, movement of glaciers, and decode how further global warming will impact them.

> **PEPPER IT WITH**
> EOS-3, IRNSS, GAGAN

Dark Energy

News Excerpt

With advanced technologies and newer experiments, scientists have found certain clues about it and, recently, an international team of researchers made the first putative direct detection of dark energy.
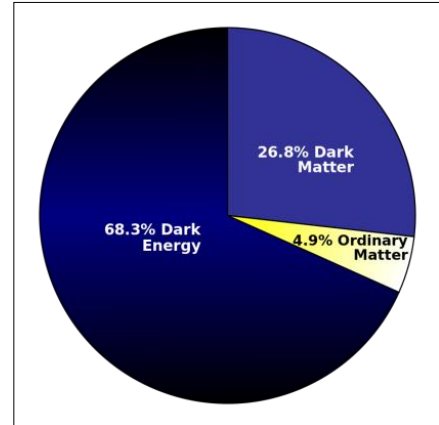
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Dark energy, the mysterious form of energy that makes up about 68% of the universe, has intrigued physicists and astronomers for decades. Dark energy has been noted as "the most profound mystery in all of science".
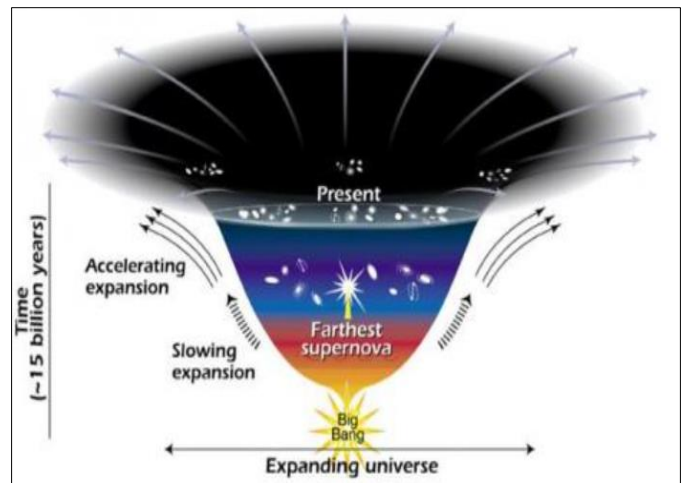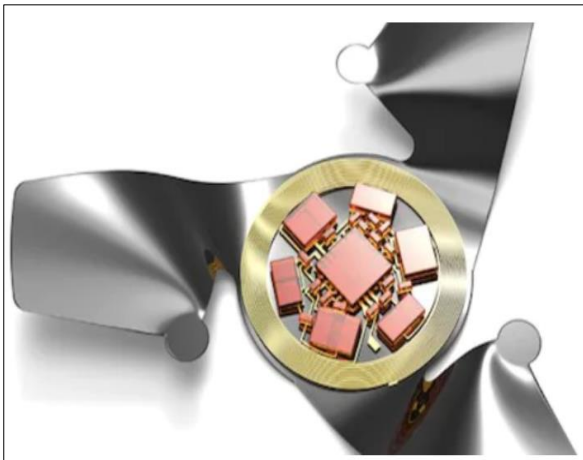
Highlights

- Scientists noticed certain unexpected results in an underground experiment and believe that dark energy may be responsible for it.
- The XENON1T experiment is the world's most sensitive dark matter experiment and was operated deep underground at the INFN LaboratoriNazionali del Gran Sasso in Italy.
- The finding also suggests that experiments like XENON1T, which are designed to detect dark matter, could also be used to detect dark energy.

Dark Energy Vs Dark Matter

➢ Everything we see – the planets, moons, massive galaxiesetc– makes up less than 5% of the universe. About 27% is dark matter and 68% is dark energy.

➢ While dark matter attracts and holds galaxies together, dark energy repels and causes the expansion of our universe.

➢ Despite both components being invisible, we know a lot more about dark matter, since its existence was suggested as early as t e 1920s, while dark energy wasn't discovered until 1998.

➢ Large-scale experiments like XENON1T have been designed to directly detect dark matter, by searching for signs of dark matter 'hitting' ordinary matter, but dark energy is even more elusive

Possible Explanations of Dark Energy

Property of Space	Quantum Theory of Matter	Dynamic Energy Fluid
•Albert Einstein was the first person to realize that empty space is not nothing. One version of **Einstein's gravity theory,** the version that contains a **cosmological constant,** implies that "empty space" can possess its own energy. •Because this energy is a property of space itself, it would not be diluted as space expands. As more space comes into existence, more of this energy-of-space would appear. As a result, this form of energy would cause the universe to expand faster and faster.	•Another explanation for how space acquires energy comes from the **quantum theory of matter.** In this theory, "empty space" is **actually full of temporary ("virtual") particles that continually form and then disappear.** •But when physicists tried to calculate how much energy this would give empty space, the answer came out wrong. So the mystery continues.	•Another explanation for dark energy is that it is a new kind of dynamical energy fluid or field, something that fills all of space but something whose effect on the expansion of the universe is the opposite of that of matter and normal energy. Some theorists have named this **"quintessence," after the fifth element of the Greek philosophers**

When can we get direct detection of dark energy?

✓ Scientists are thinking about new ways to search for dark energy.

✓ Upcoming upgrades to the XENON1T experiment and similar experiments such as LUX-Zeplin – a next generation dark matter experiment located at the Sanford Underground Research Facility, and PandaX-xT – another project at China Jinping Underground Laboratory could help directly detect dark energy within the next decade.

> **PEPPER IT WITH**
> Black Hole, Einstein's Theory of gravity

Smallest-ever Human-made Flying Structure

News Excerpt

Engineers from Illinois' Northwestern University have created an electronic microchip or "micro flier" with flight capabilities, which can help monitor air pollution levels and airborne diseases.

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Highlights

• The "smallest-ever human-made flying structure", which is about the size of a grain of sand, does not require an engine or a motor.

• Instead, it catches flight on the wind — much like a maple tree's propeller seed — and spins like a helicopter through the air toward the ground.

• The engineers behind this micro flier optimised their design by studying maple trees and other types of wind-dispersed seeds and fashioned the micro flier such that when dropped from a height it would fall at a slow velocity in a controlled manner.

• This helps stabilise its flight, ensures dispersal over a broad area and increases the amount of time it interacts with the air, making it ideal for monitoring air pollution and airborne diseases

> **PEPPER IT WITH**
> Drone Technology

• Scientists used ideas inspired by the biological world. Over the course of billions of years,

nature has designed seeds with very sophisticated aerodynamics. They borrowed those design concepts, adapted them and applied them to electronic circuit platforms.

- Evolution was likely the driving force for the sophisticated aerodynamics. These biological structures are designed to fall slowly and in a controlled manner, so they can interact with wind patterns for the longest possible period of time. This feature maximizes lateral distribution via purely passive, airborne mechanisms.

- The team designed many different types of micro fliers, including one with three wings, resembling the wings on a tristellateia seed.

SECURITY

Defence Industrial Corridor

News Excerpt

The government has setup two Defence Industrial Corridors in the Country, one in Uttar Pradesh and another in Tamil Nadu.

Highlights

- The Uttar Pradesh Defence Industrial Corridor is being set up by the Uttar Pradesh Expressways Industrial Development Authority (UPEIDA). It consists of the following six nodal points with the potential to develop defence industries in the corridor: Agra, Aligarh, Chitrakoot, Jhansi, Kanpur, and Lucknow.

- The Tamil Nadu Defence Industrial Corridor — also called the Tamil Nadu Defence Production Quad as the nodal cities form a quadrilateral with one of them at the centre — includes Chennai, Hosur, Salem, Coimbatore and Tiruchirappalli as nodes.

Analytica

- India is among the top 5 military spenders and one of the emerging defence manufacturing hubs in the world. To support the growth of the Defence sector and enhance manufacturing capacity in the sector.

- Setting up of Defence Industrial Corridors would catalyse indigenous production of defence and aerospace related items, thereby reducing our reliance on imports and promoting export of these items to other countries.

> **PEPPER IT WITH**
>
> About Micro Small and Medium Enterprises (MSMEs)

- This will lead to achieve India's goal of self-reliance in defence, generation of direct/indirect employment opportunities and growth of private domestic manufacturers, Micro Small and Medium Enterprises (MSMEs) and Star-ups.

Airspace Map of India

News Excerpt

An airspace map of India has been recently launched by the Ministry of Civil Aviation for drone operations.

Pre-Connect

- It will allow civilian drone operators to check the demarcated no-fly zones or where they need to undergo certain formalities before flying one.

- The drone airspace map comes as a follow-through of the liberalized Drone Rules, 2021 the PLI scheme for drones and the Geospatial Data Guidelines. All these policy reforms will catalyze super-normal growth in the upcoming drone sector.

Highlights

- This map has been developed by MapMyIndia and IT services firm Happiest Minds and is put up on the Directorate General of Civil Aviation's (DGCA) digital sky platform.

- The interactive map shows red, yellow and green zones across the country.

Green zone	Yellow zone	Red zone
▪ Green zone is the airspace up to 400 feet that has not been designated as a red or yellow zone, and up to 200 feet above the area located between 8-12 km from the perimeter of an operational airport. ▪ In green zones, no permission is required for operating drones with an all-up weight of up to 500 kg.	▪ Yellow zone is the airspace above 400 feet in a designated green zone, and above 200 feet in the area located between 8-12 km from the perimeter of an airport, and above ground in the area located between 5-8 km from the perimeter of an airport. ▪ Drone operations in yellow zone require permission from the concerned air traffic control authorities — which could be either the Airports Authority of India, the Indian Air Force, the Indian Navy, Hindustan Aeronautics Ltd, etc as the case may be.	▪ Red zone is the 'no-drone zone' within which drones can be operated only after a permission from the Central government.

- The Yellow zone has been reduced from 45 km earlier to 12 km from the airport's perimeter.
- The map is available on DGCA's digital sky platform (https://digitalsky.dgca.gov.in/home) and the government said that it may be updated and modified by authorised entities from time to time.
    - The drone airspace map is freely available on the digital sky platform to all without any login requirements.

> **PEPPER IT WITH**
> Drone Rules, 2021 and the PLI Scheme for drones

Analytica

Drones offer tremendous benefits to almost all sectors of the economy. These include – agriculture, mining, infrastructure, surveillance, emergency response, transportation, geo-spatial mapping, defence, and law enforcement to name a few.

Drones can be significant creators of employment and economic growth due to their reach, versatility, and ease of use, especially in India's remote and inaccessible areas.

India, U.S. agreement for Air-Launched Unmanned Aerial Vehicle

News Excerpt

Recently, India and the US have signed an agreement to jointly develop air-launched unmanned aerial vehicle (ALUAV) or drones that can be launched from an aircraft.

Pre-Connect

- The DTTI was announced in 2012 as an ambitious initiative for co-production and co-development of military systems but has never really taken off despite several efforts.
- The main aim of the DTTI is to bring sustained leadership focus to promote collaborative technology exchange and create opportunities for co-production and co-development of future technologies for Indian and U.S. military forces.

Highlights

- The Project Agreement (PA) was signed between the Ministry of Defence (MoD) and U.S. Department of Defence (DoD) by the co-chairs of the Joint Working Group (JWG) on Air

Systems, under the Defence Technology and Trade Initiative (DTTI).

➢ The PA outlines the collaboration between Air Force Research Laboratory, Indian Air Force, and Defence Research and Development Organisation (DRDO) towards design, development, demonstration, testing and evaluation of systems to co-develop an ALUAV prototype.

➢ The PA for the ALUAV fell under the Research, Development, Testing and Evaluation Memorandum of Agreement between MoD and U.S. DoD.
  o It was first signed in January 2006 and renewed in January 2015.

➢ The Aeronautical Development Establishment at the Defence Research and Development Organisation and the Aerospace Systems Directorate at the Air Force Research Laboratory, along with the Indian and U.S. Air Forces, were the principal organisations for the execution of the PA.

➢ It was a significant step towards deepening defence technology collaboration between the two nations through co-development of defence equipment.

Analytica

✓ The two countries have also inked key defence and security pacts over the past few years, including the Logistics Exchange Memorandum of Agreement (LEMOA) in 2016 that allows their militaries to use each other's bases for repair and replenishment of supplies as well as provides for deeper cooperation.

✓ The two sides have also signed COMCASA (Communications Compatibility and Security Agreement) in 2018 that provides for interoperability between the two militaries and the sale of high-end technology from the US to India.

PEPPER IT WITH
General Security of Military Information Agreement (GSOMIA) and Generalized System of Preferences (GSP)

✓ In October last year, India and the US sealed the BECA (Basic Exchange and Cooperation Agreement) agreement to further boost bilateral defense ties. The pact provides for sharing of high-end military technology, logistics and geospatial maps between the two countries.

Defense Exercises

News Excerpt

Recently, a contingent of the Indian Army participated in the seven-day long ZAPAD-2021 Multilateral 'Joint Strategic Exercise' hosted by the Soviet Union and the Russian Federation.

- ZAPAD 2021 was held at Mulino in the Novgorod Region of Russia.

Highlights

➢ It is one of the theatre level exercises of Russian armed forces and will focus primarily on operations against terrorists.

➢ The exercise aims to enhance military and strategic ties amongst the participating nations while they plan and execute this exercise.

➢ Over a dozen countries from Eurasian and South Asian Region will participate in this signature event.
  o Of these nine are Participating countries which include Mongolia, Armenia, Kazakhstan, Tajikistan, Kyrgyzstan, Serbia, Russia, India and Belarus.

PEPPER IT WITH
Exercise INDRA 2021.

  o The other eight countries are Observers which include Pakistan, China, Vietnam, Malaysia, Bangladesh, Myanmar, Uzbekistan and Sri Lanka.

➢ The NAGA Battalion group participating in the exercise will feature an all Arms combined task force.

SIMBEX

News Excerpt

Recently, India and Singapore have carried out the 28th edition of the Singapore-India Maritime Bilateral Exercise (SIMBEX).

Highlights

➢ Initiated in 1994, SIMBEX is the Indian Navy's longest uninterrupted bilateral maritime exercise with any foreign navy.

➢ The 28th edition of SIMBEX was a mega naval wargame in the southern fringes of the South China Sea in reflection of their growing congruence of interests in the strategically key region.

➢ The success of SIMBEX-2021 is yet another demonstration of the mutual resolve on both sides to strengthen the bilateral partnership further in the years ahead.

➢ Both navies have a representation in each other's Maritime Information Fusion Centres and have also recently signed an agreement on mutual submarine rescue support and coordination.

> **PEPPER IT WITH**
> SITMEX: Trilateral Maritime Exercises, Bold Kurukshetra

AUSINDEX

News Excerpt

Recently, the Australian and Indian Navy have concluded a 4th edition of bilateral maritime exercise code-named AUSINDEX.

Pre-Connect

• The bilateral exercise comes on the heels of the Malabar Naval Exercise, one of the largest wargaming exercises of India, in which all the four members of the Quad had participated—India, Australia, the US and Japan—in the last week of August.

• The series of exercises are a part of the two-month deployment of the Navy's Eastern Fleet to Southeast Asia, South China Sea and the Western Pacific.

Highlights

➢ AUSINDEX, which began in 2015 "has grown in complexity over the years and the 3rd edition of the exercise, held in 2019 in the Bay of Bengal, included anti-submarine drills for the first time.

    o Australia's Northern Territory hosts the biennial AUSINDEX, 2021 maritime warfare exercises.

➢ This edition of AUSINDEX includes complex surface, sub-surface and air operations between ships, submarines, helicopters and Long Range Maritime Patrol Aircraft of the participating Navies.

> **PEPPER IT WITH**
> Malabar Exercise and Exercise Pitch Black.

➢ This important document is aligned to the '2020 Comprehensive Strategic Partnership' between the two nations and aims to further consolidate shared commitment to regional and global security challenges promoting peace, security and stability in the Indo-Pacific region.

SAMUDRA SHAKTI'

News Excerpt

Recently, the 3rd edition of Bilateral Exercise 'Samudra Shakti' between India and Indonesia conducted in the Sunda Strait.

Highlights

➢ In pursuance of India's Act East Policy, Exercise 'Samudra Shakti' was conceived in 2018 as a bilateral IN-IDN exercise.

- The exercise aims to strengthen the bilateral relationship, enhance mutual understanding and interoperability in maritime operations between the two navies.

- The participating Indian Navy ships Shivalik and Kadmatt are amongst the latest indigenously designed and built multi-role Guided Missile Stealth Frigate and Anti-Submarine Corvette respectively.
- Indian Navy's Anti-Submarine Warfare capable Long Range Maritime Reconnaissance Aircraft P8I is also participating in the exercise.
- The exercise will also provide an appropriate platform to share best practices and develop a common understanding of Maritime Security Operations.

Surya Kiran

News Excerpt

Recently, the 15th India-Nepal combined battalion-level military training exercise 'SURYA KIRAN' was held at Pithoragarh (UK).

Highlights

- The biannual exercise – which takes place alternately in both countries.
    - Last edition of Exercise Surya Kiran was conducted in Nepal in 2019.
- The aim of the 15th India-Nepal military training exercise 'Surya Kiran' is to boost overall inter-operability between the two militaries and share their experience of counter-terrorism operations and disaster relief operations.
- The Indian side in the joint exercise is being represented by the 6th Garhwal Regiment, while the Nepalese side is being represented by Ripu Daman battalion of Nepali Army.

C-295MW transport aircraft

News Excerpt

Recently, the Cabinet Committee on Security (CCS) cleared procurement of 56 transport aircraft for Indian Air Force.

Highlights

- The procurement of 56 C-295MW transport aircraft from Airbus Defence and Space S.A., Spain.
- C-295MW aircraft is a transport aircraft of 5-10 Tonne capacity with contemporary technology that will replace the ageing Avro aircraft of IAF.
    - The fleet will replace the Avro aircraft of the Air Force, which are British-origin twin-engine turboprop, military transport and freighter with a 6-tonne freight capacity.
- The aircraft has a rear ramp door for quick reaction and para dropping of troops and cargo.
- It is powered by Pratt & Whitney PW127 engines, part of the PW100 family. All aircraft to be installed with indigenous Electronic Warfare Suite
- This is the first project of its kind in which a military aircraft will be manufactured in India under technology transfer by the private sector.
    - During the process of manufacturing in India, it is expected that all thesuppliers of TATA Consortium who will be involved in special processes will gain and maintain globally recognized National Aerospace and Defence Contractors Accreditation Program (NADCAP) accreditation.

Analytica

- ✓ The programme will provide major boost to the `Atmanirbhar Bharat Abhiyan' of the Government as it offers a unique opportunity for the Indian Private Sector to enter into technology intensive and highly competitive aviation Industry.

- ✓ The project will augment domestic aviation manufacturing resulting in reduced import dependence and expected increase in exports.
    - o A large number of detail parts, sub-assemblies and major component assemblies of aero structure are scheduled to be manufactured in India.
- ✓ The programme would act as a catalyst in employment generation in the aerospace ecosystem of the country.
    - o It was expected to generate 600 highly skilled jobs directly, over 3,000 indirect jobs and an additional 3,000 medium skill employment opportunities with more than 42.5 lakh man hours of work within the aerospace and defence sector of India.
- ✓ It will involve development of specialised infrastructure in form of hangars, buildings, aprons and taxiway.
    - o Before completion of deliveries, 'D' Level servicing facility (MRO) for C-295MW aircraft were scheduled to be setup in India.
    - o It is expected that this facility will act as a regional MRO (Maintenance, Repair, and Operations) hub for various variants of C-295 aircraft.

Maoist influence down

News Excerpt

According to data provided by the Ministry of Home Affairs (MHA), there has been a steady decline in Left Wing Extremism (LWE) related violence and geographical spread of LWE influence in the country.

Highlights

- The geographical influence of Maoists has contracted to only 41 districts in the country, a sharp reduction from 96 such districts in 10 States in 2010.
- According to the ministry, there has been a gradual decline in the number of LWE incidents in the last decade.
    - o The incidents have reduced from 2,258 in 2009 to 349 incidents till August 31 this year.
    - o The number of deaths reduced from 908 to 110 during the same period.

Left Wing Extremism (LWE)

- ➢ Left wing extremism, also known by various other names such as naxalism and Maoism, is a form of armed insurgency against the State motivated by leftist ideologies.
- ➢ Naxalism has been operating in several parts of the country. It has been there from the late 60s and 70s and different parts of the country have been affected with different levels of naxal violence.
    - o The States of Chhattisgarh, Jharkhand, Odisha, Bihar, West Bengal, Andhra Pradesh, Telangana, Maharashtra, Madhya Pradesh, Uttar Pradesh and Kerala are considered LWE affected, although in varying degrees.
- ➢ A significant change came about with the merger of the Peoples War Group and the MCC to form the CPI (Maoist) in 2004.
    - o The objective of the CPI (Maoist) Party is the armed overthrow of the Indian State. They do not have any belief in parliamentary democracy.
    - o The CPI (Maoist) Party, is the major Left Wing Extremist outfit responsible for a majority of incidents of violence and killing of civilians and security forces and has been included in the Schedule of Terrorist Organizations along with all its formations and front organizations under the Unlawful Activities (Prevention) Act, 1967.
- ➢ In 2005, then PM described the LWE challenge as the most serious security threat to India.
- ➢ The Union Home Ministry first created the LWE desk, a separate department to address the Maoist issue in 2006.
    - o The LWE Division implements security related schemes aimed at capacity building in the LWE affected States.

- o The LWE Division coordinates the implementation of various development schemes of the Ministries/Departments of Govt. of India in LWE affected States.
- ➢ LWE has its genesis in poor governance, lack of development in the tribal belt and an oppressive/exploitative hierarchy of the state and society that has pushed the tribal population, the landless and the socio-economically backward sections to the margins of survival.

Issues

The root cause of dissatisfaction is that development has not reached there in last six decades since Independence and now to deal with it, it is very essential to ensure accessibility to fast-paced development so that common and innocent people do not join them.

Government Strategy to Curb LWE

- ✓ **Operation Green Hunt** was the unofficial name for major operation undertaken by security forces in September 2009 under MHA's guidance to "flush out" insurgents from Naxal affected border areas of states in 'Red Corridor'
  - o The operation met with success but as a response to the offensive, the Naxals too launched violent attacks on the security forces, the worst being ambush on CRPF troops in April 2010 which cost lives of 75 policemen/CRPF men, the maximum number ever killed by the Maoists in any single conflict.
- ✓ **The National Policy and Action Plan formed in 2015** to address left Wing Extremism', aimed at eliminating the menace in the "shortest possible timeframe by using any element of the country's national power".
  - o The plan envisaged adopting a four pronged strategy in the areas of 'security, development, ensuring rights & entitlement of local communities and management of public perception' with the focus towards addressing the existing deficits in LWE affected areas.
  - o On the security front the Government laid emphasis on capacity building of the concerned State Governments and improving the security environment through various schemes such as Security Related Expenditure (SRE) scheme, construction of fortified police stations, construction of critical roads etc.
- ✓ **Operation 'Samadhan':** An integrated strategy through which LWE can be countered with full force and competence'. This is a compilation of short term and long-term policies formulated at different levels. SAMADHAN Stand for:-
  - o S- Smart Leadership
  - o A- Aggressive Strategy
  - o M- Motivation and Training
  - o A -Actionable Intelligence
  - o D- Dashboard Based KPIs (Key Performance Indicators) and Key Result Areas
  - o H- Harnessing Technology
  - o A-An Action plan for each Theatre
  - o N- No Access to Financing
- ✓ **Current Strategy:** The Government's approach is to deal with Left Wing Extremism in a holistic manner, in the areas of security, development, ensuring rights and entitlements of local communities, improvement in governance and public perception management.

Important Initiatives for LWE affected States

In order to holistically address the LWE problem in an effective manner, Government has formulated National Policy and Action Plan adopting multi-pronged strategy in the areas of security, development, ensuring rights & entitlement of local communities etc.

1. **Security Related Expenditure (SRE) Scheme:** The SRE Scheme aims at strengthening of the capacity of the LWE affected States to fight the LWE menace effectively.
2. **LWE Mobile Tower Project:** To improve mobile connectivity in the LWE areas.
3. **Road Connectivity Project for LWE affected areas (RRP-II):** for improving road connectivity

in LWE affected States.

4. **Special Central Assistance (SCA):** The main objective of the Scheme is to fill the critical gaps in Public infrastructure and Services, which are of emergent nature.

Way Forward

✓ It is the belief of the Government of India that through a holistic approach focussing on development and security-related interventions, the LWE problem can be successfully tackled.

✓ Para-military reforms: the Kargil Review Committee (KRC) report noted that the new situation of proxy war and large scale terrorism that the country faces, the role and the tasks of the para-military forces have to be restructured particularly with reference to command and control and leadership functions.

✓ Modernization of Police Forces: State plays vital role in maintaining law and order. Central forces have the numbers and the training, but they have no local knowledge or intelligence. Only local police can drive out Maoists.

Akash missile

News Excerpt

Recently, the Defence Research and Development Organisation (DRDO) conducted the maiden flight test of the new version of Akash Missile — Akash Prime - from Integrated Test Range (ITR), Chandipur, Odisha.

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Pre-Connect

• This comes months after the maiden test of another Akash version, Akash-NG (New Generation), and the Man Portable Anti-Tank Guided Missile (MPATGM).

• Unlike its earlier version, Akash-NG uses a two-pulse solid rocket motor that gives it a longer range and the ability to generate a high terminal velocity.

  o It is capable of intercepting high manoeuvring low radar cross section aerial targets.

• The indigenously developed low weight Man Portable Anti-Tank Guided Missile (MPATGM) was successfully test-fired validating the weapon system's minimum range.

  o The missile hit the target in direct attack mode and destroyed it with precision.

Highlights

➢ In comparison to the existing Akash System, Akash Prime is equipped with an indigenous active Radio Frequency (RF) seeker for improved accuracy to hit aerial targets.

➢ Other improvements also ensure more reliable performance under low temperature environments at higher altitudes.

➢ The Akash missiles have been developed by DRDO's Defence Research and Development Laboratory (DRDL), Hyderabad under the Missiles and Strategic Systems (MSS), in collaboration with several other DRDO facilities in the country along with industry partners.

The Akash missile

✓ Akash is India's first indigenously designed, developed and produced air defence system and the cheapest surface-to-air missile ever produced in the world with supersonic interception speed.

  o According to the Ministry of Defence, the Akash Missile system is 96 per cent indigenised, one of the highest proportions of the indigenisation.

✓ The development of the Akash surface-to-air missile (SAM) was started by the DRDO in the late 1980s as part of the Integrated Guided Missile Development Programme.

> **PEPPER IT WITH**
> Defence Research and Development Organisation (DRDO) and the Integrated Guided Missile Development Programme

✓ The Akash weapon system can simultaneously engage multiple targets in group mode or autonomous mode.

✓ It has built-in Electronic Counter-Counter Measures (ECCM) features, which means that it has

✓ mechanisms on-board that can counter the electronic systems that deceive the detection

systems.

✓ The entire weapon system has been configured on a mobile platform. A full Akash missile system comprises a launcher, set of missiles, a control centre, an built-in mission guidance system and a C4I (command, control communication and intelligence) centres and supporting ground equipment along with a radar named Rajendra which accompanies each of the missile batteries.

ART & CULTURE

Hare Krishna movement

News Excerpt

Recently, the Prime Minister has released a special commemorative coin of Rs 125 to mark the 125th birth anniversary of ISKCON founder SrilaBhaktivedanta Swami Prabhupada.

Pre-Connect

- Swami Prabhupada founded the International Society for Krishna Consciousness (ISKCON), also known as the "Hare Krishna movement", in New York in 1966.
  - o ISKCON is popularly known as the "Hare Krishna" movement, due to its members' widespread practice of chanting the Hare Krishna mantra in public.
- ISKCON has translated the Shrimad Bhagavad Geeta and other Vedic literature in 89 languages, playing a stellar role in the dissemination of Vedic literature across the world.
- Srila Prabhupada passed away on 14th November 1977, but his mission garnered a huge success.

Highlights

- ➢ The influence of Srila Bhakti siddhanta Saraswati's philosophy proved to be a milestone in Abhay Charan's life. He told Abhay Charan to introduce the philosophies of Lord Krishna in the west.
- ➢ Srila Prabhupada was born Abhay Charan De on September 1, 1896 to a pious Hindu family in Calcutta.
  - o He is also the founder-acharya of the ISKCON.
  - o The Hare Krishna movement, or ISKON, is a branch of Gaudiya Vaishnava.
- ➢ He is widely regarded as the foremost Vedic scholar, translator, and teacher of the modern era.
- ➢ He is especially respected as the world's most prominent contemporary authority on bhakti-yoga, devotional service to the Supreme Person, Sri Krishna, as taught by the ancient Vedic writings of India.
- ➢ Swamiji also established over a hundred temples and wrote several books, teaching the path of Bhakti Yoga to the world.
  - o His most appreciated and famous works include 'Bhagavad Gita As It Is', 30-volumes of 'Srimad Bhagavatam', and 17-volumes of 'Sri Chaitanya Charitamrita'.
- ➢ Śrīla Prabhupāda: The Founder-Ācārya of ISKCON, authored by Ravīndra Svarūpa Dāsa, is officially endorsed by ISKCON's Governing Body Commission (GBC).
- ➢ In his later years, as a travelling Vaishnava monk, he became an influential communicator of GaudiyaVaishnava theology to India and specifically to the West through his leadership of ISKCON, founded in 1966.

Gaudiya Vaishnavism

- ✓ Gaudiya Vaishnavism (also known as Bengali Vaishnavism or Chaitanya Vaishnavism) is a Vaishnava religious movement founded by Sri Chaitanya Mahaprabhu (1486–1534) in India in the 16th century.
  - o "Gaudiya" refers to the Gauda region (present day West Bengal & Bangladesh) and Vaishnavism meaning "the worship of Vishnu".
- ✓ Its philosophical basis is primarily that of the Bhagavad Gita and Bhagavata Purana, as well as other Puranic scriptures and Upanishads.
- ✓ The focus of Gaudiya Vaishnavism is the devotional worship (bhakti yoga) of Radha and Krishna, and their many divine incarnations as the supreme forms of God – Svayam Bhagavan.
- ✓ Most popularly, this worship takes the form of chanting or singing Radha and Krishna's holy names, such as "Hare", "Krishna" and "Rama", most commonly in the form of the Hare Krishna mahamantra.

Cultural mapping

News Excerpt
Recently, the National Mission on Cultural Mapping (NMCM) has now been handed over to the Indira Gandhi National Centre for the Arts (IGNCA), which is gearing up for a trial run in 75 villages in October, 2021.

Pre-Connect
- The Indira Gandhi National Centre for the Arts (IGNCA) was established in 1987 as an autonomous institution under the Ministry of Culture, as a centre for research, academic pursuit and dissemination in the field of the arts.
- The IGNCA would aim to complete mapping in 5,000 villages by the end of financial year 2021-2022

Highlights
➢ National Mission on Cultural Mapping (NMCM) has been set up by the Ministry of Culture in 2017 to build a comprehensive database of artists, art forms and other resources from organisations under the Ministry.
➢ It is a mission mode project -
   o To envision and address the necessity of preserving the threads of rich Indian Art and Cultural Heritage.
   o To Convert vast and widespread cultural canvass of India into an objective Cultural Mapping.
   o To Design a mechanism to fulfill the aspirations of the whole artist community of the nation.
   o To Preserve the rich cultural heritage of this country for future generations.
   o To create a strong "cultural vibrancy" throughout the nation.
➢ The work of creating a database for folk arts and mapping of heritage of villages would be carried out over five years.
➢ The Mission encompasses data mapping, demography building, formalising the processes and bringing all cultural activities under one umbrella for better results.

> **PEPPER IT WITH**
> Scheme of Financial Assistance for Promotion of Art and Culture,
> Scheme for Pension and Medical Aid to Artistes, and
> Scheme for Safeguarding the Intangible Cultural Heritage

➢ No direct benefits or assistance has been extended through this Mission to the registered artists/institution,
   o So far 14.53 lakhs artists/artisans have been registered on NMCM portal.
➢ Cultural mapping has been recognized by UNESCO as a crucial tool and technique in preserving the world's intangible and tangible cultural assets.

Miscellaneous

Porunai civilisation

- Recently carbon dated and analysed rice and soil found in a burial urn at Sivakalai archaeological excavation centre in Thoothukudi district of Tamil Nadu.

- The Porunai river [Thamirabarani] civilisation dates back to 3,200 years, almost as old as the Indus Valley Civilisation, in the northwestern part of the Indian subcontinent.

> **Carbon dating:** It is a method for determining the age of an object containing organic material by using the properties of radiocarbon, a radioactive isotope of carbon.
>
> The method was developed in the late 1940s at the University of Chicago by Willard Libby, who received the Nobel Prize in Chemistry to this work in 1960.

  - o The spot where the river meets the Gulf was the location of Korkai, an important port of the ancient Tamil Pandyan Kingdom.
  - o Korkai port was famous for the export of pearls.

- The only major perennial river in Tamil Nadu, Thamirabarani has been mentioned as Porunai, Than Porunai, Porunal and Poruntham in Tamil literature right from the Sangam era to Nayakar era (6th century BCE to 17th century CE)..
  - o Than Porunai finds a place in Tholkappiam, an ancient treatise on Tamil grammar.
  - o Porunai is also mentioned in the Sangam work Puranaanooru.
  - o One folk etymology says that the river was also called 'Tamraparani' in the classical period.

- In the first phase, studies would be undertaken at the ancient port of Muziris, now known as Pattanam, in Kerala.

- The Tamil Nadu Archaeology Department would conduct research at Quseir al-Qadim and PernicaAnekke in Egypt, which were once part of the Roman empire, as well as in KhorRori in Oman, to establish the Tamils' trade relations with these countries.

- The outcome of the excavations at Keeladi, Kodumanal and other sites in Tamil Nadu have corroborated the view that there might have been contacts between south India and north India as early as 600 BCE-700 BCE or even earlier.

Raja MahendraPratap Singh

- Recently, the Prime Minister laid the foundation stone of Raja MahendraPratap Singh University in Aligarh, Uttar Pradesh.

- He was born into the ruling Jat family of Mursan estate in Hathras in 1886. He was a freedom fighter, revolutionary, writer, social reformer, and internationalist.

- He was well versed in eight different languages. He called himself the servant of the powerless and weak.

- In 1929, MahendraPratap launched the World Federation in Berlin. In 1932, he was nominated for the Nobel Peace Prize.

- He entered LokSabha as an Independent candidate from Mathura in 1957.

- In free India, he diligently pursued his ideal of panchayati raj.

- In 1909, he gave up his own residence in Mathura to be converted into a technical school named PremMahavidyalaya. It is said to have been the country's first polytechnic.

Contribution to the Freedom Struggle:

➢ In 1913 he took part in Gandhi's campaign in South Africa.

➢ On December 1, 1915, he proclaimed the first Provisional Government of India outside India at the historic Bagh-e-Babur in Kabul.
  - o He declared himself president, and his fiery fellow revolutionary MaulanaBarkatullah of Bhopal, prime minister, of the Provisional Government.

➢ He is said to have met Vladimir Lenin in 1919, two years after the Bolshevik Revolution.

➢ In 1925 he went on a mission to Tibet and met the Dalai Lama. He was primarily on an

unofficial economic mission on behalf of Afghanistan, but he also wanted to expose the British brutalities in India.

➢ The Raja finally returned to India a year before Independence, and immediately began work with Mahatma Gandhi.

Global award in turtle conservation

- Indian biologist Shailendra Singh has been awarded the Behler Turtle Conservation Award for bringing three critically endangered turtle conservation species back from the brink of extinction.
    - o There are 29 species of freshwater turtles and tortoises in the country.
- The Behler Turtle Conservation Award was established in 2006 to recognise outstanding achievements, contributions and leadership excellence in international turtle conservation and biology.
- The award has been bestowed by several global bodies involved in turtle conservation such as Turtle Survival Alliance, IUCN/SSC Tortoise and Freshwater Turtle Specialist Group, Turtle Conservancy, and the Turtle Conservation Fund.
- These critically endangered turtles are being conserved as a part of the Turtle Survival Alliance (TSA)India's research, conservation breeding and education programme in different parts of the country. The program now protects 18 of India's 29 turtle and tortoise species.
    - o The Northern River Terrapin (Batagurbaska) is being conserved at the Sunderbans;
    - o The Red-crowned Roofed Turtle (Batagurkachuga) at Chambal; and
    - o The Black Softshell Turtle (Nilssonianigricans) at different temples in Assam.

Udham Singh

- Singh, born in Sunam in Punjab's Sangrur district in 1899, He was deeply influenced by Bhagat Singh's ideology and politics.
- Udham Singh was a political activist who got associated with the Ghadar Party while in the US. In 1924, he became an active member of the party in America.
    - o The multi-ethnic party was believed to have communist tendencies and was founded by Sohan Singh Bhakna in 1913. Headquartered in California, the party was committed to the ouster of the British from India.
- He also mobilised Indians through his own organisation, called the Azad Party.
- Udham Singh had avenged the massacre of hundreds of people in JallianwalaBagh on April 13, 1919 by General Reginald Edward Harry Dyer by killing Michael O'Dwyer, who was the Governor of Punjab when the massacre took place, in London 21 years later. Charged with murder, he was hanged to death in 1940 in a prison in London.
    - o In 1934, Singh made his way to London with the purpose of assassinating O'Dwyer, Singh considered O'Dwyer to be responsible for the massacre.
- On 13 March, 1940, Udham Singh shot dead Michael O'Dwyer at a meeting of the East India Association and the Royal Central Asian Society at the Caxton Hall in London.
- On 31 July, 1940, after a brief trial, Udham Singh was hanged at Pentonville Prison north of London.
- The Kamboj community had installed a statue of Udham Singh at JallianwalaBagh in 2018

V. O. Chidambaram Pillai

- Recently, Prime Minister of India paid tribute to the contributions of freedom fighter V O Chidambaranar on his 150th birth anniversary.
- He was popularly known as Kappalottiya Tamilan (The Tamil Helmsman) and Sekkizuththa Semmal (scholarly gentry who suffered at the oil press).
- He was born on 05 September 1872 to an eminent lawyer Olaganathan Pillai and Paramyee Ammai in Ottapidaram, Tirunelveli district of Tamil Nadu.
- His tussle with the judge forced him to seek fresh pastures at Tuticorin in 1900.Until 1905,

professional and journalistic activities consumed most of his energy.
- He entered politics in 1905 following the partition of Bengal.
    - Towards the end of 1905, He visited Madras and was drawn closer to the Swadeshi Movement initiated by Bal Gangadhar Tilak and Lala LajpatRai.
    - He was drawn towards Ramakrishna Mission and came into contact with Subramania Bharati and the Mandayam family.
- He founded the Swadeshi Steam Navigation Company (SSNC) in 1906 to compete against the monopoly of the British India Steam Navigation Company.]
- VOC and Siva were aided in their efforts by a number of Tirunelveli-based lawyers, who formed an organisation called the SwadeshiSangam, or 'National Volunteers'.
- The nationalist movement acquired subaltern character with the beginning of the Tuticorin Coral Mills strike.
- V. O. Chidambaram Pillai, along with other leaders, resolved to take out a mammoth procession on the morning of 9thMarch 1908 to celebrate the release of B.C. Pal from jail and to hoist the flag of Swaraj.
- He was also an erudite scholar.
    - o The autobiography in Tamil verse which he started in prison was completed upon his release in 1912.He also wrote a commentary on the Thirukural and compiled ancient works of Tamil grammar, Tholkappiam. He showed ingenuity in his works of Meyyaram and Meyyarivu, praised for spontaneous style, and earned an indisputable reputation for translations of James Allen's books.
    - o He was died on the 18 November 1936 in the Indian National Congress Office at Tuticorin as was his last wish.

Acharya Vinoba Bhave Jayanti

- Recently, Prime Minister of India paid tribute to the Acharya Vinoba Bhave on his Jayanti.
- He was born on 11 September, 1895, at Gagode in Kolaba district, Maharashtra . He was the eldest son of Narahari Shambhu Rao and Rukmini Devi.
- He was a nonviolence activist, freedom activist, social reformer and spiritual teacher.An avid follower of Mahatma Gandhi, Vinoba upheld his doctrines of non-violence and equality.
    - o He was attracted towards the principles and ideologies of Mahatma Gandhi and he considered Gandhi his guru, from both political and spiritual point of view.
- On April 8, 1921, Vinoba went to Wardha to take charge of a Gandhi-ashram there under the directives from Gandhi. During his stay at Wardha, Bhave also brought out a monthly in Marathi, named, `Maharashtra Dharma'.
- Some of the books written by him are Swarajya Sastra, Geeta Pravachane, Teesri Shakti or The Third Power etc.

Role in Freedom Struggle:
- He took part in programs of non-cooperation and especially the call for use of Swadeshi goods instead of foreign imports.
- In 1940, he was chosen as the first Individual Satyagrahi (an Individual standing up for Truth instead of a collective action) by Gandhi himself.

Social Work:
- VinobaBhave worked tirelessly towards eradicating social evils like inequality.
- Influenced by the examples set by Gandhi, he took up the cause of people that his guru lovingly referred to as Harijans.
- He adopted the term Sarvodaya from Gandhi which simply means "Progress for All".
- The Sarvodaya movement under him implemented various programs during the 1950s, the chief among which is the Bhoodan Movement.
    - o On April 18, 1951, the Harijans of the Pochampalli village requested him to provide them with around 80 acres of land to make a living.He is best known for his 'Bhoodan

Movement' (Gift of the Land).

- o He was successful in collecting around 4.4 million acres of land, of which around 1.3 million was distributed among poor landless farmers.

Religious Work:

- He was greatly influenced by the Bhagvad Gita and his thoughts and efforts were based upon the doctrines of the Holy Book.
- He established the Brahma Vidya Mandir in 1959, a small community for women, aiming at self-sufficiency on the lines of Mahatma Gandhi's teachings.
- He took a strong stand on cow slaughter and declared to go on fast until it was banned in India.

Mahakavi Subramania Bharati

- Recently, the Vice-President paid floral tributes to Mahakavi Subramania Bharati to mark the death centenary (100th) of the poet and freedom fighter.
- He was a poet, freedom fighter and social reformer from Tamil Nadu. He was known as "Mahakavi Bharathiyar".
- He was born on 11th December 1882, in a village called Ettayapuram in Tamil Nadu.
- In 1904 he joined Swadesamitran, a Tamil daily in Chennai as its sub-editor and remained associated with the newspaper till his death.
- In 1906 he also joined Chakravartini, a Tamil monthly that focused on women's issues.
- In order to proclaim its revolutionary ardour, Bharathi had the weekly newspaper India, printed in red paper.
  - o "India" was the first paper in Tamil Nadu to publish political cartoons.
  - o He also published and edited a few other journals like "Vijaya".
- Bharathi used to attend the Annual sessions of Indian National Congress and discuss national issues with extremist Indian National Leaders like Bipin Chandra Pal, B.G. Tilak and V.V.S. Iyer.
  - o His participation and activities in Benaras Session (1905) and Surat Session (1907) of the Indian National Congress impressed many national leaders about his patriotic fervour.
- He published the sensational "Sudesa Geethangal" in 1908.
- Bharathiwas essentially a lyrical poet: "Kannan Pattu" "NilavumVanminumKatrum" "Panchali Sabatam" "Kuyil Pattu" are examples of Bharathi's great poetic output.
- Bharati's reaction to the Russian Revolutions of 1917, in a poem entitled "Pudiya Russia" ("The New Russia"), offers a fascinating example of the poet's political philosophy.
- Bharathi died on 11th September 1921.
- The International Bharati Festival 2020 was organised by Vanavil Cultural Centre to celebrate the 138th birth anniversary of Mahakavi Subramanya Bharathi.
  - o Scholar Shri Seeni Viswanathan received the Bharathi Award for the year 2020.

Concept Clearing Assignment

1. With worsening relations between India and China as well as Australia and China in recent years, both New Delhi and Canberra have been realigning their interests and partners, and those connections will likely grow manifold in the coming years. Discuss.

2. The Russian Far East's underdevelopment has been a source of concern for Moscow. Elucidate.

3. What are blue stragglers? How is blue straggler different from others? What is the significance of blue stragglers?

4. What do you understand by the Coronal Mass Ejection (CME)? How the Coronal Mass Ejection (CME) can affect the satellites and disrupt communication networks on Earth? Why astronomers are particularly interested in the study of Coronal Mass Ejection (CME)?

5. What is the Solar DC Cooking System? What are its salient features? How it helps to build the resilient families and break the cycle of poverty?

6. Critically examine the role of Election Commission of India in the registration of political parties to assure free and fair elections with equal representation in the country. Also, highlights the challenges in this context.

7. With the rise of Non-performing assetsin Indian banking sector, creation of Bad bank would provide effective solution. Critically analyze?

8. The climate change deliberations are doomed to be failed if wetland are not given due importance. Illustrate with special reference to the challenges pertaining in India regarding wetland conservation?

9. Discuss the India's effort to assure social protection preparedness. How social protection can be provided to women and children?

10. What are the reasons behind the rise of crime against women in the last two decades in India? Explain especially in context of the new forms of gender violence that are taking place.

11. AcharyaVinobaBhave tirelessly worked towards eradicating social evils and his role in freedom struggle is significant. Elucidate.

12. To what extend do you think that Transport and Marketing Assistance (TMA) scheme would contribute in doubling farmers Income? And also, highlight the steps taken by the Government to Boost Agri Exports.

13. What is Sufficiency Economy Philosophy? How this approach can ensure sufficient resources for household consumption and reducing reliance on food imports?

14. Highlight the contribution of SardarUdham Singh in Indian National Movement?

15. Cryptocurrencies are now emerging as hotbeds of speculation but Crypto-finances can provide alternative finance ecosystem. Comment. What are the benefits of Crypto-Finance?

P.T Oriented Questions

1. Which of the following statements is/are correct regarding SFURTI (Scheme of Fund for Regeneration of Traditional Industries) scheme?
   1. This scheme is launched by Khadi and Village Industries Commission (KVIC).
   2. This mission aims to promote participation of more children into sports.
   Select the correct answer using the codes given below:
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

2. Which of the following statements are correct regarding SwachhSurvekshanGrameen 2021?
   1. Ministry of JalSakti launched SwachhSurvekshanGrameen 2021 under Swachh BharatMission (Grameen).
   2. Under the survey, ODF-plus status aims to ensure management of solid as well as liquid waste.
   3. In this survey citizen's feedback would not be considered for the compilation of score.
   Select the correct answer using the code given below:
   (a) 2 and 3 only
   (b) 1 and 3 only
   (c) 1 and 2 only
   (d) 1, 2 and 3

3. The 'Report on the State of Social Protection' is released by which of the following?
   (a) Amnesty International
   (b) UN forum on labour reforms
   (c) International Labour organization
   (d) International federation for human rights

4. Which of the following statements are correct regarding Ayushman Bharat Digital Mission?
   1. This Mission will connect the digital health solutions of hospitals across the country with each other.
   2. To be a part ofAyushmanBharat Digital Mission, one must create a health ID, which is a randomlygenerated 14-digit number.
   Select the correct answer using the code given below:
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

5. Consider the following statements regarding ZAPAD exercise 2021:
   1. The exercise is being held between India and Cambodia.
   2. The exercise is mainly focused upon training against the attacks of African pirates in sea.
   Which of the statements given above is/are correct?
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

6. In context of ammonium nitrate rules, consider the following statements:
   1. Presently, In India there is no need for Industrial licenceto carry out manufacturing of ammonium nitrate.
   2. The new rules, 2021 mandated that ammonium nitrate received at ports must be stored in the port area only.
   Which of the statements given above is/are correct?
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

7. Which of the following statements is/are correct regarding Sea Cucumber?
   1. It is a marine invertebrate that live on the seafloor.
   2. It is listed in'schedule V' of Wildlife Protection Act, 1972
   3. In 2020, the Lakshadweep Islands administration created the world's first conservation area for sea cucumbers.
   Select the correct answer using the

code given below:
(a) 1 and 2 only
(b) 1 and 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

8. Consider the following statements:
   1. The National Clean Air Programme (NCAP) is aimed to reduce 20-30% of PM2.5 and PM10 concentrations recorded in 2017 by 2024.
   2. Recently, In 2021, the Graded Response Action Plan was launched for the entire India to curb Air Pollution.
   Which of the statements given above is/are correct?
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

9. Recently, A term 'Tarballs' was often seen in news. It is related to—
   (a) Table Tennis
   (b) Heavy Metals
   (c) Sticky balls of oil
   (d) None of the above

10. Which of the following statements are correct regarding Air-Launched Unmanned Aerial Vehicle?
    1. India and the US have signed an agreement to jointly develop air-launched unmanned aerial vehicle (ALUAV).
    2. The two countries have signed Logistics Exchange Memorandum of Agreement (LEMOA) in 2021.
    Select the correct answer using the codes given below:
    (a) 1 only
    (b) 2 only
    (c) Both 1 and 2
    (d) Neither 1 nor 2

11. Consider the following statements about Akash Missile:
    1. The Akash weapon can simultaneously engage multiple targets in group mode or autonomous mode.
    2. The AkashMissile is surface-to-air missile ever produced in the world with supersonic interception speed.
    Which of the statements given above

is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

12. In which of the following States, Government has setup Defence Industrial Corridors?
    1. Gujarat
    2. Tamil Nadu
    3. Bihar
    4. Uttar Pradesh
    Select the correct answer using the code given below:
    (a) 2 and 4 only
    (b) 1, 3 and 4 only
    (c) 2, 3 and 4 only
    (d) 1, 2 and 3 only

13. Which of the following statements is/are correct regarding National Mission on Cultural Mapping (NMCM)?
    1. The Mission is aimed to build a comprehensive database of artists, art forms and other resources from organisations under the Ministry.
    2. The NMCM has now been handed over to the NITI Aayog.
    Select the correct answer using the codes given below:
    (a) 1 only
    (b) 2 only
    (c) Both 1 and 2
    (d) Neither 1 nor 2

14. recently seen ''Porunaicivilization' belongs to–
    (a) Northern Maharashtra
    (b) Tamil Nadu
    (c) Andhra Pradesh
    (d) South Odisha

15. Consider the following statements about Udham Singh:
    1. Udham Singh was a political activist who got associated with the Ghadar Party while in the US.
    2. He mobilised Indians through his own organisation, called the Azad Party.
    Which of the statements given above is/arecorrect?
    (a) 1 only
    (b) 2 only
    (c) Both 1 and 2

(d) Neither 1 nor 2

16. Consider the following statements regarding the GaudiyaVaishnavism:
1. GaudiyaVaishnavism is the religious movement founded by Swami Prabhupada in India during 16thcentuary.
2. The focus of GaudiyaVaishnavism is the devotional worship (bhakti yoga) of Radha and Krishna.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

17. With reference to V.O Chidambaram Pillai, consider the following statements:
1. He was the part of Swadeshi Movement initiated by BalGangadharTilak and LalaLajpatRai.
2. He founded the Swadeshi Steam Navigation Company (SSNC) to compete against the monopoly of the British India Steam Navigation Company.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

18. Consider the following statements regarding the International Satellite Program in Research and Education (INSPIRE)initiative:
1. It is a consortium of global space universities formed to advance space science and engineering,
2. It is aimed to provide a constellation of Earth with advance weapon system including laser guns.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

19. Which among the following countries are included in AUKUS grouping?
1. Australia
2. Thailand
3. United States of America
4. United Kingdom
Select the correct answer using the code given below:
(a) 1 and 3 only
(b) 1, 3 and 4 only
(b) 2, 3 and 4 only
(d) 2 and 4 only

20. With reference to the UNSC resolution on Taliban, consider the following statements:
1. It was sponsored by the France, UK and the US, and adopted by 13 members excluding India.
2. The resolutionsaid the territory of Afghanistan is not to be used to threaten any country or shelter terrorists.
3. The international community expects the Taliban to adhere to the commitments they made regarding the safe and orderly departure of Afghans and all foreign nationals from the country.
Which of the Statements given above is/are correct?
(a) 1 and 2 only
(b) 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

21. With reference to the "Coronal Mass Ejection (CME)", consider the following statements:
1. CMEs are the lightest explosions happening in our solar system
2. CMEs can damage the electronics in our satellites and disrupt radio communication networks on Earth.
Which of the Statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

22. Recently, a District Level Committeesfor power related schemes of Government of India was constituted. Which among the following are associated with this committee?

1. Most Senior MP in the district
2. District Collector
3. Members of Legislative assembly of the district
4. Ward Panch at rural level

Select the correct answer using the code given below:
(a) 1 and 2 only
(b) 2, 3 and 4 only
(c) 1, 2 and 3 only
(d) 1, 3 and 4 only

23. Consider the following statements regarding Transport and Marketing Assistance (TMA) scheme:
   1. Dairy products have been included for assistance under the revised scheme.
   2. Presently, the rates of assistance have been increased, by 50% for exports by sea and by 100% for exports byair.

   Which of the following statements given above is/are correct?
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

24. Which of the following statements is/are correct regarding Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006?
   1. This actrecognizes the rights of the forest dwelling tribal communities and other traditional forest dwellers to forest resources.
   2. This act protects the tribal population from eviction without rehabilitation and settlement.

   Select the correct answer using the code given below:
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

25. Consider the following statements:
   1. Registration of Political parties is governed by the provisions of Section 29A of theRepresentation of the People Act, 1951.
   2. Under the provision of Section 1 of theRepresentation of the People Act, 1951 a well elaborated

mechanism for de-registration of a political party has been mentioned.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

26. With reference to Ocean Mean Temperature (OMT), which of the following statements is/are correct? (UPSC 2020)
   1. OMT is measured up to a depth of 26°C isotherm which is 129 meters in the south-western Indian Ocean during January - March
   2. OMT collected during January - March can be used in assessing whether the amount of rainfall in monsoon will be less or more than a certain long-term mean.

   Select the correct answer using the code given below:
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

27. The Chairmen of public sector banks are selected by the—(UPSC 2019)
   (a) Banks Board Bureau
   (b) Reserve Bank of India
   (c) Union Ministry of Finance
   (d) Management of concerned bank

28. In India, "Extended producer responsibility" was introduced as an important feature in which of the following? (UPSC 2019)
   (a) The Bio-medical Waste (Management and Handling) Rules, 1998
   (b) The Recycled plastic (Manufacturing and Usage) Rules, 1999
   (c) The e-Waste (Management and Handling) Rules, 2011
   (d) The Food Safety and Standard Regulations, 2011

29. Consider the following statements: (UPSC 2020)
   1. Jetstreams occur in the Northern Hemisphere only.
   2. Only some cyclones develop an eye.

3. The temperature inside the eye of a cyclone is nearly 10°C lesser than that of the surroundings.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 and 3 only
(c) 2 only
(d) 1 and 3 only

30. What is the use of biochar in farming? (UPSC 2020)
1. Biochar can be used as a part of the growing medium in vertical farming.
2. When biochar is a part of the growing medium, it promotes the growth of nitrogen-fixing microorganisms.
3. When biochar is a part of the growing medium, it enables the growing medium to retain water for longer time.

Which of the statements given above is/are correct?
(a) 1 and 2 only
(b) 2 only
(c) 1 and 3 only
(d) 1, 2 and 3

ANSWERS

No.	Ans	No.	Ans	No.	Ans
1.	A	11.	C	21.	B
2.	C	12.	A	22.	C
3.	C	13.	A	23.	C
4.	C	14.	B	24.	C
5.	D	15.	C	25.	A
6.	D	16.	B	26.	D
7.	B	17.	C	27.	A
8.	A	18.	A	28.	C
9.	C	19.	A	29.	C
10.	A	20.	C	30.	D