

## 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](mailto: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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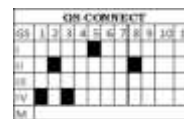
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<b>GS - I</b>	Culture-Art Forms, Literature and Architecture from ancient to modern times.	Indian history significant events, personalities, issues and the Freedom Struggle	Post independent issues, National boundary and disputes	Indian society features, issues, globalization and diversity	Women - issues and developments	Urbanization – problems and remedies	Distribution of industries and resources – India and world	Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc	International Relation- India and other countries, various Indian and international agreements, effects of other countries on India and international institutions.	Disaster & Disaster Management	Challenges to internal security, Various Security forces and agencies and their mandate. Cybersecurity ; moneylaundering and its prevention.
<b>GS - II</b>	Indian constitution- Amendments, acts and bills.	Legislative, executive and judicial processes.	Constitutional , non- constitutional, judicial, quasi-judicial, administrative and other types of bodies.	Federal structure and local bodies. Their powers and functions.	Government policies and various governance issues like transparency and – governance	Committees and schemes.	Non- government issues, self-help groups and role of civil society	Vulnerable sections of our society and social sector issues and initiatives.	Environment; Government initiatives, various judgments, 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.
<b>GS - III</b>	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 and computer	Disease, biotechnology and human welfare	Innovations, intellectual property, Awards, POI and other important aspects of S&T	Environment; Government initiatives, various judgments, 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.
<b>GS - IV</b>	Ethical issues related to family society, education, Corruption etc.	Ethics in public and private administration	Issues	Related laws and rules	Governance/ Governance	Ethics in international issues	Person alities and their teachings	Other important topics			
<b>Misc.</b>											

## POLITY

### Representation of Women and Youth

#### News Excerpt

The age and gender profiles of 3 newly elected Assemblies show that the share of women MLAs is unchanged in West Bengal, has grown slightly in Kerala, and fallen in Tamil Nadu. West Bengal has more young MLAs than earlier while the other two Assemblies have less than 10% MLAs under 40.



#### Pre-Connect

- Articles 168 to 212 in Part VI of the Constitution deal with the organisation, composition, duration, officers, procedures, privileges, powers and so on of the state legislature.
- There is no uniformity in the organisation of state legislatures. Andhra Pradesh, Bihar, Karnataka, Maharashtra, Telangana, and Uttar Pradesh have bicameral legislatures, with the remaining states having a unicameral one.

#### Low Count of women MLAs

- Among the three new state Assemblies being analysed here, only Kerala recorded a marginal increase in seats for women from 8 to 11.
- Women's representation in West Bengal remained unchanged with 40 seats (41 in 2016). Tamil Nadu, notably, recorded a decline from 21 seats to 12.
- This has been a continuing trend in state elections. In the 243-member Bihar legislature, the number of women MLAs has remained largely unchanged over the last two elections, with 28 women elected in 2015 and 26 in 2020.
- And in Maharashtra, 24 women were elected to the assembly in 2019 as against 20 in 2014.

#### Older MLAs

- ✓ Except in West Bengal, where the number of young MLAs in the 25-40 age group has risen to 14%, the number in Kerala and Tamil Nadu stands at 9% and 6%.
- ✓ Tamil Nadu recorded a jump in the share of MLAs on the other end — members who are 70 or older. Fifteen of its incoming MLAs are 70-plus.

#### Analytica

##### Women

- There is growing recognition of the untapped capacity and talents of women and women's leadership. Over the last two decades, the rate of women's representation in national parliaments globally has incrementally increased from 11.8 percent in 1998 to 17.8 percent in 2008 to 23.5 percent in 2018.
- Some regions have seen particularly dramatic increases, such as Sub-Saharan Africa, where in the last 20 years the number of women in parliaments has risen from 11 to 23.6 percent, and the Arab States region, which has seen an increase from 3.1 to 17.5 percent.
- Total global representation is still well below the 30% benchmark often identified as the necessary level of representation to achieve a "critical mass" – a considerable minority of all legislators with significant impact, rather than a token few individuals – not to mention falling short of women's representation as half of the world's population.
- Accordingly, the meaningful participation of women in national, local, and community leadership roles has become an important focus on global development policy.
- Still, some may ask why it matters if women become political leaders, elected policymakers, or civil society activists. Why does the world need more women involved in all aspects of the political process? Women's political participation results in tangible gains for democracy, including greater responsiveness to citizen needs, increased cooperation across party and ethnic lines, and a more sustainable future.
- Women's participation in politics helps advance gender equality and affects both the range of policy issues that get considered and the types of solutions that are proposed.

- Research indicates that whether a legislator is male or female has a distinct impact on their policy priorities. There is also strong evidence that as more women are elected to office, there is a corollary increase in policy making that emphasizes quality of life and reflects the priorities of families, women, and ethnic and racial minorities.
- Women’s engagement is crucial—and it is important to recognize that women are not a homogeneous group. Depending on whether women are young or older, educated or uneducated, live in rural or urban areas, they have very different life experiences that lead to different priorities and needs.
- Moreover, not every woman elected to parliament or another legislative body will place women’s issues or rights at the forefront of her own agenda. Clearly, women’s representation is not the only factor, but it is a critical factor for the development of inclusive, responsive, and transparent democracies.

### **Youth Participation**

- ✦ To make a difference in the longer term, it is essential that young people are engaged in formal political processes and have a say in formulating today’s and tomorrow’s politics.
- ✦ Inclusive political participation is not only a fundamental political and democratic right but also is crucial to building stable and peaceful societies and developing policies that respond to the specific needs of younger generations.
- ✦ For young people to be adequately represented in political institutions, processes, and decision-making, and in particular in elections, they must know their rights and be given the necessary knowledge and capacity to participate in a meaningful way at all levels.

### **Conclusion**

- > For political systems to be representative, all parts of society must be included.
- > Male and female legislators must work together in order to solve the myriad of problems in their countries.
- > In order to meet worldwide development goals and build strong, sustainable democracies, women must be encouraged, empowered and supported in becoming strong political and community leaders.

**PEPPER IT WITH**  
Unicameral and Bicameral Legislature,  
National Youth Parliament

## **Reservation to the Maratha Community**

### **News Excerpt**

The Supreme Court recently quashed the Maratha reservation in so far it breaches the 50% ceiling of reservation, and struck down the Maharashtra law that guaranteed the community their quota in public education and employment.

QS CORRECT											
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Q5											

### **Why do the politically, socially and economically dominant Marathas want reservation?**

- Marathas under the banner of Maratha KrantiMorcha came together at Aurangabad to protest the rape and killing of a 15-year-old girl in Kopardi village of Ahmednagar district in Maharashtra. Although Kopardi was the trigger, the Maratha consolidation, leading to 58 silent, but massive, rallies across the state between 2016-17, was centred on reservation for the community in government

**Why was the M G Gaikwad Commission set up?**

Sensing the growing aggression amongst the Marathas, the then chief minister Devendra Fadnavis set up a 11-member commission headed by Retired Justice N G Gaikwad in 2017. The commission submitted a report stating Marathas should be given reservation under Socially and Educationally Backward Class (SEBC). Although the commission recommended reservation, it did not specify the quota percentage and left it to state government.

jobs and educational institutions. The mammoth public attendance at the leaderless and apolitical rallies made inroads from cities to villages to taluka levels across Maharashtra.

- At the end of every rally, a ten-point charter of demands was presented to the district collector. High on the agenda was Maratha reservation. Apart from it the organisation demanded justice for the Kopardi girl and sternest punishment to perpetrators of the crime and loan waiver for farmers among other things. In the second phase of agitation between 2017-18, street protests took a violent turn and even led to some suicides.

**PEPPER IT WITH**  
Bill of Rights of the Constitution of USA, Reservation for EWSs in Public Employment, Mandal case (1992),

### When did state adopt the legislation?

- In November 2018, the Maratha community was given the reservation under the Maharashtra State Socially and Educational Backward Act. The special act was sanctioned by Maharashtra State Backward Class Commission and approved in both the assembly and council. The emphasis on legislation was to give reservation under SEBC, a legal and constitutional validity. The legislation proposed by then opposition government got unanimous support from then opposition.
- Reservation under SEBC was challenged by a PIL in Bombay High Court. High Court while upholding the reservation pointed that instead of 16% it should be reduced to 12% in education and 13% in jobs. Accordingly, the Act was implemented with Maratha students availing the quota in educational institutions and jobs.
- In September 9, 2020 the Maratha reservation confronted another hurdle as Supreme Court stayed its implementation and refer the case to Chief Justice of India for larger bench.
- It meant Marathas could not avail quota benefits either in education or jobs till the final verdict came out. But those who had availed the quota benefit till date remained unaffected. The Supreme Court has now quashed the reservation.

### What is the reservation break up now?

The Maratha reservation of 12 and 13 per cent (in education and jobs) had increased the overall reservation ceiling to 64 per cent and 65 per cent, respectively. Minus Maratha quota now, the total reservation in the state caste wise is restored to 52 per cent.

### What did the Gaikwad Commission conclude?

- ❖ The Gaikwad Commission had concluded that the community needed reservation based on the public meetings and grassroot interactions conducted by experts and institutions with 1.93 lakh representatives, including individuals, gram panchayats, public representatives and organisations.
- ❖ It found that 76.86 % of Maratha families were engaged in agriculture and farm labour, around 50% lived in mud houses, only 35.39% had personal tap water connections, 13.42% of Marathas were not literate with only 35.31% having primary education, 43.79 % having cleared HSC and SSC.
- ❖ The Commission also found that 93% Maratha families had an annual income of ₹ 1 lakh and that 37.38% families were Below Poverty Line against the State average of 24.2 %, and importantly 71% owned less than 2.5 acres.

### Why was SEBC struck down?

Notwithstanding the politics, the question which is being debated is why did the apex court not uphold SEBC, created as a separate category to accommodate Marathas with unanimous consent from the state and legislative assemblies. The legal and constitutional challenges to Maratha reservation will not go uncontested.



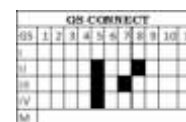
## Conclusion

Marathas, who constitute 32% of state population, are a major political force to reckon with in Maharashtra. The discontent amongst the community is likely to manifest once again. The divide between rich and poor Marathas could manifest in new form of politics and protests. The complex reservation politics had set the process of polarisation between Marathas versus OBCs. With SC's order, it is likely to sharpen the divide on reservation.

## The Social Security Code

### News Excerpt

Section 142 of the Social Security Code, 2020 has been notified by Ministry of Labour & Employment covering applicability of Aadhaar. The notification of section will enable Ministry of Labour and Employment to collect Aadhaar details for the database of beneficiaries under various social security schemes.



### Pre-Connect

- **Labour falls under the Concurrent List of the Constitution.** Therefore, both Parliament and state legislatures can make laws regulating labour.
- The central government has stated that there are over 100 state and 40 central laws regulating various aspects of labour such as resolution of industrial disputes, working conditions, social security and wages.
- The Second National Commission on Labour (2002) found existing legislation to be complex, with archaic provisions and inconsistent definitions.
- To improve ease of compliance and ensure uniformity in labour laws, it recommended the consolidation of central labour laws into broader groups such as:
  - Industrial relations,
  - Wages,
  - Social security,
  - Safety, and
  - Welfare and working conditions.
- In 2019, the Ministry of Labour and Employment introduced four Bills to consolidate 29 central laws. These Codes regulate: (i) Wages, (ii) Industrial Relations, (iii) Social Security, and (iv) Occupational Safety, Health and Working Conditions.
- The SS Code, will merge eight existing labour laws including Employees' Compensation Act 1923, Employees' State Insurance Act, 1948, Employees' Provident Funds and Miscellaneous Provisions Act, 1952, Maternity Benefit Act, 1961, Payment of Gratuity Act, 1972, and Unorganised Workers' Social Security Act, 2008.

### Highlights

- National Data Base for unorganised workers (NDUW) is at an advanced stage of development by National Informatics Centre. The portal is aimed at collection of data for unorganised workers including migrant workers for the purpose of giving benefits of the various schemes of the Government. An inter-state migrant worker can register himself on the portal on the basis of submission of Aadhaar alone.
- Union Minister for Labour and Employment has clarified that the section under the Social Security Code has been notified only for collection of data of workers including migrant workers. No benefit will be denied to workers for want of Aadhaar.
- The Code on Social Security 2020 (SS Code) implementation has been postponed due to States not issuing notifications. Now, due to the Covid crisis, implementation of all the four new Codes on labour is to be postponed to next year. This is good, since there are many problems with the Codes, especially the SS Code.

- However, the SS Code does not still provide for the universal social security for 91% of India's workforce. This is especially disappointing given that the demographic dividend of young workers who can support the aged and ageing will shrink from 2030 onward.

### Ambiguities in the SS Code, 2020

- ✓ This new Code attempts to reconfigure the social security landscape for the unorganised sector, defined to cover diverse occupations that include the self-employment too. Gig and platform workers have been defined separately — the conceptual distinction between self-employed and gig workers is left unstated.
- ✓ The Central Government is set to play a pivotal role in devising and administering SS for the unorganised sector too. So far, SS for the sector was mostly absent and whatever little was provided was by State governments. Till now, respective State governments are responsible for formulation and implementation of social security schemes for unorganised sector workers. In the new SS Code, this responsibility has been partially assumed by the Centre.
- ✓ Under the Code, both Central and State governments will formulate schemes on clearly demarcated areas. This means dual authority for an individual unorganised worker. What is not specified is who will be the implementing authority at the State levels, and the fragmentation of SS for unorganised workers will continue.
- ✓ Further, every eligible unorganised worker shall be required to be registered with Aadhaar, on self-declaration basis, on a portal of the Central Government. Presently, in many States, unorganised workers are registered on the State portal. The question remains whether registered workers' data on the State portal will be transferred to the proposed Central portal or existing beneficiaries need to register afresh.
- ✓ Similar arrangements also apply for gig/platform workers too. Formulation of social security schemes for these workers rests with the Centre. The problem is that the SS Code provides for separate boards for unorganised and gig/platform workers. This approach seems overlapping as gig/platform workers are a subset of the larger set that is unorganised workers.
- ✓ As unorganised workers span across the country, inter-State arrangements and cooperation become imperative. The Code does not provide for this. The Draft Rules provide for a nodal officer to be notified by the State government. However, as unorganized construction workers are footloose and move from one State to another in search of livelihood, inter-State coordination still remain unresolved. The Draft Rules did not provide any roadmap for such coordination.
- ✓ About half of informal workers are self-employed who have no employer-employee relationship. Most unorganised workers are not attached to any specific occupation — they shift from one form of occupation to another based on availability.
- ✓ Most unorganised workers fall within the State's purview rather than the Centre's. In fact, it would be difficult to even define an appropriate government for the unorganised workers, since they are mostly employed through layers of intermediaries. The SS Code provides for unorganised sector social security boards at the Central and State levels, but major part of the organisation seems to be with States.

### Limited scope

- The scope of the proposed Central Board seems limited. Presently, States have Unorganised Workers Welfare Board under the Unorganised Workers' Social Security Act, 2008. Most States have Boards under this Act.
- There is no explicit mention either in the Code or in the draft Rules, about the continuation of existing social security schemes run by State governments. As and when the Code becomes operational, unorganised workers need to register themselves on the Central portal. They are presently registered as beneficiary with the respective State governments. But it is not only about registration. The administration of social security for the

unorganised sector has a different landscape in the new Code. There are no directions in the Rules how the existing SS schemes align with the proposed new landscape.

- For example, West Bengal has registered about 1.3 crore unorganised workers as beneficiaries under existing social security schemes. The database is maintained by the State. Now, when the Code becomes operational, will the workers migrate to the Central sphere or should they register themselves afresh in the Central portal.

**Conclusion**

In the new Code, the social security framework for unorganised workers has become unnecessarily complex and cluttered. There are dual authorities and overlapping zones. Provisions in the draft Rules further accentuate these anomalies. There is an urgent need for simplifying things and avoidance of multiple authorities before the Code goes into effect. If the goal of the Central Government is not to universalise social security for unorganised workers in the foreseeable future (as it should have been), it should consider confining its role to advising State governments for effective implementation of existing schemes.

**PEPPER IT WITH**  
 Wage Code; Social Security Code; Occupational Safety, Health & Working Conditions Code; and the Industrial Relations Code

**Article 311**

**News Excerpt**

Suspended police officer Sachin Waze, arrested by the National Investigation Agency (NIA) in connection with the MukeshAmbani terror scare case, was dismissed from service by Mumbai Police Commissioner under Article 311 (2) (b) without a departmental enquiry.

GS CONNECT											
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**Why was former cop Sachin Waze dismissed from service without departmental enquiry?**

- After Waze was arrested by the NIA in March in connection with his role in the Ambani terror scare case and subsequent murder of MansukhHiran, he was suspended. On May 11, Mumbai Police dismissed him for service under Article 311 (2)(b) of the Indian Constitution.
- While Article 311 is meant to act as a safeguard for civil servants that gives them a chance to respond to the charges in an enquiry so that he/she is not arbitrarily dismissed from service, the article also provides exceptions to these safeguards under subclause 2 provision b. It states “when an authority empowered to dismiss or remove a person or to reduce him in rank is satisfied that for some reason, to be recorded by that authority in writing, it is not reasonably practicable to hold such enquiry”.
- In Waze’s case, it was mentioned that he was the competent disciplinary authority and was satisfied that holding a departmental enquiry against Waze “will not be reasonably practicable.”

**Are there other exceptions where a person can be dismissed without departmental enquiry?**

As per Article 311 sub clause 2 provision a, if a government employee is convicted in a criminal case, he can be dismissed without DE. Apart from this, under 311 (2) (c), a government employee can be dismissed when the President or the Governor, as the case may be, is satisfied that in the interest of the security of state it is not expedient to hold such an enquiry, the employee can be dismissed without DE.

**PEPPER IT WITH**  
 Union Public Service Commission, State Public Service Commission, Joint State Public Service Commission

**Conclusion**

As Waze was dismissed from his post which proves that civil servants can’t make mockery of law if they are guilty then they will be punished and no matter what position they held. So, the main reason for which article 310 and 311 has been

envisaged in the constitution by the makers of constitution is still working today but it is interesting to note that the framer of the constitution had an insight of corruption in near future that's why such provisions were included.

**What are the safeguards that Article 311 provides civil servants?**

Article 311 says that no government employee either of an all-India service or a state government shall be dismissed or removed by an authority subordinate to the own that appointed him/her. Section 2 of the article says that no civil servant shall be dismissed or removed or reduced in rank except after an inquiry in which s/he has been informed of the charges and given a reasonable opportunity of being heard in respect of those charges.

**What is the process of a departmental enquiry?**

In a departmental enquiry, after an enquiry officer is appointed, the civil servant is given a formal chargesheet of the charges. The civil servant can represent himself/herself or choose to have a lawyer. Witnesses can be called during the departmental enquiry following which the enquiry officer can prepare a report and submit it to the government for further action.

**Are 311 (2) sub sections used frequently?**

They are invoked in exceptional circumstances. But the Jammu & Kashmir administration recently set up a Special Task Force (STF) to “scrutinise cases of employees suspected of activities requiring action under article 311(2)(c). The order dated April 21 further tasks the STF headed by ADG (CID) J&K to “compile records of such employees, wherever necessary and to the committee constituted by the government”. Three government employees, including two teachers, have already been fired. The move has been opposed by rights activists.

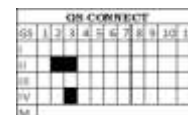
**Can the dismissal under section 311 (2) be challenged by the government employee?**

Yes, the government employee dismissed under these provisions can approach either tribunals like the state administrative tribunal – in Waze’s case it would be the Maharashtra Administrative Tribunal — or Central Administrative Tribunal (CAT) or the courts.

**Need for restructuring the Tribunals system**

**News Excerpt**

The apex court said that the 2020 Rules shall be amended to make lawyers with an experience of at least 10 years eligible for appointment as judicial members in the tribunals.



**Pre-Connect**

- The original Constitution did not contain provisions with respect to tribunals.
- The 42nd Amendment Act of 1976 added a new Part XIV-A to the Constitution.
- This part is entitled as ‘Tribunals’ and consists of only two Articles–Article 323 A dealing with administrative tribunals and Article 323 B dealing with tribunals for other matters.
- Article 323 A empowers the Parliament to provide for the establishment of administrative tribunals for the adjudication of disputes relating to recruitment and conditions of service of persons appointed to public services of the Centre, the states, local bodies, public corporations and other public authorities.
- In other words, Article 323 A enables the Parliament to take out the adjudication of disputes relating to service matters from the civil courts and the high courts and place it before the administrative tribunals.
- In pursuance of Article 323 A, the Parliament has passed the Administrative Tribunals Act in 1985.

**Highlights**

- The Supreme Court ordered the Centre to constitute a National Tribunals Commission (NTC) to act as an independent body to supervise appointments and functioning of tribunals across India.
- The NTC would also take care of the administrative and infrastructural needs of tribunals and it would enhance the image of tribunals and instil confidence in the minds of litigants (SC).
- Until NTC was constituted, a separate wing in the Ministry of Finance shall be established to cater to the requirements of tribunals.
- The order came delivered on petitions challenging the validity of the Tribunal, Appellate Tribunal and other Authorities (Qualification, Experience and Other Conditions of Service of Members) Rules, 2020.
- The SC Bench said there was an “imperative need” to ensure that tribunals discharged the judicial functions without any interference of the executive whether directly or indirectly.
- It said that till amendments are carried out in 2020 Rules, the search-cum-selection committees should comprise of Chief Justice of India or his nominee as the chairperson and others, including the outgoing chairman or president of the tribunal in case of appointment of chairman or president and secretary to the Ministry of Law and Justice.
- The chairpersons, vice-chairpersons and the members of the tribunal shall hold office for a term of five years and shall be eligible for reappointment. Rule 9(2) of the 2020 Rules shall be amended to provide that the vice-chairman, vice-chairperson and vice-president and other members shall hold office till they attain the age of sixty-seven years”.
- The court said the 2020 Rules shall be amended to make lawyers with an experience of at least 10 years eligible for appointment as judicial members in the tribunals and while considering their appointment, the search-cum-selection committee shall take into account the experience of the advocate at the bar and their specialisation in the relevant branches of law.
- It directed the Centre to make appointments to tribunals in three months from the date on which the search-cum-selection committee made recommendations.

**PEPPER IT WITH**  
L. Chandra Kumar v. Union of India, 1997; Joint Administrative Tribunal (JAT)

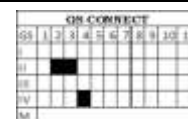
### Conclusion

Tribunals in India have been a long-standing feature of the judicial system, beginning with the setting up of the Income Tax Appellate Tribunal as early as 1941. The 42nd Amendment in 1976, which inserted Article 323-A and 323-B into the Constitution, empowered both the Parliament and state legislatures to establish administrative and other tribunals. With this insertion, tribunals, as an alternate method of adjudication, received constitutional legitimacy. Despite this, over the years, tribunals have been a subject of much judicial scrutiny. With successive verdicts from the SC, starting with the **S.P. Sampath Kumar v. Union of India** (“Sampath Kumar”) to the **Madras Bar Association v Union of India** (“NTT case”), there exists a considerable jurisprudence in determining the constitutional fetters of tribunals.

## Independent collegium to appoint members of the EC

### News Excerpt

A petition was filed in the Supreme Court seeking the constitution of an independent collegium to appoint members of the Election Commission.



### Pre-Connect

- The Election Commission is a permanent and an independent body established by the Constitution of India directly to ensure free and fair elections in the country.
- Article 324 of the Constitution provides that the power of superintendence, direction and control of elections to parliament, state legislatures, the office of president of India and the office of vice-president of India shall be vested in the election commission.

- Since its inception in 1950 and till 15 October 1989, the election commission functioned as a single member body consisting of the Chief Election Commissioner.
- On 16 October 1989, the president appointed two more election commissioners to cope with the increased work of the election commission on account of lowering of the voting age from 21 to 18 years (61<sup>st</sup> amendment). Thereafter, the Election Commission functioned as a multimember body consisting of three election commissioners.
- The two posts of election commissioners were abolished in January 1990 and the Election Commission was reverted to the earlier position. Again, in October 1993, the president appointed two more election commissioners.

### The Association of Democratic Reforms- the society behind many changes in the electoral process

- A registered society under the Societies Registration Act XXI of 1860, The Association of Democratic Reforms has been in the vanguard of electoral and political reforms in the country.
- In the past years, it has been indulged in activities related to advocacy for transparent functioning of the political parties, conducting a detailed analysis of candidates in every election, and analysing the financial records of political parties as well as the ministers.
- In 1999, ADR filed a PIL in the Delhi High Court seeking disclosure of criminal, financial and educational background of candidates contesting in the elections, and based on this, the Supreme Court in 2002 and 2003 made it mandatory for the candidates to disclose their criminal, financial and educational background prior to the polls by filing an affidavit.
- Then in April 2008, ADR obtained yet another landmark order from the Central Information Commission, as per which Income Tax Returns of political parties and assessment order passed by them will be available to the citizens. Besides, is also working to bring political parties and leaders under the ambit of Right to Information.

### Highlights

- The plea filed by Association for Democratic Reforms, represented by advocates Prashant Bhushan and others, said the practise of government making the appointments to the poll body is a violation of the Basic Structure of the Constitution and creates a dent on free and fair elections in a democracy.
- The petition said the recommendation to have a neutral collegium to fill up vacancies in the Election Commission have been given by several expert committees, commissions from 1975. The recommendation was also part of the Law Commission in its 255th report in 2015.
- Election Commission should be insulated from political and/or Executive interference.
- The Election Commission is not only responsible for conducting free and fair elections, but it also renders a quasi-judicial function between the various political parties including the ruling government and other parties.
- In such circumstances if it is not independent then it can give benefits to the ruling party.

### Conclusion

There's no doubt that in order to ensure the purity of the election process it was thought that the responsibility to hold free and fair elections in the country should be entrusted to an independent body which would be insulated from political and/ or executive interference. The appointment of members of Election Commission on the 'pick and choose' of the executive violates the very foundation for which it was created, thus, making the Election Commission a branch of executive.

**PEPPER IT WITH**  
Political Parties, Delimitation  
Commission, Union Public  
Service Commission

## Meeting of Parliamentary Standing Committees

### News Excerpt

Days after Leader of Opposition in Rajya Sabha Mallikarjun Kharge wrote to Chairman M Venkaiah Naidu urging him to allow virtual meetings of parliamentary standing committees, the Rajya Sabha Secretariat is learnt to have replied to him turning down his plea.

KS CONNECT										
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### Pre-Connect

- The Parliament is too unwieldy a body to deliberate effectively the issues that come up before it. The functions of the Parliament are varied, complex and voluminous.
- Moreover, it has neither the adequate time nor necessary expertise to make a detailed scrutiny of all legislative measures and other matters. Therefore, it is assisted by a number of committees in the discharge of its duties.
- The Constitution of India makes a mention of these committees at different places, but without making any specific provisions regarding their composition, tenure, functions, etc. All these matters are dealt by the rules of two Houses.
- Broadly, parliamentary committees are of two kinds—Standing Committees and Ad Hoc Committees. The former are permanent (constituted every year or periodically) and work on a continuous basis, while the latter are temporary and cease to exist on completion of the task assigned to them.

### The merits of the standing committee system in the Parliament are

- Their proceedings are devoid of any party bias.
- The procedure adopted by them is more flexible.
- The system makes parliamentary control over executive much more detailed, close, continuous, in-depth and comprehensive.
- The system ensures economy and efficiency in public expenditure as the ministries / departments would now be more careful in formulating their demands.
- They facilitate opportunities to all the members of Parliament to participate and understand the functioning of the government and contribute to it.
- They can avail of expert opinion or public opinion to make the reports. They are authorised to invite experts and eminent persons to testify before them and incorporate their opinions in their reports.

### Highlights

- Requests to allow virtual meetings of the standing committees were turned down last year as well by the parliament on grounds that virtual meetings would violate the confidential nature of such meetings and that any change to the norms require approval by Parliament.
- It has been said that the matter can be resolved during the session as any amendment to the Rules can be approved by the Houses “only after the matter is considered by the Rules Committees”.

### Conclusion

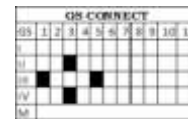
Presently, there are no provisions in the Rules of Procedure for holding of virtual sittings of the Parliamentary committees or allowing the committees to take evidence of official or non-official witnesses or experts on any subject through virtual meeting. The government has maintained that the rules have to be amended by the Rules Committee of both the houses of Parliament and then these amended rules have to be cleared. This however, can be done only when Parliament meets.

**PEPPER IT WITH**  
Financial Committees, Departmental Standing Committees, Committees to Inquire, Committees to Scrutinise and Control

## Competition Commission of India

### News Excerpt

Companies including Amazon, Google and Facebook which have been bullish on India - the world's second largest internet market with cheapest data rates and more than 500 million smartphone users are facing the heat from traders, who have vowed to write to respective administrations in the states to investigate the alleged malpractices of e-commerce giants.



### Pre-Connect

- The Competition Act, 2002 was enacted by the Parliament of India and governs Indian competition law. It is a tool to implement and enforce competition policy and to prevent and punish anti-competitive business practices by firms and unnecessary Government interference in the market.
- The objectives of the Act are sought to be achieved through the Competition Commission of India, which has been established by the Central Government with effect from 14th October 2003. CCI consists of a chairperson and 6 Members appointed by the Central Government.
- The Competition Commission has the power to probe into matters relating to Anti-Competitive Agreements and Abuse of Dominant power in the Indian Markets. Section 19 and Section 26 to 28 deal with these issues in the Competition Act.

### Highlights

- The move by the traders comes after India's competition watchdog Competition Commission of India (CCI) allowed the Karnataka High Court to continue its investigation of business models of Amazon and Walmart owned Flipkart.
- Confederation of All India Traders, which represents around eight crore small retailers in the country, said that nearly 50,000 mobile retail shops have shut all due to e-commerce platform's preferential treatment of sellers, colluding with mobile manufacturers for exclusive launches on their platforms, which harms the business interests of small traders.
- Amazon is claiming to create lakhs of jobs and promoting small traders. Traders challenge them to come up with the list of top 10 sellers who have benefitted from their platform during the last eight years of their existence in India. These sellers have special agreements with the e-commerce firms or are simply their subsidiaries, which basically violates India's existing laws.
- CAIT had earlier accused ecommerce majors of violating Section 3 of the Competition Act as well as Foreign Direct Investment rules.
- Traders had submitted their concerns before the centre who directed the Enforcement Directorate to investigate whether Amazon and Flipkart are circumventing the country's FDI and Foreign Exchange Management Act (FEMA).
- Meanwhile, Amazon has aggressively been promoting itself as a platform of small businesses and has said that the company remains committed to digitize one crore. SMBs (including 10 lakh local stores), enabling \$10 billion in exports, and creating 20 lakh jobs by 2025.
- It is not just e-commerce that Amazon is focussed on. It has also eyed India's payments, insurance, food delivery, online pharmacy and even offline retail markets through various investments throughout its subsidiaries in the last couple of years.
- In the US, another crucial market of Big Tech, the Congress has proposed a new legislation that seeks to break big firms into smaller subsidiaries or shed their private-label businesses to prevent the digital monopoly.

#### PEPPER IT WITH

Goods and Services Tax Council, Central Information Commission, Central Vigilance Commission, Central Bureau of Investigation, Lokpal and Lokayuktas, National Investigation Agency



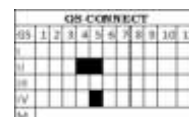
## Conclusion

The graph of CCI's enforcement has evolved substantially in many sectors and, in the years to come, we expect that its stance will continue to progress, particularly in emerging areas such as digital markets and e-commerce sector. It is expected that the CCI would take some measures to implement a framework for adequate transparency and define basic conditions for e-commerce industry and digital market platforms. In 2021, the commission also anticipate further streamlining of various substantive and procedural aspects of competition law, based on the Competition Law Review Committee recommendations.

## Chief Secretary transfer Issue

### News Excerpt

The West Bengal government and the Centre have been at loggerheads over the sudden transfer order of former Bengal Chief Secretary to Delhi.



### Pre-Connect

- A 'civil post' means an appointment or office or employment on the civil side of the administration as distinguished from the military side.
- The difference between dismissal and removal is that the former disqualifies for future employment under the government while the latter does not disqualify for future employment under the government.
- 'Reduction in rank' means reduction from a higher to a lower rank or post. It is a penalty imposed on a civil servant.
- In 1963, a provision was made for the creation of three more all-India services. They were Indian Forest Service, Indian Medical and Health Service and Indian Service of Engineers. However, out of these three, only the Indian Forest Service came into existence in 1966.
- After the All-India Services Act, 1951 came into existence, the IAS cadre rules were framed in 1954. The said rule on deputation giving more discretionary powers to the Centre was added in May 1969.
- Before any officer of All India Services (AIS) is called for deputation to the Centre, his or her concurrence is required.
- The Establishment Officer in DoPT invites nominations from State governments.
- Once the nomination is received, their eligibility is scrutinised by a panel and then an offer list is prepared, traditionally done with the State government on board.
- Central Ministries and offices can then choose from the list of officers on offer. AIS officers are recruited by the Centre and they are lent to States. The publication of offer list on DoPT's website was discontinued by the government in 2018 amid reports that not many State government officers were willing to come to Centre for deputation.

### What is the rule cited by the Department of Personnel and Training? What has been the practice so far?

- The Department of Personnel and Training (DoPT) under Union Ministry of Personnel directed that West Bengal Chief Secretary report to its office at North Block in Delhi.
- The order read that the Appointments Committee of the Cabinet (ACC) has approved the "placement of services" of Mr. Bandyopadhyay as per provisions of the Indian Administrative Service (cadre) Rules, 1954 with the Government of India with "immediate effect." The ACC is headed by the Prime Minister.

### What is the rule cited by DoPT?

- ✓ The DoPT order said that the ACC has approved Mr. Bandyopadhyay's transfer to Delhi under Rule 6(I) of the IAS (cadre) Rules, 1954. The said rule pertains to "deputation of cadre officers."

- ✓ It says that a cadre officer may, with the concurrence of the State governments concerned and the Central government, be deputed for service under the Central government or another State government. It however adds, “provided that in case of any disagreement, the matter shall be decided by the Central government and the State government or State governments concerned shall give effect to the decision of the Central government.”

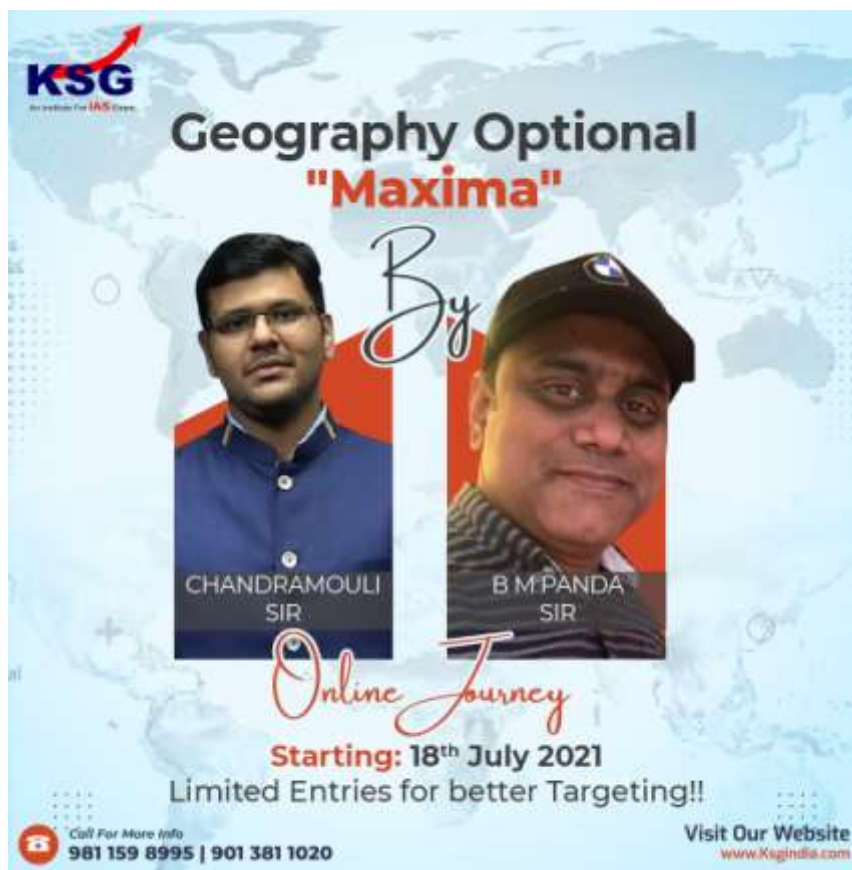
### Is the current order one of its kind?

According to VappalaBalachandran, former Special Secretary, Cabinet Secretariat, the order is not only “unprecedented” but also vindictive. Legally, it is the Centre that holds ultimate control.

### Conclusion

The All-India Services (Discipline and Appeal) Rules, 1969 are not clear on the punishment in such cases. But Rule 7 says the authority to institute proceedings and to impose penalty will be the State government while he or she was “serving in connection with the affairs of a State.” The case is peculiar as the Chief Secretary retired on May 31 and is not on deputation.

**PEPPER IT WITH**  
Article 311, 312, 312A, Union Public Services Commission, State Public Service Commission, Joint Public Service Commission



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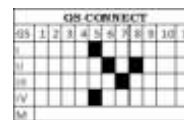
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## SOCIAL ISSUES, GOVERNMENT SCHEMES, REPORTS & INDICES

### The Immunisation Agenda 2030 (IA2030)

#### News Excerpt

Recently, Global agencies like the World Health Organization (WHO), UNICEF and others have launched the Immunisation Agenda 2030 (IA2030) during the World Immunisation Week.



#### Pre-Connect

Immunization is a success story for global health and development, saving millions of lives every year. Between 2010 and 2018, 23 million deaths were averted with measles vaccine alone. More than 20 life-threatening diseases can now be prevented by immunization. Since 2010, 116 countries have introduced vaccines that they did not use previously, including those against major killers like pneumococcal pneumonia, diarrhoea, cervical cancer, typhoid, cholera and meningitis.

#### What is IA2030?

- The Immunization Agenda 2030 (IA2030) sets an ambitious, overarching global vision and strategy for vaccines and immunization for the decade 2021–2030.
- IA2030 positions immunization as a key contributor to people’s fundamental right to the enjoyment of the highest attainable physical and mental health and also as an investment in the future, creating a healthier, safer, more prosperous world for all.
- IA2030 is intended to inspire and align the activities of community, national, regional and global stakeholders – national governments, regional bodies, global agencies, development partners, health care professionals, academic and research institutions, vaccine developers and manufacturers, the private sector and civil society.

#### World Immunisation Week

World Immunization Week – celebrated every year in the last week of April – aims to promote the use of vaccines to protect people of all ages against disease.

Using the theme ‘Vaccines bring us closer’, World Immunization Week 2021 will urge greater engagement around immunization globally to promote the importance of vaccination in bringing people together, and improving the health and wellbeing of everyone, everywhere throughout life.

#### How it works?

- IA2030 provides a long-term strategic framework to guide a dynamic operational phase, responding to changes in country needs and the global context over the next decade.
- It will provide technical information on the strategic framework, together with new and existing strategies and immunization plans, including those for disease-specific programmes to control, eliminate or eradicate disease.
- IA2030 will become operational through regional and national strategies, a mechanism to ensure ownership and accountability and a monitoring and evaluation framework to guide country implementation.

#### What is Immunisation?

Immunization is the process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine.

Vaccines are substances that stimulate the body’s own immune system to protect the person against subsequent infection or disease.

#### Targeted Population

The programme will give priority to populations that are not currently being reached, particularly the most marginalised communities, those living in fragile and conflict-affected settings and mobile populations, such as those moving across borders.

IA2030 will also provide a strong foundation for the global immunisation strategy in the decade 2021-2030.

### Immunisation Programme in India

- ✓ Immunization Programme in India was introduced in 1978 as 'Expanded Programme of Immunization' (EPI) by the Ministry of Health and Family Welfare, Government of India.
- ✓ In 1985, the programme was modified as 'Universal Immunization Programme' (UIP) to be implemented in phased manner to cover all districts in the country by 1989-90 with the one of largest health programme in the world.
- ✓ Ministry of Health and Family Welfare, Government of India provides several vaccines to infants, children and pregnant women through the Universal Immunisation Programme.

### Covid-19 Immunisation challenges in India

- India, with its inherently fragile healthcare system, has come under immense pressure as never before.
- Vaccines are complex formulations of many components and depend on a seamless supply of raw materials that are mostly imported.
- From production of the bulk material to filling of the formulation in vials is a highly complex and time-consuming process that cannot be hastened. Ramping up of existing production, even after adequate funds are available, will inevitably take a minimum 2-3 months.
- Even if the licence is granted to vaccine manufacturers, actual production will take several months of preparation to kick off.

**PEPPER IT WITH**  
Mission Indhradhanush, Intensified Mission Indradhanush (IMI) 3.0, eVIN (Electronic Vaccine Intelligence Network), Pentavalent Vaccine

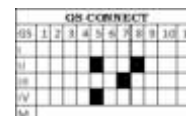
### Conclusion

- ✦ IA2030 must be contextualized within the global focus on improving access to good-quality, affordable primary health care as a foundation for achieving universal health coverage.
- ✦ The vision and strategy of IA2030 do not exist in isolation. It is backed by technical analyses and documentation, complementary strategies of stakeholder organizations, disease-specific initiatives and other global health and development programmes for steering national strategies and plans for vaccination.
- ✦ IA2030 will be adaptable to regional and national contexts. Thus, countries will prioritize various focus areas in each IA2030 strategic priority according to their situation. IA2030 will enable partners and stakeholders at all levels to align their work to ensure that all actions reinforce each other, in the pursuit of common goals.

## Model Insurance Villages

### News Excerpt

Recently, the Insurance Regulatory and Development Authority of India (IRADI) has come out with the concept of model insurance villages to cover the entire population in those areas, with the financial support of various institutions like NABARD and CSR funds.



### Pre-Connect

- 1991: Government of India begins the economic reforms programme and financial sector reforms
- 1993: Committee on Reforms in the Insurance Sector, headed by Mr. R. N. Malhotra, (Retired Governor, Reserve Bank of India) set up to recommend reforms.
- 1994: The Malhotra Committee recommends certain reforms having studied the sector and hearing out the stakeholders
- **Some recommended reforms:**

- Private sector companies should be allowed to promote insurance companies
- Foreign promoters should also be allowed
- Government to vest its regulatory powers on an independent regulatory body answerable to Parliament
- Insurance Regulatory and Development Authority (IRDA) was set up as autonomous body under the IRDA Act, 1999

**About the Model Insurance Villages**

- The idea behind the model village concept is to offer comprehensive insurance protection to all the major insurable risks that villagers are exposed to and make available covers at affordable or subsidised cost.
- The concept may be implemented in a minimum of 500 villages in different districts of the country in the first year and increased to 1,000 villages in the subsequent two years.
- The choice of villages is to be made carefully, considering the various relevant aspects and parameters in order to implement the concept successfully for a period of three to five years.
- According to the IRDAI, in order to demonstrate the concept and efficacy of insurance as risk management tool and to make farmers and rural population aware of benefits of insurance, special focused efforts need to be made to cover the entire population in the village and their property, farms/crops, farm machineries, vehicles, different village level services, manufacturing enterprises and other specific insurance needs of the particular village through targeted efforts in few selected villages. Such model villages are expected to tackle losses due to natural calamities like floods and earthquakes. There's no catastrophe insurance in the country now.
- Every general insurance company and reinsurance company accepting general insurance business and having office in India (partnering with general insurance company of their choice) needs to be involved for piloting the concept.
- The efforts in selected villages need to be continued for a minimum of 3 to 5 years so as to make insurance benefits visible to the community.

**Key Activities of IRDAI**

- ❖ Frames regulations for insurance industry in terms of Section 114A of the Insurance Act 1938.
- ❖ From the year 2000 has registered new insurance companies in accordance with regulations.
- ❖ Monitors insurance sector activities for healthy development of the industry and protection of policyholders' interests.

**SWAMIH**

- ❖ It is India's Special Window for Affordable & Mid-Income Housing (SWAMIH).
- ❖ The residential project - Rivali Park, located in suburban Mumbai, was the first housing project in India to have received funding under the SWAMIH Fund.

About SWAMIH

- In a short time-span of 1.5 years since inception, the SWAMIH Investment Fund I today is one of the largest private equity teams in India and has done commendable work despite COVID-19 related restrictions.
- Thus, the Fund is targeting to complete an aggregate of 1,16,600 homes.
- This Fund is bridging the trust deficit between homebuyers and developers by completing construction and delivering homes without depending on any other source of finance.

**Conclusion**

In order to make the premium affordable, financial support needs to be explored through NABARD, other institutions, CSR

**PEPPER IT WITH**

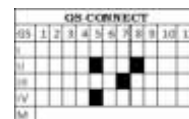
Atal Beemit Vyakti Kalyan Yojana, Ayushman Bharat Scheme, Community-based health insurance, Employees' State Insurance Corporation,

funds, government support and support from re-insurance companies and to keep some of the covers available with very minimum or nominal premium cost. This is to ensure that families and their property, crops get cover and the entire village community participate in the initiative.

## Unique Disability Identification Portal

### News Excerpt

The Department of Empowerment of Persons with Disabilities (DEPwD), Government of India recently make it mandatory for all states/UTs to grant certificate of disability through online mode only using UDID portal.



### Pre-Connect

- The Central Government notified the Rights of Persons with Disabilities Rules, 2017 under RPwD Act, 2016 in 2017. Rule 18(5) mandates the Central Government to appoint a date making it mandatory for the State/UT authorities to issue certificate of disability through online mode.
- The UDID project is under implementation since 2016. Concerned authorities of all States/UTs have been imparted training by DEPwD for working on the UDID portal. The States/UTs have been given adequate time to convert to online mode. It will ensure complete digitization of certification of disability, besides providing a viable mechanism for cross-checking genuineness of the certificate to achieve pan-India validity, and simplifying the process for the benefit of Divyangjan.

### About Unique Disability Identification Card (UDID)

"Unique ID for Persons with Disabilities" project is an initiative of Department of Empowerment of Persons with Disabilities, Government of India. It aims at building a holistic end-to-end integrated system for Issuance of Universal ID & Disability Certificates for Person with Disabilities with their identification and disability details.

The UDID project is being implemented with a view of creating a National Database for PwDs, and to issue a Unique Disability Identity Card (UDID) to each person with disabilities.

### Right of Person with Disabilities Act, 2016

The Act replaces the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995. It fulfills the obligations to the United National Convention on the Rights of Persons with Disabilities (UNCRPD), to which India is a signatory.

According to the The Rights of Persons with Disabilities (RPwD) Act, 2016, Disability has been defined based on an evolving and dynamic concept.

### Right and entitlements

- ❖ Responsibility has been cast upon the appropriate governments to take effective measures to ensure that the persons with disabilities enjoy their rights equally with others.
- ❖ Additional benefits such as reservation in higher education (not less than 5%), government jobs (not less than 4 %), reservation in allocation of land, poverty alleviation schemes (5% allotment) etc. have been provided for persons with benchmark disabilities and those with high support needs.
- ❖ Every child with benchmark disability between the age group of 6 and 18 years shall have the right to free education.
- ❖ Government funded educational institutions as well as the government recognized institutions will have to provide inclusive education to the children with disabilities.
- ❖ For strengthening the Accessible India Campaign, stress has been given to ensure accessibility in public buildings (both Government and private) in a prescribed time-frame.

It includes -

- Online availability of data of Person with Disabilities across country through a centralized web application
- Online filing and submission of registration application form for disability certificate/ Universal ID card; Offline applications may also be accepted and subsequently digitized by agencies
- Quick Assessment process for calculating the percentage of disability by the hospitals/ Medical Board
- Non-duplication of PwDs data
- Online renewal and update of information by Person with Disabilities/ on their behalf
- MIS reporting framework
- Effective management including interoperability of the benefits / schemes launched by the Government for PwD
- To take care of additional disabilities in future. Number of disabilities at the moment is seven and shall be subject to increase as per the new Act/ notification which can be up to 19 or more.

**PEPPER IT WITH**  
SPARSH Project, Divyangjan Swavalamban Yojana, National Handicapped Finance and Development, Social Justice

### Benefits of UDID

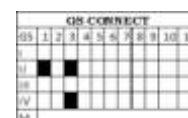
The UDID card shall bring a host of benefits to the Persons with Disabilities as given below:

- ✓ Persons with disabilities will not need to make multiple copies of documents, maintain, and carry multiple documents as the card will capture all the necessary details which can be decoded with the help of a reader
- ✓ The UDID card will be the single document of identification, verification of the disabled for availing various benefits in future
- ✓ The UDID Card will also help in stream-lining the tracking of the physical and financial progress of beneficiary at all levels of hierarchy of implementation – from village level, block level, District level , State level and National level.

### MLA-LAD Fund

#### News Excerpt

Recently, Rajasthan Chief Minister has approved a proposal to provide ₹3 crore each from the MLA Local Area Development (LAD) Fund. For meeting the expenses for COVID-19 vaccination of people in the age group of 18 to 44 years, the fund for each legislator has been increased from ₹2.25 crore to ₹5 crore a year.



#### Pre-Connect

##### WHAT IS MLA LAD?

- Member of Legislative Assembly Local Area Development is a scheme that enables each MLA to undertake small developmental works in his/her constituency through the allocated funds of Rs. 2 crore per year.
- Under this scheme, funds will be provided in the State's Plan Budget every year. The MLALAD Scheme is intended to be utilised for small but essential projects/works based on the felt needs of the local public.

##### Observation of ARC on MP/MLA LAD

According to Second Administrative Reform Commission, 2007 MP/MLA LADS should be scrapped because the Schemes "seriously erode the notion of separation of powers, as the legislator directly becomes the executive"

- It is also meant to be used for providing missing links to operationalise non-operational plan assets for which funds cannot be provided under any other on-going programme. This fund is not tied to any development sector.
- The Planning & Convergence Department has issued the guidelines on Scheme Concept, implementation, and monitoring. The Department has initiated all necessary steps to ensure that the scheme is successfully implemented in the field. The progress of the works being implemented under the scheme is monitored on a regular basis.

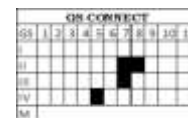
### Issues with MLA-LAD

- The criticism has been on two broad grounds. First, that it is inconsistent with the spirit of the Constitution as it co-opts legislators into executive functioning.
- The workload on MLAs created by the scheme diverted their attention from holding the government accountable and other legislative work.
- The second criticism stems from allegations of corruption associated with allocation of works. The Comptroller and Auditor General have on many occasions highlighted gaps in implementation.

## COVID outbreak in Vulnerable Tribal Groups

### News Excerpt

With the second wave of COVID-19 sweeping across rural heartland of Odisha, infections are being reported among the Particularly Vulnerable Tribal Groups (PVTGs).



### Pre-Connect

- Tribal communities are often identified by some specific signs such as primitive traits, distinctive culture, geographical isolation, shyness to contact with the community at large and backwardness.
- Along with these, some tribal groups have some specific features such as dependency on hunting, gathering for food, having pre-agriculture level of technology, zero or negative growth of population and extremely low level of literacy. These groups are called Particularly Vulnerable Tribal Groups.
- PVTGs are more vulnerable among the tribal groups. Due to this factor, more developed and assertive tribal groups take a major chunk of the tribal development funds, because of which PVTGs need more funds directed for their development.
- In this context, in 1975, the Government of India initiated to identify the most vulnerable tribal groups as a separate category called PVTGs and declared 52 such groups, while in 1993 an additional 23 groups were added to the category, making it a total of 75 PVTGs out of 705 Scheduled Tribes, spread over 17 states and one Union Territory (UT), in the country (2011 census).

### Government of India follows the following criteria for identification of PVTGs.

- Pre-agricultural level of technology
- Low level of literacy
- Economic backwardness
- A declining or stagnant population.

**PEPPER IT WITH**  
Denotified, Nomadic and Semi-Nomadic Communities, Fifth Schedule Areas, The National Commission for Scheduled Tribes, Van Dhan Scheme, VanbandhuKalyanYojana

### How and Why COVID-19 Outbreaks in these tribal groups?

- As state government didn't stop weekly markets where Tribals come in contact with outside world.
- As it is difficult to prevent spread of highly infectious coronavirus state government do not any precautions to keep tribal communities safe.



- The administration would find it very tough to stop faster spread, if virus makes further inroad into tribal communities. Since many Tribals live in tiny huts, it makes transmission of the virus very difficult to contain and isolate.
- Apparently, unlike other states where special drives are being held to vaccinate the vulnerable tribal population, such measures are yet to start in Odisha.

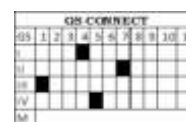
### Which PVTGs effected by COVID-19?

The PVTGs such as Bonda, Birhor, Chuktia Bhunjia, Didayi, Dongaria Kandha, Hill Kharia, Juang, Kutia Kondh, Lanjia Saora, Lodha, Mankirdia, Paudi Bhuyan and Saora have been identified on the basis of stagnant or diminishing populations, subsistence level of economy associated with pre-agricultural stages of hunting, food gathering and shifting cultivation, and relative physical isolation.

## The State of Working India (SWI) 2021

### News Excerpt

Recently, the State of Working India (SWI) 2021 was brought out by the researchers at Azim Premji University. The report, which is an annual feature, documented the impact of one year of COVID-19 in India, on jobs, income, inequality and poverty.

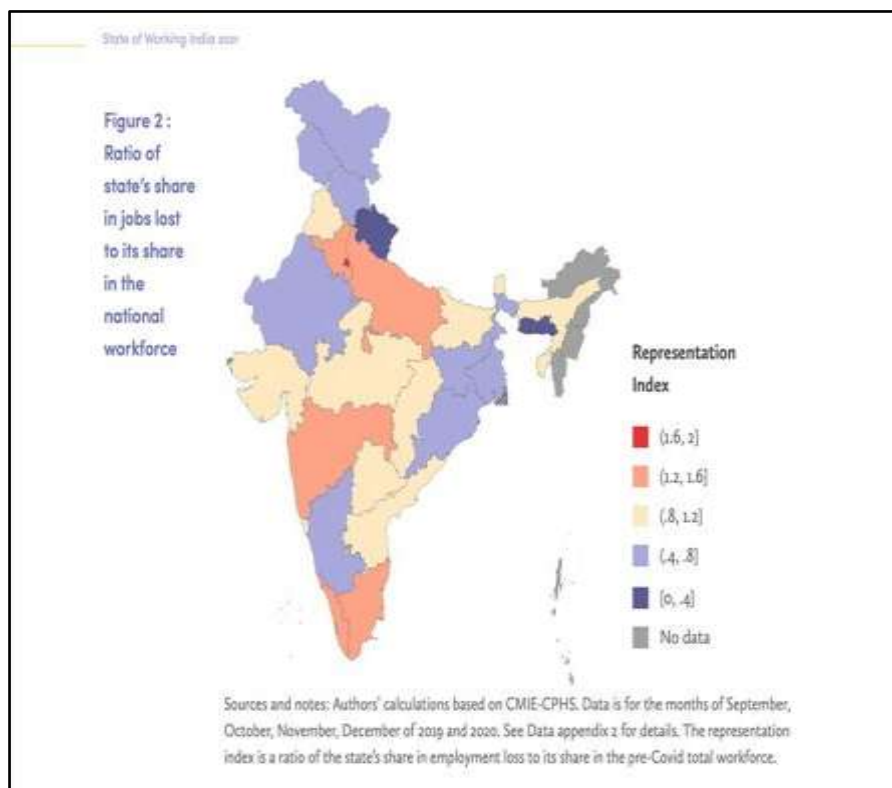


### Pre-Connect

- The report collated data from a wide range of studies and research such as the Consumer Pyramids Household Survey from the Centre for Monitoring the Indian Economy, the AzimPremji University Covid-19 Livelihoods Phone Survey (CLIPS) and the India Working Survey (IWS).
- The report brought out jointly by the Centre for Monitoring Indian Economy (CMIE) and Centre for Economic Data and Analysis or CEDA at Ashoka University.

### What report show?

**Employment:** During the lockdown and months afterwards, 61% of working men remained employed, and 7% lost employment and did not return to work. **For women, only 19% remained employed, and 47% suffered a permanent job loss during the lockdown, not returning to work even by the end of 2020.**

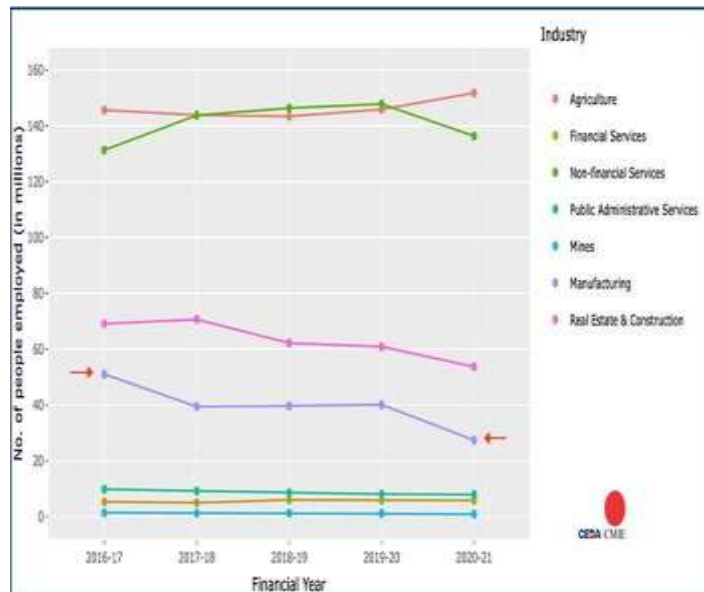


### Women as part of India’s labour Force:

- Rather than having women leave agricultural work and shift towards better-paid and more productive manufacturing jobs (as was achieved in East Asian and Southeast Asian economies), the Indian economy has instead pushed them out of the labour force altogether.
- The fact that women are hit harder by the pandemic is not unique to India. But it is particularly problematic, as the participation of women in India's workforce has been on a decline over the past decade despite the increasing GDP.
- The agriculture sector is the primary source of employment for women, accounting for 60% of working women in India. Participation of women in other industrial core sectors is minimal, like 7% in oil and gas, 10% in auto, 11% in pharma and 28% in IT.

✓ **There was a large increase in informal employment. Salaried workers moved into self-employment and daily wage work. Agriculture and trade emerged as fallback sectors:** After the lockdown, workers came back into more precarious and informal forms of employment. Nearly half of formal salaried workers moved into informal work, either as self-employed (30%), casual wage (10%) or informal salaried (9%) workers, between late 2019 and late 2020.

✓ **Poorer households were worse affected, and poverty and inequality has increased.** Though incomes fell across the board, the pandemic has taken a far heavier toll on poorer households. In April and May the poorest 20% of households lost their entire incomes. In contrast the richer households suffered losses of less than a quarter of their pre-pandemic incomes. Over the entire eight month period (Mar to Oct), an average household in the bottom 10% lost ₹15,700, or just over two months’ income.



✓ **Households coped by cutting back on food intake,** selling assets, and borrowing informally from friends, relatives, and money-lenders. An alarming 90 per cent of respondents in the AzimPremji University CLIPS reported that households had suffered a reduction in food intake as a result of the lockdown.

### Jobs in manufacturing sectors

- The chart alongside is based on CMIE’s monthly time-series of employment by industry going back to the year 2016. It shows employment data across seven sectors, viz. agriculture, mines, manufacturing, real estate and construction, financial services, non-financial services, and public administrative services. Between them, these sectors account for 99% of total employment in India.
- The number of people employed in the manufacturing sector of the economy has come down from 51 million to 27 million — that is, almost halving in the space of just four years!
- For the longest time, India has struggled to get its

**PEPPER IT WITH**  
Skill India, Demographic Dividend,  
National Skill Development  
Corporation, PMKVY

manufacturing industries to create a growing bank of jobs. But, and this is what the CMIE data shows, what is happening in the past 4-5 years is that far from soaking up excess labour from other sectors of the economy, manufacturing is actually letting go of workers.

- The manufacturing jobs lost are in labour-intensive sectors such as textiles, construction material (like tiles etc.) and the food processing industry.

### Why is Indian manufacturing failing to create jobs?

- ✦ The governments have been corrupt, with officials and politicians extracting bribes. The combination of these factors makes starting a manufacturing firm that much riskier and that explains the slow growth or, in other words, the weak supply of manufacturing firms.
- ✦ As regards the demand for manufacturing goods, Indians have always consumed relatively less of manufacturing goods and relatively more of food and services.
- ✦ There are two possible reasons for this. One, most Indians are quite poor and hence most of the income is spent on food. Two, repairs and maintenance are a very high part of our consumption choice. In other words, when Indians buy a manufactured product — say a refrigerator — they tend to use it for much longer than in developed countries. Moreover, even when you discard the fridge after 20 years, there is a large second-hand market for it among the lower-income groups.

### What need to be done?

- > Extending free rations under the PDS beyond June, at least till the end of 2021.
- > Cash transfer to as many vulnerable households as can be reached with the existing digital infrastructure, including but not limited to Jan Dhan accounts.
- > Expansion of MGNREGA entitlement to 150 days and revising programme wages upwards to state minimum wages.
- > Launching a pilot urban employment programme in the worst hit districts, possibly focused on women workers.
- > Automatically enrolling all MGNREGA workers who do construction work, as registered workers under the Building and Other Construction Workers (BoCW) Act so that they can access social security benefits.
- > A Covid hardship allowance to 2.5 million Anganwadi and ASHA workers.

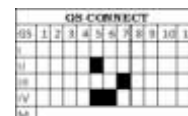
### Conclusion

Someday the pandemic will be behind us, and the task of economic revival will include addressing weak structural transformation, persistent informality and inadequate employment generation. The time is also right to correct the historical undervaluation of workers who have played a crucial frontline role in the response to the crisis. A National Employment Policy should be envisioned, which includes the promotion of public investment in social infrastructure as well as the facilitation of private investment. These, together with a comprehensive social security infrastructure that includes rights based entitlements, portable benefits, and empowered worker welfare boards, can tackle the persistent problems of low earnings, low productivity and precarity.

## **India's Health workers Brain Drain**

### News Excerpt

India needs systematic changes that could range from increased investment in health infrastructure, ensuring decent pay to health workers and building an overall environment that could prove to be beneficial for them and motivate them to stay in the country.



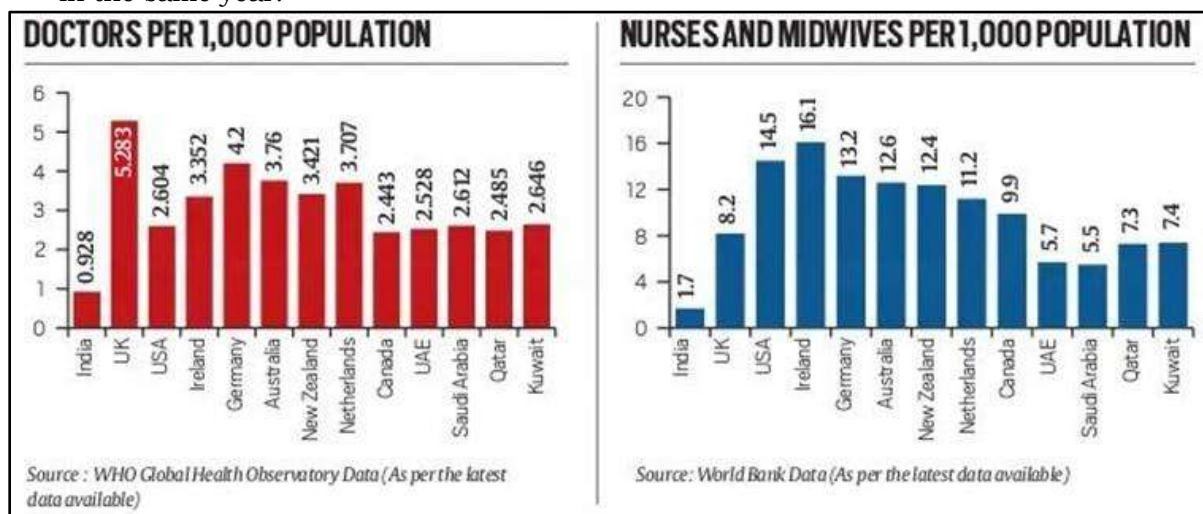
### What are the issues India currently facing?

- India is currently undertaking one of the largest vaccination programmes in the world.

- At the same time, significant doses of vaccines made in India had been exported to over 84 countries.
- The country is grappling with problems ranging from insufficient hospital beds, ICUs and ventilators to shortages in oxygen supply.
- A further surge in cases across the country could ultimately lead to overburdening these workers. Besides treating Covid patients, they will also have to administer vaccines, now available to the country’s entire adult population.

### Reasons for such problems

- For several decades, India has been a major exporter of healthcare workers to developed nations particularly to the Gulf Cooperation Council countries, Europe and other English-speaking countries.
- This is part of the reason for the shortage in nurses and doctors. As per government reports, India has 1.7 nurses per 1,000 population and a doctor to patient ratio of 1:1,404 — this is well below the WHO norm of three nurses per 1,000 population and a doctor to patient ratio of 1:1,100. But, this does not convey the entire problem.
- The distribution of doctors and nurses is heavily skewed against some regions. Moreover, there is high concentration in some urban pockets.
- As per OECD data, around 69,000 Indian trained doctors worked in the UK, US, Canada and Australia in 2017. In these four countries, 56,000 Indian-trained nurses were working in the same year.



### How other countries manage their health workers?

- ✓ With the onset of the pandemic, there has been a greater demand for healthcare workers across the world, especially in developed nations. Countries in dire need of retaining their healthcare workers have adopted migrant-friendly policies.
- ✓ At the beginning of the pandemic, OECD countries exempted health professionals with a job offer from the travel bans. Some countries processed visa applications of healthcare workers even during the lockdown period.
- ✓ The UK has granted free one-year visa extensions to eligible overseas healthcare workers and their dependents whose visas were due to expire before October this year. Similarly, France has offered citizenship to frontline immigrant healthcare workers during the pandemic.
- ✓ While there are strong pull factors associated with the migration of healthcare workers, in terms of higher pay and better opportunities in the destination countries, one cannot deny the strong push factors that often drive these workers to migrate abroad.

### What need to be done by India?

- The need for increased investment in healthcare has been evident throughout the pandemic. The 2020 Human Development Report shows that India has five hospital beds per 10,000 people — one of the lowest in the world.
- Increased investment in healthcare, especially in the public sector, is thus the need of the hour. This would, in turn, increase employment opportunities for health workers.
- Over the years, the government has taken measures to check the brain drain of healthcare workers with little or no success. In 2014, it stopped issuing No Objection to Return to India (NORI) certificates to doctors migrating to the US.
- The NORI certificate is a US government requirement for doctors who migrate to America on a J1 visa and seek to extend their stay beyond three years. The non-issuance of the NORI would ensure that the doctors will have to return to India at the end of the three-year period.
- The government has included nurses in the Emigration Check Required (ECR) category. This move was taken to bring about transparency in nursing recruitment and reduce exploitation of nurses in the destination countries.
- This policy requires nurse recruitment to be done through six state-related employment agencies and makes it mandatory for the nurses to accept international contracts that are approved by the government.
- The government’s policies to check brain drain are restrictive in nature and do not give us a real long-term solution to the problem. The nation requires systematic changes that could range from increased investment in health infrastructure, ensuring decent pay to workers and building an overall environment that could prove to be beneficial for them and motivate them to stay in the country.

**PEPPER IT WITH**  
VAJRA Scheme, Young Scientist Award, Pravasi Bharatiya Divas

### Conclusion

The government should focus on framing policies that promote circular migration and return migration — policies that incentivise healthcare workers to return home after the completion of their training or studies. It could also work towards framing bilateral agreements that could help shape a policy of “brain-share” between the sending and receiving countries — the destination countries of the migrants would be obliged to supply healthcare workers to their country of origin in times of need, especially in times such as what we are living in now.

## Registration of Unorganised Workers

### News Excerpt

Recently, The Supreme Court asked the Centre and states to complete the registration of unorganised workers, who had to return to their native villages after the Covid-induced national lockdown last year, “as early as possible” so that they “are able to reap the benefit of different” welfare schemes.

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### Pre-Connect

- The term unorganized worker has been defined under the Unorganized Workers' Social Security Act, 2008, as a home-based worker, self-employed worker or a wage worker in the unorganized sector and includes a worker in the organized sector who is not covered by any of the Acts mentioned in Schedule-II of Act i.e. the Employee's Compensation Act, 1923 (3 of 1923).
- As per the survey carried out by the National Sample Survey Organization in the year 2011-12, the total employment in both organized and unorganized sector in the country was of the order of 47 crore. Out of this, about 8 crore were in the organized sector and the balance of 39 crore in the unorganized sector.

- The workers in the unorganized sector constitute more than 90 percent of the total employment in the country.
- A large number of unorganized workers are home based and are engaged in occupations such as beedi rolling, agarbatti making, papad making, tailoring, and embroidery work.

### Impact of COVID on unorganised sector

- The already declining labour market faced a further decline due to the pandemic. According to the 2018-19 data, 52% of the labour force is self-employed. 24% were casual workers without any financial security and the remaining 24% were regular waged workers. The shock of the pandemic affected the labour force unequally.
- The regular formal employed are the least affected. Coupled with job tenure, high salaries, and social security, they are in a comfortable position. They can enjoy the privilege of working from home.
- The less-educated casual workers who engage in low paying work are the most affected. They work in unstable conditions and are susceptible to layoffs. Physical distancing, safety measures, along with the fear of contracting the disease itself, the casual workers are left to face the brunt of the pandemic.
- Most of the migrants are casual workers or daily wage workers. With the lockdown in effect, many were jobless. **The ILO predicted that the pandemic would push 400 million workers to poverty.** Their pathetic situation forced the migrants to return to their villages. Without money, food, and transportation, many migrants either walked or cycled on their return.
- India is an agrarian economy. Food and agriculture contribute 16.5% in the GDP, the highest by any industry. Approx. half of the total workforce of the country is employed in agriculture. The pandemic hit during the peak of the Rabi season, also the time when the harvest reaches the mandis for sale by governmental agencies. The non-availability of labour has resulted in longer harvesting time, which resulted in a spike of the daily wage for harvesting crops.
- The fishing industry employs around 14 million people and contributes 1.1% in the GDP. 80% of the employed are small scale fishermen. The lockdown imposed restrictions on fishing, which reduced the supply to the markets. Higher prices of fish and other marine products, along with the pandemic, inflicted losses on the vendors.
- Another industry severely affected by the pandemic are the handloom and handicrafts industry. The already dull industry was made worse by the pandemic. The absence of

### Role of Judiciary for the protection of Unorganized Sector

When there is a failure of proper implementation of legislations, the judiciary protects the rights of unorganized workers.

In **Sanjit Roy V. State of Rajasthan**, the court held that whenever any person who works for the state is affected by drought or scarcity, the state shall not pay him minimum wages as it violates Art 23 of the Constitution of India. Any labour work done by prisoners and if they are not paid minimum wages, it means it is forced labour and it infringes Art 23 of the Constitution.

In **Daily Rated Casual Labour v. Union of India**, the court held that if the workers are classified into regular and working employees, then it leads to infringement of Art 14 and 16 of the Constitution. No person can refuse to render services to any worker on the ground that they belong to scheduled caste.

#### **PEPPER IT WITH**

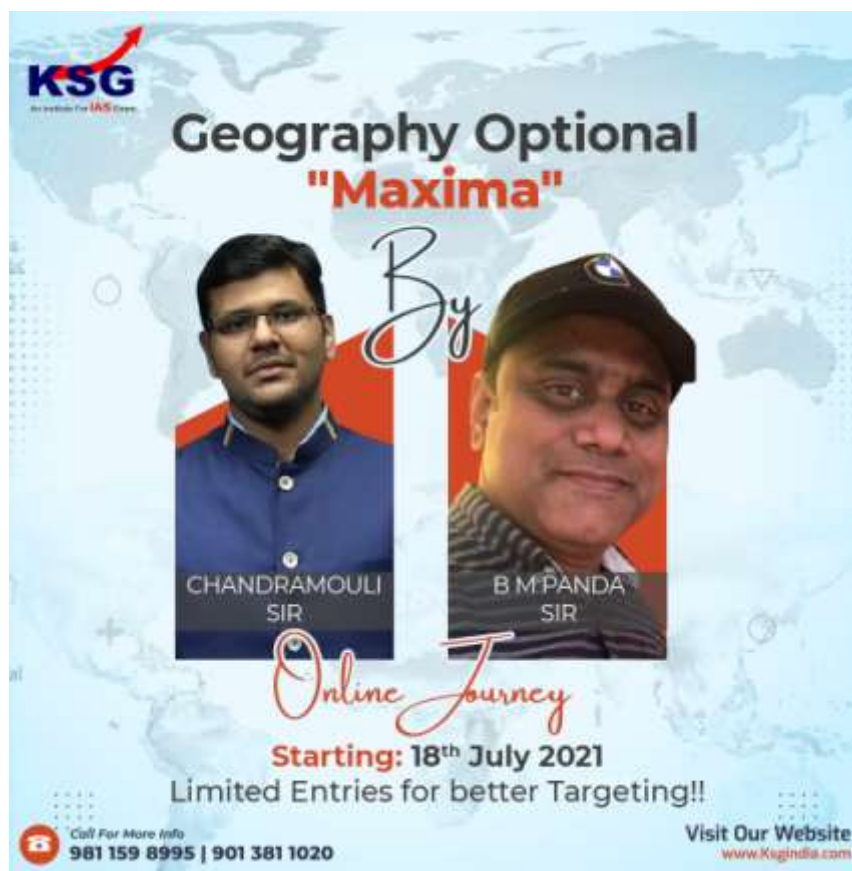
Pradhan Mantri Shram Yogi Maandhan (PM-SYM), Gig Economy, Pradhan Mantri Rozgar Protsahan Yojna, NPS Scheme for unorganised workers

exhibitions, banning the sale of nonessential items, and lowered demand contribute to their decline. The export of the industry fell by 40% to \$2.1 billion from \$3.53 billion.

- The MSME sector is one of the worst-hit sectors. It employs 120 million people, produces 45% of the exports, and contributes 37% of the GDP. In a situation filled with fear, lowered demand, and a ban on the sale of non-essential commodities, the MSME sector is the most vulnerable. The key challenges are to pay wages, rents, and pressing creditors. Businesses like garments, logistics, and consumer goods face a sharp decline. Businesses dependent on imports such as pharmaceuticals, electronic gadgets, and consumer durables are declining due to disruption in the value chain.

### Conclusion

- ✓ Unorganized workers in India face many problems like low wages, cruel treatment by employers, poor living condition, etc. Social security is one of the important subjects that should be recognized by the government to reduce poverty in the country. Apart from the Unorganized Workers Social Security Act, 2008, there are many schemes like old age scheme, life insurance scheme, health insurance scheme, etc. for the welfare of unorganized workers.
- ✓ The rights of the unorganized workers are protected by various articles in the constitution of India. The unorganized workers should be given awareness regarding their health, living, and wages and should not be exploited by the employers in their working areas.



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## ECONOMY

### Pradhan Mantri Mudra Yojana (PMMY)

#### News Excerpt

More than 28.68 crore loans for an amount of Rs 14.96 lakh crore sanctioned by Banks, NBFCs and MFIs since launch of the PMMY. PMMY helped in generation of 1.12 crore net additional employment from 2015 to 2018.

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#### Pradhan Mantri MUDRA Yojana (PMMY)

- **PMMY was launched in 2015** for providing loans upto Rs.10 Lakh to the non-corporate, non-farm small/micro enterprises.
- Under PMMY collateral free loans of uptoRs. 10 Lakh are extended by Member Lending Institutions (MLIs) viz Scheduled Commercial Banks, Regional Rural Banks (RRBs), Small Finance Banks (SFBs), Non-Banking Financial Companies (NBFCs), Micro Finance Institutions (MFIs) etc.
- The loans are given for income generating activities in manufacturing, trading and services sectors and for activities allied to agriculture.
- Mudra loans are offered in three categories namely, 'Shishu', 'Kishore' and 'Tarun' which signifies the stage of growth or development and funding needs of the borrowers-
  - Shishu: covering loans up to Rs. 50,000/-
  - Kishore: covering loans above Rs. 50,000/- and uptoRs. 5 lakhs
  - Tarun: covering loans above Rs. 5 lakh and uptoRs. 10 lakhs
- With an objective to promote entrepreneurship among the new generation aspiring youth, it is ensured that more focus is given to Shishu Category loans and then Kishore and Tarun categories.

#### Achievements of this Scheme

- More than 28.68 crore loans for an amount of Rs 14.96 lakh crore have been sanctioned since launch of the scheme.
- 4.20 crore PMMY loans sanctioned and Rs. 2.66 lakh Crore sanctioned in FY 2020-21.
- 88% of the loans are of 'SHISHU' category.
- Almost 24% of the loans have been given to new entrepreneurs.
- About 68% of the loans have been given to women entrepreneurs.
- About 51% of the loans loan have been given to SC/ST/OBC borrowers.
- SCs and STs constitute 22.53 % of the borrowers.
- OBCs constitute 28.42% of the borrowers.
- About 11% of the loans have been given to Minority community borrowers.
- As per a survey conducted by Ministry of Labour and Employment, PMMY helped in generation of 1.12 crore net additional employment from 2015 to 2018. Out of the 1.12 crore of estimated increase in employment, Women accounted for 69 lakh (62%).

#### PEPPER IT WITH

Mudra Loan, NPA, Haircut, Kamath committee, Special Mention Accounts, Insolvency and Bankruptcy Code, SARFAESI Act, 2002

### Growth of the Core Sectors

#### News Excerpt

The combined Index of Eight Core Industries stood at 143.1 in March, 2021, which increased by 6.8 (provisional) per cent as compared to the Index of March, 2020. Its cumulative growth during April to March, 2020-21 has been (-) 7.0%.

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## Highlights

- Final growth rate of Index of Eight Core Industries for December 2020 is revised to 0.4% from its provisional level (-) 1.3%.
- The Eight Core Industries comprise 40.27 per cent of the weight of items included in the Index of Industrial Production (IIP). The summary of the Index of Eight Core Industries is given below:
  - **Coal** - Coal production (weight: 10.33 per cent) declined by 21.9 per cent in March, 2021 over March, 2020. Its cumulative index declined by 4.8 per cent during April to March, 2020-21 over corresponding period of the previous year.
  - **Crude Oil** - Crude Oil production (weight: 8.98 per cent) declined by 3.1 per cent in March, 2021 over March, 2020. Its cumulative index declined by 5.2 per cent during April to March, 2020-21 over the corresponding period of previous year.
  - **Natural Gas** - The Natural Gas production (weight: 6.88 per cent) increased by 12.3 per cent in March, 2021 over March, 2020. Its cumulative index declined by 8.2 per cent during April to March, 2020-21 over the corresponding period of previous year.
  - **Petroleum Refinery Products** - Petroleum Refinery production (weight: 28.04 per cent) declined by 0.7 per cent in March, 2021 over March, 2020. Its cumulative index declined by 11.2 per cent during April to March, 2020-21 over the corresponding period of previous year.
  - **Fertilizers** - Fertilizer's production (weight: 2.63 per cent) declined by 5.0 per cent in March, 2021 over March, 2020. Its cumulative index increased by 1.8 per cent during April to March, 2020-21 over the corresponding period of previous year.
  - **Steel** - Steel production (weight: 17.92 per cent) increased by 23.0 per cent in March, 2021 over March, 2020. Its cumulative index declined by 9.5 per cent during April to March, 2020-21 over the corresponding period of previous year.
  - **Cement** - Cement production (weight: 5.37 per cent) increased by 32.5 per cent in March, 2021 over March, 2020. Its cumulative index declined by 11.9 per cent during April to March, 2020-21 over the corresponding period of previous year.
  - **Electricity** - Electricity generation (weight: 19.85 per cent) increased by 21.6 per cent in March, 2021 over March, 2020. Its cumulative index declined by 0.6 per cent during April to March, 2020-21 over the corresponding period of previous year.

## Analytica

- Experts believe that the spike was largely due to the base effects from March 2020, when a national lockdown impacted industrial activity.
- Economists said core sector numbers for March came in below expectations and that the uptick was misleading. Steel, cement, electricity and natural gas production recorded a sharp double-digit percentage rise from a year ago, but four sectors remained in the red despite a low base — coal (-21.9%), fertilizers (-5%), crude oil (-3.1%) and petroleum refinery products (-0.7%).
- According to some experts, industrial output is expected to grow by close to 10% since it had dipped 16.7% in March 2020.

## Impact of the Covid-19 Pandemic on Core Sector Industries in India

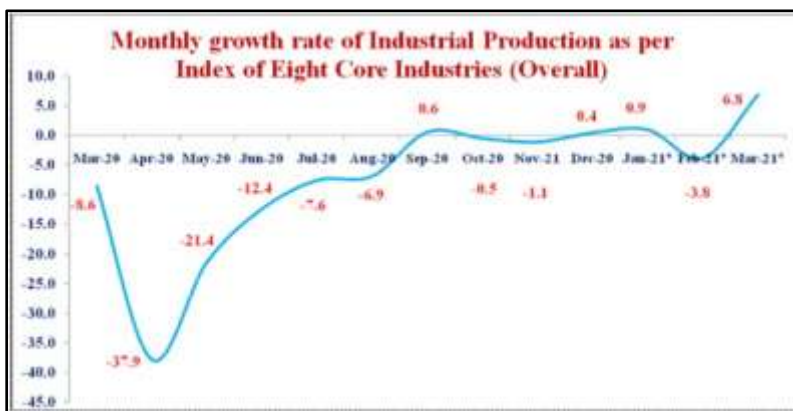
- ✓ The production of eight Core industries has been adversely affected by the Covid-19 pandemic and associated disruptions in demand and supply of goods and services.
- ✓ Some of the demand side factors responsible for drop in production are decline in private final consumption expenditure and gross fixed capital expenditure, uncertainty in business sentiments, etc.
- ✓ The imposition of nationwide lockdown to contain the outbreak of Covid-19 pandemic was a major supply side factor responsible for drop in the core sector growth.

- ✓ Industrial growth depends on a number of factors including structural, external, fiscal and industrial factors.
- ✓ The sudden outbreak of COVID-19 has severely impacted some of the major economies of the world, viz. USA, European Union, UK and Japan.
- ✓ In India too, various sectors were affected due to the nation-wide lockdown. However, after the lockdown was relaxed, improvement has been witnessed in several sectors of the economy.
- ✓ After a steep decline in March and April 2020, the overall growth rate of production of eight core industries started showing signs of recovery since May 2020.

### Steps taken by the Government

- The National Infrastructure Pipeline is expected to significantly boost infrastructure and spur growth impulses in the economy.
- Make in India, PradhanMantri Gram SadakYojana, PradhanMantriAwaasYojana – Gramin, PM AwaasYojana (Urban), Swachh Bharat Mission, JalJeevan Mission to provide ‘HarGharJal’ as well as other infrastructure and housing schemes will stimulate the production and sale of **cement, steel, and other construction materials** resulting in multiplier effect on the economy.
- As part of Atmanirbhar Bharat Abhiyan, a Production Linked Incentive (PLI) scheme has been announced to enhance production of ‘**Speciality Steel**’, incorporating four different product categories.

- In the **Coal Sector**, amendments in the Coal Mines (Special Provisions) Act, 2015 was made through the Mineral Laws (Amendment) Act, 2020. A total of 11 coal blocks are allocated under Mines and Minerals (Regulation and Development) (MMDR) Act. Successful auction done for 19 out of the of 38 coal mines for commercial mining in June-2020.



- For enhancing **production of oil and gas**, Government has approved major reforms in exploration and licensing policy to enhance exploration activities, attract domestic and foreign investment in unexplored/unallocated areas of sedimentary basins and accelerate domestic production of oil and gas from existing fields.
- The policy reforms inter-alia aims to boost exploration activities with greater weightage to work programme, simplified fiscal and contractual terms, bidding of exploration blocks under Category II and III sedimentary basins etc.
- The Integrated **Power** Development Scheme (IPDS) has been approved to facilitate state utilities to ensure quality and reliable 24x7 power supply in the urban areas with a total outlay of Rs 32,612 crores.
- Further, the country has already accomplished two major landmarks in rural electrification arena: (i) 100 per cent village electrification under DeenDayalUpadhyaya Gram JoytiYojana, and (ii) universal household electrification under ‘PradhanMantriSahajBijliHarGharYojana’ (Saubhaagya).
- To boost the **Mining sector**, Government has announced major initiatives under Atmanirbhar Bharat Abhiyan, which inter alia include: (a) introduction of a seamless composite exploration-cum-mining cum-production regime; (b) 500 mining blocks to be offered through an open and transparent auction process; (c) joint auction of bauxite and

coal mineral blocks; (d) removal of distinction between captive and non-captive mines; (e) Mineral index for different mineral; and (f) rationalization of stamp duty. These structural reforms are aimed to boost growth, employment and to bring state of art technology in the mining sector in general and in exploration in particular.

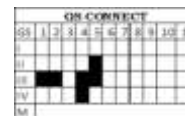
- To boost domestic manufacturing, industrial production and GDP growth, Production-Linked Incentive (PLI) Scheme in 13 key sectors, under the aegis of AatmaNirbhar Bharat, have been announced for enhancing India’s manufacturing capabilities and exports. PLI Schemes for medical devices; mobile phones; electronic components; pharmaceutical drugs; telecom and network equipment; and electronic technology products have been notified.
- Empowered Group of Secretaries (EGoS) and Project Development Cells (PDCs) have been set up in the Ministries/Departments to facilitate and promote investment. A Single Window System involving clearances by Ministries /Departments and selected State Governments is on the anvil to provide end-to-end facilitation support
- In the Union Budget 2021-22, with a view to promote domestic manufacturing, announcements have been made on setting up seven Mega Investment Textiles Parks (MITRA) over the next 3 years with plug-and-play facilities, rationalization of customs duty structure across sectors and for a Scrappage Policy to phase out old and unfit commercial vehicles.
- To boost domestic manufacturing, Department for Promotion of Industry and Internal Trade has taken various measures like amendments of Public Procurement Rules to enhance minimum local content; setting up of Fund of Funds, Seed Fund, Credit guarantee Schemes to build up a strong eco-system for nurturing innovation and Startups; development of Industrial Land/ Land Bank and Industrial Information System; creating world class infrastructure through developing nodes across various Industrial Corridors; formulation of National Master Plan on multimodal connectivity infrastructure; Industrial development schemes for North-East States, Union Territory of J &K and Union Territory of Ladakh, for the States of Himachal Pradesh &Uttarakhand have been in force to boost industrialization in NE and hilly States.
- Announcement of structural reforms such as deregulation of the agricultural sector, change in definition of MSMEs, commercialization of coal mining, higher FDI limits in defence and space sector, development of Industrial Land/ Land Bank and Industrial Information System, revamp of Viability Gap Funding scheme for social infrastructure, new power tariff policy and incentivizing States to undertake sector reforms as part of the Aatmanirbhar Package.
- Regulatory and compliance measures such as postponing tax-filing and other compliance deadlines, reduction in penalty interest rate for overdue GST filings, change in government procurement rules, faster clearing of MSME dues, IBC related relaxations for MSMEs, amongst others have been taken to boost the industry.
- To contain surge in imports of non-essential commodities, corrective steps such as increase in basic customs duty or through other non-tariff measures like issue of Quality Control Orders have been taken.
- One District One Product Scheme has also been launched to realize the true potential of a district.

**PEPPER IT WITH**  
 CPI, WPI, Headline Inflation,  
 Core Inflation, Economy of  
 Scale, Chief Economic Advisor

**FDI Inflow FY21**

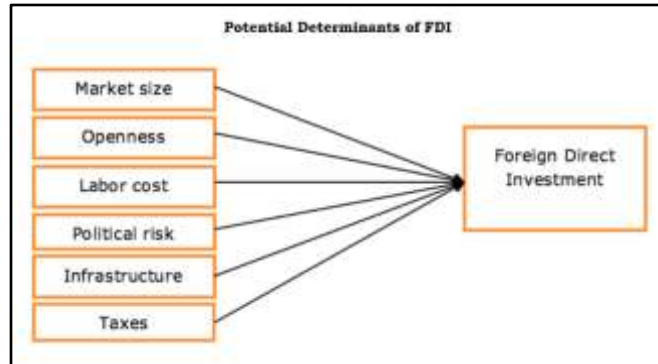
**News Excerpt**

According to Commerce and Industry Ministry, Foreign direct investment (FDI) flows into India grew 10% in 2020-21 to touch a record \$81.72 billion, with FDI equity inflows rising 19% to almost \$60 billion.



### Pre-Connect

- Foreign direct investment (FDI) is when a company takes controlling ownership in a business entity in another country. With FDI, foreign companies are directly involved with day-to-day operations in the other country.
- Apart from being a critical driver of economic growth, Foreign Direct Investment (FDI) has been a major non-debt financial resource for the economic development of India.
- Foreign companies invest in India to take advantage of relatively lower wages, special investment privileges like tax exemptions, etc. For a country where foreign investment is being made, it also means achieving technical know-how and generating employment.
- The Indian Government’s favourable policy regime and robust business environment has ensured that foreign capital keeps flowing into the country. The Government has taken many initiatives in recent years such as relaxing FDI norms across sectors such as defence, PSU oil refineries, telecom, power exchanges, and stock exchanges, among others.



### Routes through which India gets FDI

- **Automatic route:** The non-resident or Indian company does not require prior nod of the RBI or government of India for FDI.
- **Govt route:** The government's approval is mandatory. The company will have to file an application through Foreign Investment Facilitation Portal, which facilitates single-window clearance. The application is then forwarded to the respective ministry, which will approve/reject the application in consultation with the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce. DPIIT issues the Standard Operating Procedure (SOP) for processing of applications under the existing FDI policy.

<b><i>FOREIGN DIRECT INVESTMENT</i></b>	
<b>ADVANTAGES</b>	<b>DISADVANTAGES</b>
• <i>Economic growth</i>	• <i>Crowing of local industry</i>
• <i>Trade</i>	• <i>Conflict of laws</i>
• <i>To increase employment and skill level</i>	• <i>Loss of control</i>
• <i>Technology diffusion and knowledge transfer</i>	• <i>Effect on national environment</i>
• <i>Linkages and spillover to domestic firms</i>	• <i>Effect on culture</i>

### Highlights

- ✓ Singapore emerged as the top investor with almost a third of all investments, followed by the U.S. which accounted for 23% of FDI and Mauritius from where 9% of the foreign capital flows originated.
- ✓ FDI equity flows from the U.S. more than doubled during the year compared with 2019-20, while investments from the U.K. surged 44%. However, the sharpest growth among the top 10 FDI-origin countries was recorded from Saudi Arabia. Investments from the oil-rich nation jumped from a mere \$90 million in 2019-20 to \$2.8 billion last year.
- ✓ Gujarat was the top FDI destination in the year gone by, accounting for 37% of the foreign equity inflows followed by its traditional industrial rival Maharashtra which got 27% of the equity inflows.

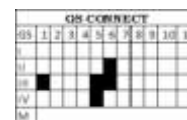
- ✓ Karnataka accounted for another 13% of the equity investments, indicating that the rest of the country got a disproportionately less 23% of foreign equity capital.
- ✓ Computer software and hardware has emerged as the top sector during 2020-21 with about 44% share of the total FDI equity inflow followed by construction (infrastructure) activities (13%) and services sector (8%), respectively.
- ✓ As much as 94% of the equity FDI into Gujarat was routed into the computer software and hardware sector, with the State accounting for 78% of the total investments into the sector. Karnataka, with 9% of FDI equity receipts into the sector, was followed by Delhi which received 5%.
- ✓ In 2019-20, India had received \$74.39 billion in FDI, with almost \$50 billion coming in the form of equity investments.
- ✓ Construction (infrastructure) activities, computer software and hardware, rubber goods, retail trading, drugs and pharmaceuticals and electrical equipment have recorded more than 100% jump in equity during 2020-21

**PEPPER IT WITH**  
Automatic Route, FII, FPI, Strategic Sectors, Divestment (DIPAM), Vertical FDI, Conglomerate FDI

### MCA21 Version 3.0

#### News Excerpt

Minister of State for Finance and Corporate Affairs recently launched the first phase of Ministry of Corporate Affairs' (MCA) **MCA21 Version 3.0 (V3.0)** comprising of revamped website, new email services for MCA Officers and two new modules, namely, e-Book and e- Consultation during a virtual event.



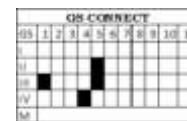
#### Highlights

- MCA21 is an e-Governance initiative of MCA, Government of India that enables an easy and secure access of the MCA services to the corporate entities, professionals and citizens of India.
- The MCA V3.0 is going to be implemented in two phases. The second and final phase shall be launched from October 2021 onwards.
- The entire project is proposed to be launched within this Financial Year and will be data analytics and machine learning driven.
- The MCA21 V3.0 in its entirety will not only improve the existing services and modules, but will also create new functionalities like e-adjudication, compliance management system, advanced helpdesk, feedback services, user dashboards , self-reporting tools and revamped master data services.
- MCA21 has been part of Mission Mode projects of the Government of India. Bagging several accolades in past, the project has now reached its 3<sup>rd</sup> version.
- MCA21 V3.0 is part of this year's Budget announcement and will leverage the use of latest technologies to further streamline the Corporate Compliance and stakeholders experience.
- The e-consultation module will facilitate:
  - virtual public consultation of proposed amendments and new legislations to be introduced by MCA from time to time.
  - leverage Artificial intelligence for compiling, grouping and categorizing comments/inputs received from stakeholders and create analytical reports for quick policy decision making.
  - new email service for officers of MCA will provide them with advanced features and capabilities for organised and managed communication with internal as well as external stakeholders.

## RBI Annual Report 2020-21

### News Excerpt

The foreign exchange transactions of the central bank have come as a saviour for the government even as the Covid pandemic continues to rage across the country. The Reserve Bank of India (RBI) has been able to transfer a higher amount to the government as surplus this year following a sharp fall in provisions and gains from foreign exchange transactions during the year ended March 2021.



### Pre-Connect

- Under Section 47 of the RBI Act, 1934, after making provisions for bad and doubtful debts, depreciation in assets, contribution to staff and superannuation funds and for all matters for which provisions are to be made by or under the Act or that are usually provided by bankers, the balance of the profits of the Reserve Bank is required to be paid to the central government.
- The central bank's gain from foreign exchange transactions rose from Rs 29,993 crore to Rs 50,629 crore in 2020-21. A good chunk of the money transferred to the government was profit from the sale of dollars during the last three months of FY21 — \$25.94 billion in March, \$24.57 billion in February and \$15.37 billion in January. Last year, RBI dollar sales were just \$8.03 billion in March and \$1.46 billion in February.
- The RBI recently decided to transfer a higher amount of Rs 99,122 crore to the government despite the year FY21 being a nine-month period as against Rs 57,127 crore in the previous 12-month period.
- The RBI move, which is likely to boost the government's finances, comes at a time when the real economy indicators moderated through April-May 2021 as the second wave of Covid-19 took a heavy toll.

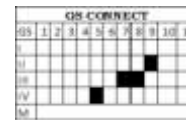
### Highlights of the Report

- While the economy has not moderated to the extent during the first wave, the surrounding uncertainties can act as a deterrent in the immediate period. RBI is expecting a 10.5 per cent growth in 2021-22.
- Report said that as the vaccination drive picks up and cases of infections fall, a sharp turnaround in growth is likely, supported by strong favourable base effects.
- According to RBI, in the midst of the second wave as 2021-22 commences, pervasive despair is being lifted by cautious optimism built up by vaccination drives.
- The central bank said the rupee gained by 3.5 per cent (based on USD/rupee closing rates as at end-March 2021 over end-March 2020) but underperformed vis-a-vis its Asian peers during 2020-21.
- In Q4 of 2020-21, while the Indian rupee remained supported by foreign portfolio flows and merchant-related inflows, aiding the RBI to sell dollars at a gain, dollar purchases almost matched sales.
- According to the RBI report, in India, the pace of contagion of the second wave has been alarming, stretching health infrastructure.
- The onset of the second wave has triggered a raft of revisions to growth projections, with the consensus gravitating towards the Reserve Bank's projection of 10.5 per cent for the year 2021-22 with 26.2 per cent growth in Q1, 8.3 per cent in Q2, 5.4 per cent in Q3 and 6.2 per cent in Q4.
- The size of the RBI balance sheet increased by 6.99 per cent from Rs 53,34,792 crore as on June 30, 2020 to Rs 57,07,669 crore as on March 31, 2021.

## Patent Waiver on Covid-19 Vaccines

### News Excerpt

Recently, a heated debate is going on among the experts regarding a call for a World Trade Organization (WTO) waiver on intellectual property protection (IPP) for pharmaceutical patents in the ongoing covid pandemic.



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### Pre-Connect

Intellectual property rights (IPR) on drugs and vaccine formulae give creators an exclusive right over inventions for a certain period of time, and prevent multiple pharmaceutical companies from making the same items. This typically keeps prices high, and when drugs go off patents and multiple companies can make them, prices crash, making them more accessible and affordable.

### What is the Issue?

- The conversation on patent waivers began in the first year of the pandemic, when India and South African made a proposal at the World Trade Organization (WTO) on October 2, 2020, for IPR exemptions on several items for COVID-19, including drugs, vaccines, protective gear, ventilators and diagnostic kits.
- The WTO is the ultimate authority on global trade rules, including IPR, and enabler of international trade agreements for 164 member countries including India.
- Internationally, IPR are governed by the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which would have to be waived as an exception, per the proposal.
- The proposal recommended that these exemptions be in place until "the majority of the world's population has developed immunity" and until "widespread vaccination is in place globally".
- At the time, the World Health Organization's director general, Tedros Adhanom Ghebreyesus, had also said that he supported this move as it would "ease international & intellectual property agreements on COVID-19 vaccines, treatments & tests in order to make the tools available to all who need them at an affordable cost".
- Public health advocates have supported the proposal. The United States government has also come out in support of a waiver. Several other countries indicated they would support a waiver, including France, Russia and New Zealand.
- Any waiver by the WTO would have to be by consensus among member states.
- The European Commission said it would begin discussions on waivers but Germany, home to BioNTech, the firm that created the vaccine being marketed by Pfizer, said it opposed a waiver because "the protection of intellectual property is a source of innovation and must remain so".

### The Case of India

- The Indian government has taken a different line domestically: At a hearing in India's Supreme Court this month, the court asked the government whether it intended to issue any compulsory licenses to companies to manufacture drugs like remdesivir that are being used for COVID-19 treatment.
- The government reportedly informed the court that as it was actively engaging itself with global organisations at a diplomatic level to find out a solution, and further: "Any exercise of statutory powers either under the Patents Act 1970 read with TRIPS Agreement and Doha Declaration or in any other way can only prove to be counter-productive at this stage".
- If the government were to use its powers to waive patents on COVID-19 items, this "would have serious, severe and unintended adverse consequences in the country's efforts being made on global platform using all its resources, good-will and good-offices through diplomatic and other channels".

- The shortage of COVID-19 vaccines is global, and India being a major producer, its shortage directly impacts global supplies.
- Some 64 countries are due to receive COVID-19 vaccines from the World Health Organization's (WHO) COVAX facility for low- and middle-income countries. But this has taken a hit-the WHO said in March 2021 that countries depending on the AstraZeneca vaccine from the Serum Institute of India (SII), branded Covishield in India, would experience delays "due to the increased demand for COVID-19 vaccines in India."
- Experts believe that the patent waiver at the global level is a good move. Indian companies will be able to step in and make more COVID-19 vaccines. The next step must be to ensure transfer of technology.
- India's generics industry has for decades reverse-engineered drugs to sell cheaper, mass-produced generic versions. But vaccines, especially those using the newer mRNA technology, require a higher order of scientific knowhow which is the reason why technology transfer will be key.
- Experts believe vaccine production after waivers will take well over a year to ease the current shortage.
- The most effective solution is for patent holders themselves to issue voluntary licenses to other companies.
- For generic companies wishing to make COVID-19 drugs and vaccines, it is important that they not only have access to the patent information but also have some sort of partnership or license with the innovator companies to figure out how to develop the item. This will help them arrange the necessary equipment, infrastructure, technical skills, technology, software, laboratories and raw materials.
- Companies who receive these licenses from the innovator companies, to make the drug or vaccine on contract basis, will also avoid going through clinical trials again, which will not be the case for a generic company that develops the entire technology, product and process for the item on its own without a technology transfer.

**Criticism of the Patent Waiver at Global Level**

- ✓ Big foreign pharmaceutical companies and their industry-associations are not yet on board with the waiver, or convinced that it will solve any of the current supply problems.
- ✓ They point out that a waiver could disrupt existing supply chains of raw materials and manufactured vaccines, and result in a suboptimal use of limited resources at a critical time. For instance, a statement from the Pharmaceutical Research and Manufacturers of America (PhRMA) pointed out that patent waivers would not solve the limited availability of raw materials or provide solutions to actually distribute the various vaccines thus produced.
- ✓ According to the International Federation of Pharmaceutical Manufacturers and Associations, trade barriers and supply-chain constraints are a more worrisome problem than patents.
- ✓ Pharmaceutical companies don't have an incentive to allow cheaper pricing in the developing world.

**Criticism of India's Stand**

- Experts believe that the Indian government is giving contradictory statements abroad and there is no clarity on whether it will support waiving patents.
- Unless the waiver comes with technology-transfer, it will take longer for Indian manufacturers to themselves develop the technology needed, end-to-end, especially for the mRNA vaccines such as from Pfizer and Moderna.
- The existing manufacturing capacity in India is already in use, with very little idle capacity.

**PEPPER IT WITH**

TRIPS, Vaccine Diplomacy,  
Compulsory licensing, WTO,  
Right to grant compulsory  
licences



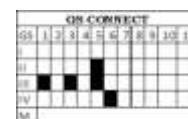
### What India can do?

- ✦ In a global pandemic, governments must use all their powers, laws, and negotiation skills, and reinvent how patents operate.
- ✦ Experts believe that the two Indian companies supposed to supply vaccines to India-- Serum Institute and Bharat Biotech--have not been able to keep up. So, this duopoly should not be allowed to exist anymore.
- ✦ The Indian government has the power to issue a compulsory license--to make a patent-holding pharmaceutical company compulsorily grant a manufacturing license to another company, which could be accompanied by transfer of technology.

## Exports of Organic Millets

### News Excerpt

In a major boost to organic products exports from the country, first consignment of millets grown in Himalayas from snow-melt water of Ganges in *DevBhoomi* (Land of the God), Uttarakhand would be exported to Denmark.



### Pre-Connect

- India's export of organic food products rose by more than 51% to Rs 7078 crore (\$ 1040 million) during April-February (2020-21) compared to the same period in the previous fiscal (2019-20).
- In terms of quantity, the exports of organic food products grew by 39% to 888,179 metric tonne (MT) during April-February (2020-21) compared to 638,998 MT shipped in April-February (2020-21). The growth in organic products have been achieved despite logistical and operational challenges posed by the COVID19 pandemic.

### Highlights

- APEDA, in collaboration with Uttarakhand Agriculture Produce Marketing Board (UKAPMB) & Just Organik, an exporter, has sourced & processed *ragi* (finger millet), and *jhingora* (barnyard millet) from farmers in Uttarakhand for exports, which meets the organic certification standards of the European Union.
- The exports of millets to Denmark would expand exports opportunities in European countries. The exports would also support thousands of farmers that are getting into organic farming.
- Millets are unique agricultural products from India which have significant demand in the global market.
- In Uttarakhand, many of the common varieties of millets are the staple foods in the hills. The Uttarakhand government has been supporting organic farming. UKAPMB, through a unique initiative has been supporting thousands of farmers for organic certification. These farmers produce mainly millets such as ragi, barnyard millet, amaranthus etc.
- Millets are gaining a lot of popularity globally because of high nutritive values and being gluten free also.

### Analytica

- ✓ Oil cake meal is also a major commodity of the organic product exports from the country followed by oil seeds, fruit pulps and purees, cereals & millets, spices, tea, medicinal plant products, dry fruits, sugar, pulses, coffee, essential oil etc. India's organic products have been exported to 58 countries including USA, European Union, Canada, Great Britain, Australia, Switzerland, Israel and South Korea.
- ✓ At present, organic products are exported provided they are produced, processed, packed and labelled as per the requirements of the National Programme for Organic Production (NPOP). The NPOP has been implemented by APEDA since its inception in 2001 as notified under the Foreign Trade (Development and Regulations) Act, 1992.

- ✓ The NPOP certification has been recognized by the European Union and Switzerland which enables India to export unprocessed plant products to these countries without the requirement of additional certification. NPOP also facilitates export of Indian organic products to the United Kingdom even in the post Brexit phase.
- ✓ In order to facilitate the trade between major importing countries, negotiations are underway with Taiwan, Korea, Japan, Australia, UAE, New Zealand for achieving Mutual Recognition Agreements for exports of organic products from India.
- ✓ NPOP has also been recognized by the Food Safety Standard Authority of India (FSSAI) for trade of organic products in the domestic market. Organic products covered under the bilateral agreement with NPOP need not to be recertified for import in India.

### **Organic Exports from India**

- The growth story of organic farming is unfolding with increasing demand not only in India but also globally. In a world battered by the COVID pandemic, the demand for healthy and safe food is already showing an upward trend and hence this is an opportune moment to be captured for a win-win situation for our farmers, consumers and the environment.
- India ranks first in number of organic farmers and ninth in terms of area under organic farming. Sikkim became the first State in the world to become fully organic and other States including Tripura and Uttarakhand have set similar targets. North East India has traditionally been organic, and the consumption of chemicals is far less than rest of the country. Similarly, the tribal and island territories are being nurtured to continue their organic story.
- With the aim of assisting farmers to adopt organic farming and improve remunerations due to premium prices, two dedicated programs namely Mission Organic Value Chain Development for North East Region (MOVCD) and Paramparagat Krishi Vikas Yojana (PKVY) were launched in 2015 to encourage chemical free farming.
- With the simultaneous thrust given by the Agri-export Policy 2018, India can emerge as a major player in global organic markets. The major organic exports from India have been flax seeds, sesame, soybean, tea, medicinal plants, rice, and pulses, which were instrumental in driving an increase of nearly 50 per cent in organic exports in 2018-19, touching Rs 5151 crore (US\$ 730.74 million).
- Modest commencement of exports from Assam, Mizoram, Manipur and Nagaland to UK, USA, Swaziland, and Italy have proved the potential by increasing volumes and expanding to new destinations as the demand for health foods increases.
- Certification is an important element of organic produce to instil customer confidence. Both PKVY and MOVCD are promoting certification under Participatory Guarantee System (PGS) and National Program for Organic Production (NPOP) respectively targeting domestic and exports markets. The Food Safety and Standards (Organic Foods) Regulations, 2017 are based on the standards of NPOP and PGS.
- About 40,000 clusters are being assisted under PKVY covering an area of about 7 lakh ha. MOVCD has brought in its fold 160 FPOs cultivating about 80,000 ha. For these clusters to become sustainable, it is important that henceforth market led production starts in a contract farming mode, so that there is a ready market for the produce and industry also gets the desired quality and quantity when required.
- The commodities with highest potential include ginger, turmeric, black rice, spices, nutri cereals, pineapples, medicinal plants, buckwheat, bamboo shoots, etc.
- Number of instances of farmer groups setting up markets in RWAs and selling directly is increasingly becoming common especially in Maharashtra and Karnataka where fresh organic produce is lapped up by the urbanites and farmers get a better bargain with no intermediaries.
- The presence of aggregators is imperative to bring about economies of scale for the small and marginal farmers. Hence the concept of market led One district - One product is being

encouraged, as also development of more clusters in the vicinity of bigger towns where the appetite for organics will be much more.

- When the pandemic struck India, access to quality food was as high on priority for the country as much as health. Advisories to States on supporting direct marketing in order to decongest mandis led to number of States issuing orders and amending legislations, thereby opening up market options to farmers.
- Working within the constraints posed due to disruption in logistics, access to regular markets, decrease in demand, number of States and clusters innovated and converted this crisis into an opportunity. Examples are-
  - The Green Caravan of Kohima created market linkages from all villages of Nagaland to urban areas for vegetables, handicrafts, and handlooms.
  - There was online sale of fruits and vegetables by FPOs in Maharashtra and doorstep delivery in specially designed electric vans in Punjab.
  - Manipur Organic Agency (MoMA) mobilised all the 15 FPCs of MOVCD to collect produce and transport to two organic wholesale centres at Sanjenthong and Chingmeriong in Imphal for onward delivery to consumers.
- The organic e-commerce platform [www.jaivikkheti.in](http://www.jaivikkheti.in) is being strengthened for directly linking farmers with retail as well as bulk buyers.
- Infusion of digital technology in a much bigger way has been a major takeaway during the pandemic period and is a welcome norm here to stay, saving in expenses on travel, logistics, etc while not compromising in any way on the quality of information sharing.
- In fact, video conferencing and webinars makes possible outreach with many more in the field, with minimum disruption in their works too and which was not possible in physical meetings.

### Conclusion

Natural farming is not a new concept in India, with farmers having tilled their land without the use of chemicals - largely relying on organic residues, cow dung, composts, etc since time immemorial. The philosophy underlying organic farming of integration of the elements – soil, water, microbes and ‘waste’ products, forestry and agriculture is the correct recipe for sustainable use of natural resources, which are coming under severe stress due to ever increasing requirement of food and feedstock for agri based industry. This is also in sync with the Sustainable Development Goal 2 targeting ‘end hunger, achieve food security and improved nutrition and promote sustainable agriculture’.

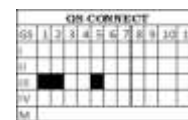
Hence with greater awareness and capacity building of the producers on compliance with international standards, Indian organic farmers will soon be reinforcing their rightful place in global agri trade.

**PEPPER IT WITH**  
 NPOP, PGS, Jaivik Bharat,  
 Organic Farming, FPO, MSP, UN  
 Decade of Millet

### Bond Yields Softening

#### News Excerpt

Recently, the Reserve Bank of India took decision to step up purchase of government securities under the government securities acquisition programme (G-SAP). This led to the yield on the benchmark 10-year bond falling below 6%.



#### Pre-Connect

- In April, the RBI launched G-SAP under which it said it would buy Rs 1 lakh crore worth of bonds in the April-June quarter.
- It has so far bought Rs 25,000 crore worth of government securities (G-secs).
- The 10-year bond has declined 15 basis points from 6.15% in the last one month.

- Movements in yields, which depend on trends in interest rates, can result in capital gains or losses for investors.
- If an individual holds a bond carrying a yield of 6%, a rise in bond yields in the market will bring the price of the bond down. On the other hand, a drop in bond yield below 6% would benefit the investor as the price of the bond will rise, generating capital gains.
- According to RBI Governor, G-SAP has engendered a softening bias in G-sec yields which has continued since then.

### Analytica

- The fall in bond yields in India could also be due to a sharp decline in US Treasury yields or the economic uncertainty caused by Covid-19.
- The most important driver of the bond market is considered to be RBI interventions. The announcement of a bond-buying programme – G-SAP — at the start of the month played a crucial role in turning the market sentiment.
- RBI continued to send strong yield signals by cancelling and devolving government debt auctions.
- In the last month alone, the RBI cancelled more than Rs 30,000 worth of debt auctions. Although part of this amount was offset by availing the green-shoe option (option to accept bids for more than the notified amount of debt auction) in other securities, the decision to buy Rs 35,000 crore worth of bonds in May was supposed to help the market absorb a portion of the Rs 1.16 lakh crore market borrowings by the government during the month.

### The impact on markets and investors

- ✓ Experts say the structured purchase programme has calmed investors' nerves and reduced the spread between the repo rate and the 10-year government bond yield.
- ✓ A decline in yield is also better for the equity markets because money starts flowing out of debt investments to equity investments.
- ✓ It means that as bond yields go down, the equity markets tend to outperform by a bigger margin and as bond yields go up equity markets tend to falter.
- ✓ The yield on bonds is normally used as the risk-free rate when calculating the cost of capital. When bond yields go up, the cost of capital goes up.
- ✓ That means that future cash flows get discounted at a higher rate. This compresses the valuations of these stocks. That is one of the reasons that whenever the interest rates are cut by the RBI, it is positive for stocks.
- ✓ When bond yields go up, it is a signal that corporates will have to pay a higher interest cost on debt. As debt servicing costs go higher, the risk of bankruptcy and default also increases and this typically makes mid-cap and highly leveraged companies vulnerable.
- ✓ The markets have viewed these measures positively with the BSE Sensex rising, while the bond markets have seen additional buying reflected by decline in G-Sec yields.

### The Role of RBI

- The RBI has been aiming to keep yields lower as that reduces borrowing costs for the government while preventing any upward movement in lending rates in the market.
- A rise in bond yields will put pressure on interest rates in the banking system which will lead to a hike in lending rates. The RBI wants to keep interest rates steady to kick-start investments.
- The yield had fallen to a low of 5.74% on July 10 last year as a result of a series of interest rate cuts. However, yields subsequently rose and touched a high of 6.15%.
- If yields come down, the RBI will be able to bring down the cost of government borrowing for 2021-22, which is set at Rs 12.05 lakh crore.

**PEPPER IT WITH**  
G-Sec, OMO, Inflation Target,  
MSF, Effective Yield, Coupon  
Rate, Zero Coupon Bond

### Future Scenario

- ✦ Analysts say potential changes in the US monetary policy direction and Fed bond yields are the biggest risk factors for the Indian bond market in 2021.
- ✦ Notwithstanding this risk, bond yields may remain in a tight range in near future supported by RBI's bond purchases.
- ✦ Over the medium term, inflation and potential monetary policy normalisation will play a more important role in shaping the interest rate trajectory.
- ✦ Experts expect market interest rates to move higher gradually over the next 1-2 years.

### India's Sovereign Rating

- ❖ According S&P Global Ratings, India's sovereign rating will remain unchanged at the current level of BBB- for the next two years despite the potential adverse impact of surging pandemic on its economy.
- ❖ However, it expects that the country would witness a slightly faster pace of growth in the next couple of years, effectively supporting the sovereign rating.
- ❖ It has predicted India's real GDP growth forecast at 11% for this fiscal.
- ❖ According to S&P, India in all likelihood will have positive growth this fiscal year but there is potential for a lower rate of growth owing to the current health crisis.
- ❖ It believes that there could be upside pressure on fiscal deficit because of Covid-19 Second Wave as revenue generation could be weaker but despite this, the government's debt stock would remain roughly stable at just above 90% of the GDP.
- ❖ In the severe scenario, there could be more additional fiscal spending from the government and revenue growth would be weaker. This would mean that the debt stock would stabilise in the next fiscal.
- ❖ Earlier, S&P, in a report, stated that India's nascent economic recovery through March solidified government revenue. But the rapidly developing health crisis could derail this progress.
- ❖ Record case numbers, limited capacity in the healthcare system, and localised lockdowns aimed at curtailing the spread of the virus would likely take a toll on household consumption and retail activity.
- ❖ The report said that over the next two to three years, fast nominal GDP growth would be critical in arresting the rise of the government debt to GDP ratio. This ratio may only stabilise the following fiscal year in the severe downside scenario.

### Edible Oil Prices

#### News Excerpts

The price of edible oil has risen sharply in recent months.

#### Pre-Connect

- Data on the Department of Consumer Affairs website show that the prices of six edible oils — groundnut oil, mustard oil, vanaspati, soya oil, sunflower oil and palm oil — have risen between 20% and 56% at all-India levels in the last one year.
- The monthly average retail prices of all six edible oils soared to an 11-year high in May 2021.
- The sharp increase in cooking oil prices has come at a time when household incomes have been hit due to Covid-19.

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#### Analytica

#### Consumption of Edible Oil in India

- With rising incomes and changing food habits, consumption of edible oils has been rising over the years.
- While mustard oil is consumed mostly in rural areas, the share of refined oils —sunflower oil and soyabean oil — is higher in urban areas.
- Between 1993-94 and 2004-05, monthly per capita consumption of edible oils increased from 0.37 kg to 0.48 kg in rural areas, and from 0.56 kg to 0.66 kg in urban areas. By 2011-12, it had risen further to 0.67 kg in rural areas and 0.85 kg in urban areas.
- Although comparable figures are not available beyond that, a steady rise in the per capita availability of vegetable oils, through domestic sources as well as imports, indicates that demand has continued to rise.
- According to the Ministry of Agriculture and Farmers' Welfare, the per capita availability of vegetable oils in the country has been in the range of 19.10 kg to 19.80 kg per annum during the last five years.
- According to the Agriculture Ministry, the demand for vegetable oils has been in the range of 23.48–25.92 million tonnes between 2015-16 and 2019-20. However, domestic supply in this period has been much lower, in the range of 8.63–10.65 million tonnes.
- In 2019-20, domestic availability of edible oils from both primary sources (oilseeds like mustard, groundnut etc.) and secondary sources (such as coconut, oil palm, rice bran oil, cotton seed) was only 10.65 million tonnes against the total domestic demand of 24 million tonnes — a gap of over 13 million tonnes.
- Thus, India depends on imports to meet its demand. In 2019-20, the country imported about 13.35 million tonnes of edible oils worth Rs 61,559 crore, or about 56% of the demand. This mainly comprised palm (7 million tonnes), soyabean (3.5 million tonnes) and sunflower (2.5 million tonnes).
- The major sources of these imports are Argentina and Brazil for soyabean oil; Indonesia and Malaysia palm oil; and Ukraine and Argentina again for sunflower oil.

### Factors Responsible for Price Rise

- ✓ The increase in domestic prices is basically a reflection of international prices, because India meets 56% of its domestic demand through imports. In the international market, prices of edible oils have jumped sharply in recent months due to various factors.
- ✓ The price of crude palm oil (for the most actively-traded futures contract at the Bursa Malaysia derivatives exchange) was quoted at 3,890 ringgit per tonne on May 25, compared to 2,281 ringgit a year ago.
- ✓ At the Chicago Board of Trade (CBOT), the closing price of soyabean for July delivery was at \$559.51 per tonne on May 24, as against \$306.16 at this time last year. The prices of soyabean at CBOT and of Malaysian palm oil determine the prices Indian consumers pay for edible oil.
- ✓ Even the Food and Agriculture Organization (FAO) price index (2014-2016=100) for vegetable oils, an indicator of movement of edible oil prices in the international market, has soared to 162 in April this year, compared to 81 in April last year.

### Factors Responsible for International Price Rise

- One of the reasons is **the thrust on making biofuel from vegetable oil**. There is a shifting of edible oils from food basket to fuel basket. There has been a thrust on making renewable fuel from soyabean oil in the US, Brazil and other countries. Despite the Covid-



19 pandemic, the global demand for edible oils has been high.

- Other factors include buying by China, labour issues in Malaysia, the impact of La Niña on palm and soya producing areas, and export duties on crude palm oil in Indonesia and Malaysia.
- According to the FAO, reports of “lower than-expected planting intentions and accounts of below-average temperatures and dry conditions in parts of USA’s main soya growing regions cast doubts over the supply prospects for the upcoming 2021/22 season”.
- Besides, Argentina’s production outlook is conditioned by reports of lower-than-anticipated yields owing to prolonged dryness.

### Options Before the Indian Government

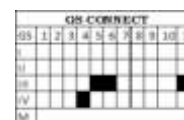
- ✦ One of the short-term options for reducing edible oil prices is to lower import duties.
- ✦ According to experts, the effective rate of import duties, including agriculture infrastructure and development cess and social welfare cess, has been 35.75% with effect from February 2, 2021.
- ✦ The effective import duties on ‘refined, bleached and deodorised (RBD) palm oil’ is 59.40%. Similarly, the rate of effective import duties on crude and refined soyabean oil and sunflower oil is in the range of 38.50% to 49.50%.
- ✦ The policy for import of crude palm oil is “free”, while for RBD palm oil it is “restricted.” If the government reduces import duty on refined palm oil, prices will come down immediately.
- ✦ However, the edible oil industry is not in favour of reducing duties. According to experts, if import duties are reduced, international prices will go up, and neither will the government get revenue, nor will the consumer benefit.
- ✦ Experts feel that the government should rather subsidise edible oils and make available these to the poor under the Public Distribution System.

**PEPPER IT WITH**  
Transesterification, PLI Scheme, National Mission on Oilseeds and Oil Palm, Vegetable Oils, Fatty Acids

## Cryptocurrency Market Crash

### News Excerpt

The cryptocurrency market recently saw a big correction with prices of major currencies, including Bitcoin, Ethereum, BNB and others crashing as much as 30% within 24 hours. This came in the backdrop of announcement of Chinese regulators regarding a crackdown on crypto currencies.



### Analytica

#### Factors Responsible for Cryptocurrency Crash

- China has barred financial institutions and payment companies from providing any services related to cryptocurrency transactions.
- This means that banks and online payments channels must not offer clients any service involving cryptocurrency, such as registration, trading, clearing and settlement.
- China had issued such a ban in 2017 as well, but compared with the previous ban, the new rules have expanded the scope of prohibited services, and surmise that “virtual currencies are not supported by any real value”.
- While the Chinese announcement was the straw that broke the camel’s back, Bitcoin and Ethereum were on a decline as Tesla CEO Elon Musk recently announced that the electric carmaker won’t be accepting Bitcoin as payment — a reversal of an earlier decision.
- The company cited environmental concerns over the computational ‘mining’ process behind its move. Mining basically refers to the process in which computers solve complex mathematical puzzles to enable transactions using Bitcoins and in return generate more

Bitcoins. This is a high energy intensive process, requiring electricity often produced by burning coal.

- According to some estimates, China is home to the largest concentration of world’s crypto miners. This results in high electricity consumption for a country which has been dealing with severe pollution.

PEPPER IT WITH  
Block chain Technology,  
Distributive Ledger, Legal  
Tender, Fiat Money, Token  
Money

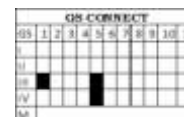
### Future Scenario

- A crackdown by one of the world’s biggest economy notwithstanding, those in the ecosystem have termed this decline as a short-term correction.
- A nearly 40% dip in the bitcoin price from its all-time high looks dramatic but is normal in many volatile markets, including crypto, especially after such a large rally.
- Such corrections are mainly due to short-term traders taking profits. Long-term value investors might call these lower prices a buying opportunity.

## Gold Exchange in India

### News Excerpt

The Securities and Exchange Board of India (SEBI) has issued a consultation paper proposing draft regulations for exchanges that permit trading in gold. It has proposed an elaborate framework wherein one can convert physical gold into ‘Electronic Gold Receipts’ and even convert those back into physical gold.



### Pre-Connect

- Gold Exchange offers trading facilities in the precious metal.
- Entities like retail investors, banks, foreign portfolio investors (FPIs), jewellers and bullion dealers among others would be allowed to trade on the exchange.
- While there are existing commodity exchanges that offer trading in gold contracts, those are derivative instruments while the proposed gold exchange would allow trading akin to the spot market.

### Analytica

#### Trading on A Gold Exchange

- SEBI has proposed an instrument called ‘Electronic Gold Receipt’, or EGR.
- The gold exchange, along with intermediaries like the vault manager and the clearing corporation, would facilitate the creation of EGR and its trading.
- So, participants can convert their physical gold into EGR, which can then be bought or sold on the exchange like any normal equity share of a listed company.
- The EGR can even be converted back into physical gold.
- As part of the draft regulations, SEBI has proposed three denominations of EGR – one kilogram, 100 grams and 50 grams.
- It has, however, added that EGRs of five grams or 10 grams can also be allowed for trading to increase the liquidity of the market and attract more participants.

#### Conversion Process

- ✓ An entity that intends to convert physical gold into EGR will have to go to a ‘Vault Manager’.
- ✓ According to the proposed framework, any entity registered in India and with a net worth of at least Rs 50 crore can apply to become a vault manager.
- ✓ After the receipt of the gold, the vault manager would create an EGR for which the depository will assign an International Securities Identification Number, or ISIN, which is a unique code to identify the specific security.



- ✓ Once the ISIN is issued, the EGR can be traded on the gold exchange just like any other tradable security.
- ✓ **EGRs can be again converted into physical gold.** To convert an EGR into physical gold, the owner of the EGR will have to surrender the EGR to the vault manager who will deliver the gold and extinguish the electronic receipt.
- ✓ Considering the logistics and delivery challenges, it has been proposed that conversion of an EGR into physical gold should be allowed only if a minimum of 50 grams of gold has been accumulated in electronic form.

### Significance of the Move

- This move assumes significance as India is the second-largest consumer of gold – after China – with an annual demand of around 800-900 tonnes.
- According to SEBI, the proposed exchange would bring in more transparency in the gold trading market in terms of spot price discovery, quality of the gold and enable greater integration with the financial markets.

### Key Issues

- ✚ Firstly, taxation is a key issue. Since the EGRs would be traded on an exchange, Securities Transaction Tax (STT) would be levied.
- ✚ Also, GST would be applicable when EGRs are converted into physical gold for withdrawal. If in case the buyer and seller are from different states then levying state GST could be cumbersome.
- ✚ SEBI is mulling if only IGST or Integrated Goods and Services Tax can be levied to resolve this issue.
- ✚ SEBI has also sought public feedback on the kind of incentives or waivers that should be sought from the government to make the segment more investor-friendly.
- ✚ Further, it wants suggestions on what should be the smallest denomination for conversion of EGR into physical gold, whether storage and delivery charges should be levied and the validity of EGRs in terms of tenure.

**PEPPER IT WITH**  
Gold Monetization Scheme,  
Sovereign Gold Bond (SGB)  
Scheme, Digital Gold, BIS Gold  
Hallmark

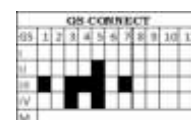
### Conclusion

Proposed gold exchange, encompassing the entire ecosystem of trading and physical delivery of gold can be considered as beneficial in order to create a vibrant gold ecosystem in India, which is commensurate with its large share of global gold consumption.

## **Fertilizer Subsidy in India**

### News Excerpt

The government has recently announced a 137% increase in the subsidy on diammonium phosphate (DAP), from Rs 511.55 to Rs 1,211.55 per 50-kg bag.



### Pre-Connect

#### **Significance of DAP**

- DAP is the second most commonly used fertiliser in India, with its sales of 119.13 lakh tonnes (lt) in 2020-21 next only to the 350.42 lt of urea.
- Farmers normally apply this fertiliser just before or at the time of sowing, as it is high in phosphorus (P) that stimulates root establishment and development – without which plants cannot grow to their normal size or will take too long to mature.
- DAP contains 46% P and 18% nitrogen (N).
- While there are also other phosphatic fertilisers – single super phosphate (SSP), for instance, has 16% P and 11% sulphur (S) – DAP is the farmer’s preferred choice.

- This is similar to urea and muriate of potash (MOP), which again have very high N and potassium (K) content of 46% and 60%, respectively.

### Analytica

- Internationally, the cost of the raw materials used to make DAP, as well as the cost of the finished product, has risen manifold.
- According to figures from the Department of Fertilisers, Government of India, global prices of phosphoric acid and ammonia, which are key components in making DAP, rose by 60-70 per cent between 10 April and 10 May. As a result, the price of imported DAP rose to \$560/tonne (approximately Rs 40,000/tonne) on 10 May, from \$383/tonne (Rs 27,000/tonne) on 10 February. The price of MOP fertilisers also increased to \$280/MT from 230\$/MT.
- Potash and phosphoric acid have only a few big players and very few mines in the world, which control production and prices. Raw material demand has also increased this year, with better agricultural production sentiment.
- Potash and rock phosphate are almost non-available in India, and almost every non-urea fertiliser input is imported. Such high DAP prices of \$500-550 per tonne were last seen in 2012-13, while ammonia had hit \$450 per tonne in 2015.
- Though (Indian) players held off an increase in prices of fertilisers for a while to not dent demand in the upcoming kharif season, a further surge in product demand and increase in input price forced them to hike the finished product's price.

### Need of Government Intervention

- ✓ The government provides fertilisers such as urea and DAP to farmers at subsidised prices via manufacturers and importers.
- ✓ While urea subsidy varies from time to time, in order to keep its selling price constant amid market fluctuations, non-urea fertiliser subsidy such as that for DAP, NPK and MOP fertilisers, is given on a per-tonne basis to companies, which means final prices can vary.
- ✓ With the price of urea remaining unchanged at Rs 268/bag since 2012, the DAP price hike could have resulted in farmers increasing urea usage, affecting soil health.
- ✓ In addition, the rising costs would have resulted in the government having to increase crops' minimum support prices, thus spiking food inflation.

### Criticism of the Move

- Farmer unions across the spectrum had accused the government of adding to the burden of farmers by allowing manufacturers hike prices of key fertilisers.
- According farmers unions, this indirect subsidy is not in favour of farmer but instead will benefit industry.
- They are demanding for DBT (direct bank transfer) to farmers for all agriculture inputs, including organic manure. According to them, direct subsidy should be per acre, per farmer.
- The Central Government spends about Rs 80,000 crore on subsidies for chemical fertilisers every year. With the increase in subsidy in DAP, Government of India will spend an additional Rs 14,775 crore as subsidy in Kharif season.
- Unions have called upon the Centre to provide such support for organic fertilisers as well which are not harmful for either human or environment.

**PEPPER IT WITH**  
DBT Scheme, Neem Coated Urea, Nano-Fertilizers, Pm-KISAN, PMFBY, MSP

### RBI to Ease Covid-19 Burden

#### News Excerpt

With India's economic recovery threatened by the COVID-19 second wave, the Reserve Bank of India recently came up with measures aimed at alleviating any financing constraints for healthcare infrastructure and services, as well as

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small borrowers who may be facing distress due to a sudden spike in health expenditure.

### **Highlights**

- RBI announced a Term Liquidity Facility of ₹50,000 crore with tenor of up to three years, at the repo rate, to ease access to credit for providers of emergency health services.
- Under the scheme, banks will provide fresh lending support to a wide range of entities, including vaccine manufacturers, importers/suppliers of vaccines and priority medical devices, hospitals/dispensaries, pathology labs, manufacturers and suppliers of oxygen and ventilators, and logistics firms.
- These loans will continue to be classified under priority sector till repayment or maturity, whichever is earlier.
- Banks are expected to create a COVID loan book under the scheme.

### **Steps Taken for the MSMEs**

- As part of a “comprehensive targeted policy response”, the RBI unveiled schemes to provide credit relief to individual and MSME borrowers impacted by the pandemic as restoring livelihoods has become an imperative.
- The RBI also announced measures to protect small and medium businesses and individual borrowers from the adverse impact of the intense second wave of COVID-19 buffeting the country.
- RBI unveiled a Resolution Framework 2.0 for COVID-related stressed assets of individuals, small businesses and MSMEs.

### **Eligibility criteria**

- ✓ Considering that the resurgence of the pandemic had made these categories of borrowers most vulnerable, the RBI said those with aggregate exposure of up to ₹25 crore, who had not availed restructuring under any of the earlier restructuring frameworks (including under last year’s resolution framework), and whose loans were classified as ‘standard’ as on March 31, 2021, were eligible for restructuring under the proposed framework.
- ✓ In respect of individual borrowers and small businesses who had already availed restructuring under Resolution Framework 1.0, lenders have been permitted to use this window to modify such plans to the extent of increasing the period of moratorium and/or extending the residual tenor up to a total of two years.
- ✓ In respect of small businesses and MSMEs restructured earlier, lending institutions have been permitted as a one-time measure, to review the working capital sanctioned limits, based on a reassessment of the working capital cycle and margins.

### **Credit support**

- To provide further support to small business units, micro and small industries, and other unorganised sector entities adversely affected during the current wave of the pandemic, the RBI decided to conduct special three-year long-term repo operations (SLTRO) of ₹10,000 crore at the repo rate for Small Finance Banks.
- The SFBs would be able to deploy these funds for fresh lending of up to ₹10 lakh per borrower. This facility would be available till October 31.
- In view of the fresh challenges brought on by the pandemic and to address the emergent liquidity position of smaller MFIs, SFBs are now being permitted to reckon fresh lending to smaller MFIs (with asset size of up to ₹500 crore) for lending to individual borrowers as priority sector lending. This facility will be available up to March 31, 2022.

### **State governments**

To enable the State governments to better manage their fiscal situation in terms of their cash flows and market borrowings, maximum number of days of overdraft (OD) in a quarter is

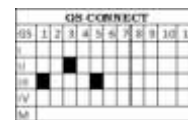
**PEPPER IT WITH**  
Atmanirbhar Bharat, Ways  
and Means Advances, PM  
SVANidhi, Fiscal Stimulus

being increased from 36 to 50 days and the number of consecutive days of OD from 14 to 21 days.

## Regulations Review Authority 2.0

### News Excerpt

The Reserve Bank recently constituted an advisory group to assist the second Regulatory Review Authority (RRA 2.0) which was constituted by the central bank earlier this month to streamline regulations and reduce the compliance burden of regulated entities.



### Pre-Connect

- The Reserve Bank of India had set up a RRA initially for a period of one year from April 1, 1999 for reviewing the regulations, circulars, reporting systems, based on the feedback from public, banks and financial institutions.
- The recommendations of the RRA enabled streamlining and increasing the effectiveness of several procedures, simplifying regulatory prescriptions, paved the way for issuance of master circular and reduced reporting burden on regulated entities.

### Highlights

- Considering the developments in regulatory functions of the Reserve Bank over the past two decades and evolution of the regulatory perimeter, it is proposed to undertake a similar review of the Reserve Bank's regulations and compliance procedures with a view to streamlining/ rationalising them and making them more effective.
- Accordingly, it has been decided to set up a new RRA 2.0 for a period of one year from the date of its establishment (May 01, 2021) to review the regulatory prescriptions internally as well as by seeking suggestions from the RBI regulated entities and other stakeholders on their simplification and ease of implementation.
- Headed by SBI Managing Director S Janakiraman, the advisory group will assist the RRA by identifying regulations, guidelines, and returns that can be rationalised.
- Reserve Bank of India Deputy Governor M RajeshwarRao was appointed as the RRA.
- The Reserve Bank said the RRA has constituted the advisory group, representing members from regulated entities, including compliance officers, to support the RRA in achieving the objective set forth in the terms of reference of RRA 2.0.
- The group will assist the RRA by identifying areas, regulations, guidelines, returns which can be rationalised and submit reports periodically to RRA containing the recommendations/suggestions.

### Analytica

The RRA 2.0 will focus on streamlining regulatory instructions, reduce compliance burden of the regulated entities by simplifying procedures and reduce reporting requirements, wherever possible. The RRA will engage internally as well as externally with all regulated entities and other stakeholders to facilitate the process. The terms of reference of RRA 2.0 would be as under:

- To make regulatory and supervisory instructions more effective by removing redundancies and duplications, if any;
- To reduce compliance burden on regulated entities by streamlining the reporting mechanism; revoking obsolete instructions if necessary and obviating paper-based submission of returns wherever possible;
- To obtain feedback from regulated entities on simplification of procedures and enhancement of ease of compliance;
- Examine and suggest the changes required in dissemination process of RBI circulars/ instructions (this would entail suggestions on the areas where the manner of issuing circulars, their updation and website linkages); and

**PEPPER IT WITH**  
Monetary Policy committee,  
Banking Regulation Act, 1949,  
Payment and Settlement  
Systems Act, 2007, UPI2.0, NPCI

- o Identify any other issue germane to the subject matter.

**SEBI's Proposal to Re-classify Promoters**

**News Excerpt**

With the concept of promoters slowly losing its relevance in India Inc, the Securities and Exchange Board of India (Sebi) has proposed doing away with the classification of 'promoter' concept and moving to 'person in control' system and scrapping the 'promoter group'. The markets regulator is expected to come out with the new regime soon, paving the way for a major change in the way the promoters and over 4,700 listed corporates function in the country.

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**SEBI's Proposal**

- The regulator has proposed the shifting of the concept of 'promoter' to 'person in control'. SEBI's ICDR Regulations define a "promoter" as a person who has been named as such in the offer document or in the annual return of the issuer or a person who has control over the issuer (directly or indirectly) or in whose advice, directions or instructions the board of directors of the issuer is accustomed to act.
- Thus, the definition of promoter is wide-ranging and goes beyond persons in control of the issuer. The concept of promoter is used in a number of regulations issued by SEBI and other regulatory authorities.

**Significance of the Move**

- The regulator said this shift is necessitated by the changing investor landscape in India where concentration of ownership and controlling rights do not vest completely in the hands of the promoters or promoter group because of the emergence of new shareholders such as private equity and institutional investors.
- SEBI said in a consultation paper that the investor focus on the quality of board and management has increased, thereby reducing the relevance of the concept of promoter.
- Governance practices have become the keyword in boardrooms and boards have become more professional with the arrival of independent directors and the structure of board composition.
- Besides, there are various committees in the board, including audit and remuneration, for transparent functioning of the affairs of a listed company.
- Increasingly, there is focus on better corporate governance with the responsibilities and liabilities shifting to the board of directors and management.
- Shareholders now look to the board of directors and management to protect their rights and add value, while discharging their duties.
- This increased focus on quality of board and management has also reduced the relevance of the concept of promoter.

**Why is the system of 'promoter group' being scrapped?**

- ✓ The definition of the 'promoter group' focuses on capturing holdings by a common group of individuals or persons and often results in capturing unrelated companies with common financial investors.
- ✓ Capturing the details of holdings by financial investors while being a challenging task, may not result in any meaningful information to investors. Further, post listing, it is more relevant to identify and disclose related parties and related party transactions. Accordingly, this deletion should rationalise the disclosure burden and bring it in line with the post listing disclosure requirements.
- ✓ Further, the Companies Act, 2013 has incorporated a definition of promoter in Section 2 (69). However, it does not define a promoter group. The definition for promoter group has been provided in Regulation 2(pp) of the ICDR 2018 of the SEBI.

**PEPPER IT WITH**  
Companies Act, IPO,  
Money Market, Capital  
Market, STT, DDT, MAT

## The Changing Nature of the Promoter Landscape

- The investor landscape in India is now changing.
- Unlike the past, the concentration of ownership and controlling rights do not vest completely in the hands of the promoters or the promoter group.
- There has been a significant increase in the number of private equity and institutional investors who invest in companies and take up substantial shareholding, and in some cases, control.
- Such private equity and institutional investors invest in unlisted companies and continue to hold shares post listing, many times being the largest public shareholders, having special rights on the listed company, such as the right to nominate directors.

## Remittance in India amidst Pandemic: World Bank report

### News Excerpt

According to a World Bank report, India received over USD83 billion in remittances in 2020, a drop of just 0.2 per cent from the previous year, despite a pandemic that devastated the world economy.

### Highlights

- In 2019, India had received USD 83.3 billion in remittances.
- The report said India's remittances fell by just 0.2 per cent in 2020, with much of the decline due to a 17 per cent drop in remittances from the United Arab Emirates, which offset resilient flows from the United States and other host countries.
- China, which received USD 59.5 billion in remittances in 2020 against USD 68.3 billion the previous year, is a distant second in terms of global remittances for the year gone by, as per the latest World Bank data.
- India and China are followed by Mexico (USD42.8 billion), the Philippines (USD34.9 billion), Egypt (USD29.6 billion), Pakistan (USD26 billion), France (USD24.4 billion) and Bangladesh (USD21 billion).

### Analytica

- In neighbouring Pakistan, remittances rose by about 17 per cent, with the biggest growth coming from Saudi Arabia, followed by the European Union countries and the United Arab Emirates.
- In Bangladesh, remittances also showed a brisk uptick in 2020 (18.4 per cent), and Sri Lanka witnessed remittance growth of 5.8 per cent.
- In contrast, remittances to Nepal fell by about two per cent, reflecting a 17 per cent decline in the first quarter of 2020.
- The World Bank, in its latest Migration and Development Brief, said despite COVID-19, remittance flows remained resilient in 2020, registering a smaller decline than previously projected.
- Officially recorded remittance flows to low- and middle-income countries reached USD540 billion in 2020, just 1.6 per cent below the 2019 total of USD548 billion.
- As COVID-19 still devastates families around the world, remittances continue to provide a critical lifeline for the poor and vulnerable.
- Remittance inflows rose in Latin America and the Caribbean (6.5 per cent), South Asia (5.2 per cent) and the Middle East and North Africa (2.3 per cent).
- However, it fell for East Asia and the Pacific (7.9 per cent), for Europe and Central Asia (9.7 per cent), and for Sub-Saharan Africa (12.5 per cent).

- The decline in flows to Sub-Saharan Africa was almost entirely due to a 28 per cent decline in remittance flows to Nigeria. Excluding flows to Nigeria, remittances to Sub-Saharan Africa increased by 2.3 per cent, demonstrating resilience.
- Remittance outflow was the maximum from the United States (USD68 billion), followed by UAE (USD43 billion), Saudi Arabia (USD34.5 billion), Switzerland (USD27.9 billion), Germany (USD22 billion), and China (USD18 billion).

**PEPPER IT WITH**  
 Current Account Deficit,  
 FERA, FEMA, Personal  
 Income, Multiplier Effect

**Remark**

- ✓ The resilience of remittance flows is remarkable. Remittances are helping to meet families' increased need for livelihood support.
- ✓ However, the relatively strong performance of remittance flows during the COVID-19 crisis has also highlighted the importance of timely availability of data.
- ✓ Given its growing significance as a source of external financing for low- and middle-income countries, there is a need for better collection of data on remittances, in terms of frequency, timely reporting, and granularity by corridor and channel.



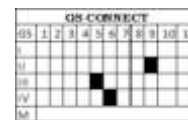
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## INTERNATIONAL RELATION

### India-UK Virtual Summit

#### News Excerpt

Prime Minister of India and Prime Minister of United Kingdom held a Virtual Summit in May 2021.



#### Key Highlights of Summit

- An ambitious 'Roadmap 2030' was adopted at the Summit to elevate bilateral ties to a 'Comprehensive Strategic Partnership'.
- The Roadmap will pave the way for a deeper and stronger engagement over the next ten years in the key areas of people to people contacts, trade and economy, defence and security, climate action and health.
- India-UK launched an 'Enhanced Trade Partnership' (ETP) to unleash the trade potential between the 5th and 6th largest economies of the world and by setting an ambitious target of more than doubling bilateral trade by 2030.
- A new India-UK 'Global Innovation Partnership' was announced at the Virtual Summit that aims to support the transfer of inclusive Indian innovations to select developing countries, starting with Africa.
- Both sides agreed to enhance cooperation on new and emerging technologies, including Digital and ICT products, and work on supply chain resilience. They also agreed to strengthen defence and security ties, including in the maritime, counter-terrorism and cyberspace domains.
- India and the UK launched a comprehensive partnership on migration and mobility that will facilitate greater opportunities for the mobility of students and professionals between the two countries.

#### Enhanced Trade Partnership (ETP)

- ❖ As part of the ETP, India and the UK agreed on a roadmap to negotiate a comprehensive and balanced FTA, including consideration of an Interim Trade Agreement for delivering early gains.
- ❖ The enhanced trade partnership between India and UK will generate several thousands of direct and indirect jobs in both the countries.

#### Recent developments in India-UK relations

- India and the UK enjoy long standing friendly ties and share a Strategic Partnership underpinned by mutual commitment to democracy, fundamental freedoms and the rule of law, strong complementarities and growing convergences.
- The UK is India's second largest partner in research and innovation collaborations.
- The two countries are working closely to ensure an ambitious outcome at COP26 and expand the UK-India partnership on tackling climate change, including by accelerating the development of clean energy and transport and new technology, protecting nature and biodiversity and helping developing countries adapt to the impact of climate change.
- The two nations have comprehensively strengthened defence partnership, focusing on maritime and industrial collaboration, recognising their shared interest in regional prosperity and stability.
- Significant new cooperation on Maritime Domain Awareness, which includes new agreements on maritime information sharing, an invitation to the UK to join India's Information Fusion Centre in Gurgaon and an ambitious exercise programme which includes joint trilateral exercises.
- The two countries are also working to conclude a Logistics Memorandum of Understanding that will enhance joint ability to tackle shared challenges.

#### India-UK '2030 Roadmap'

- ✓ Expand the UK-India health partnership to enhance global health security and pandemic resilience.



- ✓ Work together to ensure an ambitious outcome at COP26 and expand the UK-India partnership on tackling climate change, including by accelerating the development of clean energy and transport and new technology.
- ✓ Increase cooperation between British and Indian universities on crucial research in areas like health, emerging technologies, and climate science – and bringing enterprises together to propel ground-breaking innovations to communities that need them most.
- ✓ It also includes extension of the UK-India Education and Research Initiative (UKIERI) to conclude its important work in bringing higher education and research sectors, and the people who work in them, closer together.

**PEPPER IT WITH**  
 Brexit, G7, Commonwealth of Nations, WEF, South-South Cooperation

### Conclusion

India is undergoing a transition that could have significant consequences for the UK. As its economy is transformed, its political, military and cultural power is also likely to increase, elevating India to a 21st Century superpower. As Jim O’Neill has written, India will soon be ‘one of the biggest influences on the world’. It is looking for new partners in the global race. This represents a great opportunity for the UK.

## Israel-Palestine Conflict

### News Excerpt

Ambassadors met in person in New York as a fragile cessation of hostilities continues to hold, following 11 days of deadly conflict this month which engulfed the Occupied Palestinian Territory and several cities across Israel.

### Pre-Connect

- Britain took control of the area known as Palestine after the ruler of that part of the Middle East, the Ottoman Empire, was defeated in WW1.
- The land was inhabited by a Jewish minority and Arab majority.
- Tensions between the two peoples grew when the international community gave Britain the task of establishing a "national home" in Palestine for Jewish people. For Jews, it was their ancestral home, but Palestinian Arabs also claimed the land and opposed the move.
- Between the 1920s and 40s, the number of Jews arriving there grew, with many fleeing from persecution in Europe and seeking a homeland after the Holocaust of WWII.
- Violence between Jews and Arabs, and against British rule, also grew.
- In 1947, the UN voted for Palestine to be split into separate Jewish and Arab states, with Jerusalem becoming an international city. That plan was accepted by Jewish leaders but rejected by the Arab side and never implemented.
- In 1948, unable to solve the problem, British rulers left and Jewish leaders declared the creation of the state of Israel. Hundreds of thousands of Palestinians fled or were forced out of their homes in what they call Al Nakba, or the "Catastrophe".
- By the time the fighting ended in a ceasefire the following year, Israel controlled most of the territory.
- Jordan occupied land which became known as the West Bank, and Egypt occupied Gaza.
- Jerusalem was divided between Israeli forces in the West, and Jordanian forces in the East.
- In another war in 1967, Israel occupied East Jerusalem and the West Bank, as well as most of the Syrian Golan Heights, and Gaza and the Egyptian Sinai Peninsula.

### Analytica

- The latest conflict between Israel and armed groups in Gaza was among the most intense hostilities witnessed in years.

- Tensions are often high between Israel and Palestinians living in East Jerusalem, Gaza and the West Bank.
- Gaza is ruled by the Palestinian militant group Hamas, which has fought Israel many times. Israel and Egypt tightly control Gaza's borders to stop weapons getting to Hamas.
- Palestinians in Gaza and the West Bank say they're suffering because of Israeli actions and restrictions. Israel says it is only acting to protect itself from Palestinian violence.
- There are a number of issues which Israel and the Palestinians cannot agree on.
- These include what should happen to Palestinian refugees, whether Jewish settlements in the occupied West Bank should stay or be removed, whether the two sides should share Jerusalem, and - perhaps most tricky of all - whether a Palestinian state should be created alongside Israel.



### India-Israel-Palestine Relations in Contemporary times

- ✓ For India, which voted against the creation of Israel in historic Palestine in 1947 in the UN General Assembly, ties with Israel have transformed since the early 1990s.
- ✓ While Israel ties are on a strong footing, India cannot ignore the Palestinians for historic, moral, legal and realist reasons.
- ✓ India's Palestine policy had realist underpinnings too. India has been energy dependent on the Arab world. It cannot alienate the Arab voices or be isolated in the General Assembly, where most member-countries oppose the occupation.
- ✓ India's policy on the longest running conflict in the world has gone from being unequivocally pro-Palestine for the first four decades, to a tense balancing act with its three-decade-old friendly ties with Israel. In recent years, India's position has also been perceived as pro-Israel.
- ✓ The balancing began with India's decision to normalise ties with Israel in 1992, which came against the backdrop of the break-up of the Soviet Union, and massive shifts in the geopolitics of West Asia on account of the first Gulf War in 1990.
- ✓ The first indication of the new phase of growing relationship with Israel came with an abstention by India at the UN Human Rights Council on a resolution welcoming a report by the HRC High Commissioner.
- ✓ In February 2018, PM Modi became the first Indian Prime Minister to visit Israel. His itinerary did not include Ramallah. Thus, India had "de-hyphenated" the Israel-Palestine relationship, and deals with each separately.
- ✓ This de-hyphenation is actually a careful balancing act, with India shifting from one side to another as the situation demands. For instance, even as it abstained at UNESCO in December 2017, India voted in favour of a resolution in the General Assembly opposing the Trump administration's recognition of Jerusalem as the Israeli capital.

**PEPPER IT WITH**  
Golan Height, Iron Dome Missile System, Oslo Accord, Two-State Solution, Palestine Liberation Organization (PLO), West Bank, Al Aqsa mosque

- ✓ Even in the present conflict, India, a non-permanent member, attempted a delicate balancing act by reaffirming its traditional support for the Palestine cause without abandoning its new friend Israel.
- ✓ India also continues to improve ties with Arab countries, especially Saudi Arabia and the UAE, and feels vindicated by the decision of some Arab states to improve ties with Israel.

**Way Forward**

- There is a need for both the sides to return to the negotiating table, and giving up “business as usual” approach.
- Until there is a political solution to the conflict, only a strong UNRWA can bring “a sense of normality” into the region.

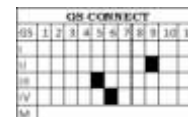
**Conclusion**

Only through negotiations that end the occupation and create a viable two-State solution, on the basis of UN resolutions, international law and mutual agreements, with Jerusalem as the capital of both States, can we hope to bring a definitive end to these senseless and costly cycles of violence.

**India-EU Leaders’ Meeting**

**News Excerpt**

At the invitation of the President of the European Council Mr. Charles Michel, Prime Minister Shri Narendra Modi participated in the India-EU Leaders’ Meeting. The meeting was held in a hybrid format with the participation of leaders of all the 27 EU Member States as well as the President of the European Council and the European Commission.



**Key Highlights**

- This is the first time that the EU hosted a meeting with India in the EU+27 format.
- During the meeting, the leaders expressed their desire to further strengthen the India-EU Strategic Partnership based on a shared commitment to democracy, fundamental freedoms, rule of law and multilateralism.
- They exchanged views on three key thematic areas: i) foreign policy and security; ii) COVID-19, climate and environment; and iii) trade, connectivity and technology.
- Negotiations on both the Trade and Investment Agreements will be pursued on parallel tracks with an intention to achieve early conclusion of both agreements together. This is a major outcome which will enable the two sides to realise the full potential of the economic partnership. India and the EU also announced dedicated dialogues on WTO issues, regulatory cooperation, market access issues and supply chain resilience, demonstrating the desire to deepen and further diversify economic engagement.
- India and the EU leaders reiterated their commitment to achieving the goals of the Paris Agreement and agreed to strengthen joint efforts for mitigation, adaptation and resilience to the impacts of climate change, as well as providing means of implementation including finance in the context of COP26. India welcomed the EU’s decision to join CDRI.

**Connectivity Partnership**  
 India and the EU launched an ambitious and comprehensive ‘Connectivity Partnership’ which is focused on enhancing digital, energy, transport and people-to-people connectivity. The Partnership is based on the shared principles of social, economic, fiscal, climate and environmental sustainability, and respect for international law and commitments. The Partnership will catalyse private and public financing for connectivity projects. It will also foster new synergies for supporting connectivity initiatives in third countries, including in the Indo-Pacific.

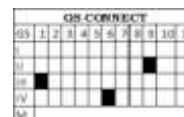
- India and the EU also agreed to enhance bilateral cooperation on digital and emerging technologies such as 5G, AI, Quantum and High-Performance Computing including through the early operationalization of the Joint Task Force on AI and the Digital Investment Forum.
- The leaders noted with satisfaction the growing convergences on regional and global issues, including counterterrorism, cybersecurity and maritime cooperation.
- The leaders acknowledged the importance of a free, open, inclusive and rules-based Indo-Pacific and agreed to closely engage in the region, including in the context of India's Indo-Pacific Ocean's Initiative and the EU's new strategy on the Indo-Pacific.

**PEPPER IT WITH**  
 European Bank for  
 Reconstruction and  
 Development, B3W Project

## India-Swiss Financial Dialogue

### News Excerpt

The 4th India-Swiss Financial Dialogue was held here today virtually through video conferencing.



### Highlights

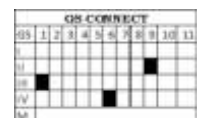
- The Dialogue, inter-alia, covered sharing of experiences by both countries for collaboration on various aspects including investments, International Financial Services Centre Authority (IFSCA), National Investment and Infrastructure Fund (NIIF), FinTech, sustainable finance and cross border financial services.
- Further, matters relating to G20, IMF and tax challenges arising from the digitilisation of the economy was discussed along with infrastructure financing.
- Both the countries shared views and perspective on their respective countries and global economic scenario.
- Both sides emphasised importance of coordinated bilateral action on clean and resilient post-COVID world.
- India and Switzerland have had cordial and friendly relations based on shared values of democracy and rule of law.
- India's policy of non-alignment and Switzerland's traditional policy of neutrality has led to a close understanding between the two countries. Both the countries have several bilateral dialogue mechanisms in place and this Financial Dialogue remains amongst the most important.

**PEPPER IT WITH**  
 Friendly treaty, Double  
 taxation avoidance Agreement,  
 SWIFT

## Farazd B Gas Field

### News Excerpt

After chasing India to develop the field for 13 years, Iran announced that it will develop the offshore gas field, which runs along the country's maritime border with Saudi Arabia.



### Pre-Connect

- The field holds 23 trillion cubic feet of in-place gas reserves, of which about 60 per cent is recoverable. It also holds gas condensates of about 5,000 barrels per billion cubic feet of gas condensates. Farzad-B's recoverable reserves are about half of total reserves of India, so that made it a big deal.
- India's total gas consumption in FY21 was about 166 MMSCMD.
- The 3,500 square kilometer Farsi block sits in a water depth of 20-90 metres on the Iranian side of the Persian Gulf.

- ONGC Videsh Ltd (OVL), the overseas investment arm of state owned Oil and Natural Gas Corp (ONGC), had in 2008 discovered a giant gas field in the Farsi offshore exploration block.



### Analytica

- This is a setback for India’s energy ties with Iran as ONGC Videsh Ltd (OVL) had discovered the gas field in 2000 and has been part of the ongoing cooperation on that front.
- India needs gas and Iran remains one of the best options as geographically, Iran is closest to India of all the countries in the Persian gulf region.
- Further, the Farzad-B Gas Field could have improved India-Iran ties as the crude oil import from Iran remains impacted due to the US sanctions.
- It is indicative of the impact of the U.S. sanctions on India-Iran energy cooperation, which had been drastically reduced during the Donald Trump administration in the U.S.
- In a world where connectivity is seen as the new currency, India’s loss on account of these projects can become gain for some other country, especially China.

**PEPPER IT WITH**  
 Joint Comprehensive Plan of Action, Iran Nuclear deal framework, Tehran Declaration

### Conclusion

India must maintain cordial relations with most of the major suppliers of energy products, including Iran, UAE, Qatar, and Saudi Arabia, as well as Iraq. It needs to play a delicate balancing act between the US and Iran.

## India-Oman

### News Excerpt

India and Oman renewed the Memoranda of Understanding (MoUs) on military cooperation along with its annexure as well as on maritime issues on May 20, 2021.

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### India-Oman Defence Cooperation

- Oman is a key partner for India in the Indo-Pacific region which provides an anchor for the Persian Gulf as well as eastern and southern Africa.
- Oman is a maritime power and India needs its support in the region to counter growing Chinese foothold in the region. India is concerned with China’s acquisition of strategic assets in the region including setting its base at Port Doraleh in Djibouti.
- In 2018, Oman has given India an access to the key Port of Duqm for military use and logistical support.
- In December 2019, the two nations signed a maritime transport agreement during Indian foreign minister S Jaishankar’s visit to the sultanate. The pact—the first with any Gulf



country—enables India to expand its footprint in the western and southern Indian Ocean, the Persian Gulf and East Africa as part of its Indo-Pacific vision.

- Oman and India have been conducting joint military exercises to foster defence cooperation. For example, Biennial Naval exercise ‘Naseem Al Bahr’, Joint military exercise ‘Al Nageh’.
- Oman is the only country in the region with which India has bilateral institutionalized exercises in all the three defence services on a biennial basis.
- A large number of Omani military personnel are trained in India through Indian Technical and Economic Cooperation.
- Recently, India has renewed two key defence pacts with Oman, related to military cooperation and maritime security.
- Recently, a meeting of the India-Oman Strategic Consultative Group (IOSCG) was held with the first high-level official visit from Oman to India since the onset of Covid-19 pandemic. Both sides reviewed the entire spectrum of India-Oman relationship including in political, energy, trade, investment, defence, security, space, mining, Science& Technology, culture and consular fields.

### Conclusion

Situated across the Arabian Sea at a distance of less than 2500 kms, Oman is India’s natural partner. Along with civilizational and historical ties, Oman and India share strategic relations. Oman is India’s oldest defence partner in West Asia and a reliable ally in the anti-piracy campaign and security and stability in Indian Ocean Region.

## BRICS astronomy working group

### News Excerpt

This year’s meeting, under the Science, Technology and Innovation track of BRICS 2021, was hosted by India, which took over the presidency in January 2021.

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### The BRICS Astronomy Working Group and BRICS Astronomy Workshop

- During the Second BRICS STI Ministerial Meeting in March 2015 in Brazil, the BRICS member countries signed a Memorandum of Understanding (MoU) on STI cooperation.
- This MoU makes provision for three governing structures: the BRICS STI Ministerial Meeting; the BRICS STI Senior Officials Meeting; and the BRICS STI Working Groups. The latter are responsible for promoting cooperation activities in the designated priority areas, which should be convened at least once a year.
- The BRICS Astronomy Workshop provides a

#### **BRICS Intelligent Telescope and Data Network**

- ❖ It is a flagship programme to establish a network of telescopes across BRICS nations.
- ❖ Once there is a network of telescopes that will simultaneously track major celestial events, there will be huge amounts of data generated. All this data will need to be transported, processed and archived which can be achieved through a Data Network.
- ❖ With India being part of building mega projects like the Square Kilometre Array (SKA), the scientific community is well aware of the need for possessing large data centres in the coming future.
- ❖ Though the final funding modalities for the project is still under consideration and being worked out by the Department of Science and Technology (DST) in India, it has been agreed that every country will contribute one million Euros, annually.
- ❖ The BAWG also envisages a human Capacity Building programme.

platform for BRICS member countries to engage on policy issues and other matters related to research, development and practice in astronomy, and to explore mechanisms for promoting BRICS cooperation in astronomy.

- The spectrum of scientific issues to be discussed may include: observational, theoretical and computational studies of the Sun and space weather, exoplanets, stellar astrophysics and asteroseismology, star formation, evolution of stars, the interstellar medium and astrochemistry, galactic chemical evolution, transient phenomena, pulsars, neutral hydrogen in galaxies, active galactic nuclei and high-redshift galaxies, time-resolved astronomy and galaxy evolution.
- The BRICS Astronomy Working Group is composed of government officials (or their designated representatives) supported by the focal points on astronomy and experts from BRICS member countries.
- The Department of Science and Technology of South Africa acts as the Secretariat to the Astronomy Working Group.

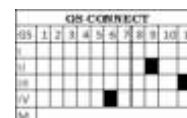
### Key Highlights

- The BRICS astronomy working group (BAWG2021) and Workshop meeting was hosted by IUCAA Pune as a fully Online meeting from during 19 to 20 May 2021 in accordance with the BRICS Calendar of STI events for organising during India's BRICS Presidency in 2021.
- The BAWG has recommended networking of telescopes in member countries and creating a regional data network.
- The members of the working group also indicated future directions of research in this area such as building a network of intelligent telescopes and data, study of transient astronomical phenomena in the universe, big data, artificial intelligence, machine learning applications to process the voluminous data generated by the enhanced multi-wavelength telescope observatory.
- The BAWG, which provides a platform for BRICS member countries to collaborate in the field of astronomy, recommended that each country should present the scientific results of the work being carried out in their country.

## **China's 17+1 Cooperation Forum**

### News Excerpt

Lithuania decided to quit China's 17+1 cooperation forum with central and eastern European states that includes other EU members.



### Pre-Connect

- The 17+1 initiative is a China-led format founded in 2012 in Budapest with an aim to expand cooperation between Beijing and the CEE(Central and East Europe) member countries, with investments and trade for the development of the CEE region.
- The framework also focuses on infrastructure projects such as bridges, motorways, railway lines and modernisation of ports in the member states.
- The initiative includes twelve EU member states and five Balkan states — Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia and Slovenia.
- The platform is largely seen as an extension of China's flagship Belt and Road initiative (BRI).
- China's narrative towards the 17+1 initiative is about improving its relations with the European countries that are less developed as compared to the Western European states.

### Analytica

- Few years into the framework, there is a growing discontent within the CEE countries given the slow progress in generating the desired economic results.

- Recently, the Baltic country of Lithuania urged fellow EU members to pursue “a much more effective 27+1 approach and communication with China.”
- In May 2020, the Latvian intelligence service, Constitution Protection Bureau in its annual report on national security, mentioned China as a cyber-threat to the NATO and the EU.
- Estonia too is considering a reassessment of its inclusion in the 17+1 initiative citing China’s posture as a threat to Western values and grave violation of human rights against the Uighurs in China.
- The reassessment of the cooperation is also consequential given the US-China tech rivalry, as the telecommunications giant Huawei competes for the expansion of the 5G network in Central and Eastern Europe.
- The US strives for its allies in region to join its ‘Clean Network Program’ with respect to the cyber policy to safeguard the privacy and data that could compromise national security.

**Conclusion**

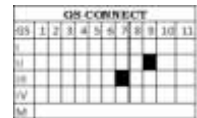
What was Beijing’s pivot to Europe is being met with skepticism about the future of the framework because of its slow results. China’s maneuvers in the region are now increasingly being viewed as merely symbolic. This provides an opportunity for India to enhance its engagement with the region based on an alternative model which delivers on the process of mutual cooperation and benefit.

**PEPPER IT WITH**  
BRI initiative, OBOR, Silk Route, String of Pearls, Fortaleza declaration

**Vaccine Tourism**

**News-Excerpt**

The tiny central European republic of San Marino welcomed its first vaccine tourists, a group of four from Latvia, who drove 26 hours in a camper van to reach San Marino, where they became the first visitors to take advantage of the microstate’s Sputnik V Covid-19 vaccine holiday package.



**Highlights**

- Central European republic of San Marino welcomed its first vaccine tourists – a group of four from Latvia.
- Russia and the Maldives are already working on programmes to offer people abroad the chance to get vaccinated during a visit; similar offerings are sprouting in the US as well.
- In India, the term “vaccine tourism” became popular late last year when reports emerged of several tour operators offering packages to the US with the additional benefit of a vaccine shot.

**PEEPER IT WITH**  
Delta Variant, Black Fungus,

**Vaccine Tourism v/s Vaccine Passport**

Sometimes, vaccine tourism is confused with vaccine passport, which is a more regulated practice gaining currency around the world. Recently, Seychelles announced that only vaccinated visitors from India, Pakistan and Bangladesh who have completed two weeks after their second dose are permitted to travel to and enter the island nation, with proof of COVID-19 vaccination.



## ENVIRONMENT

### Global Forest Goals Report 2021

#### News Excerpt

The UN Department of Economic and Social Affairs (DESA) have launched a new flagship publication, the Global Forest Goals Report for 2021. The report provides the first assessment of progress towards the six Global Forest Goals.

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#### Pre-Connect

- The report is the first evaluation of where the world stands in implementing the **United Nations Strategic Plan for Forests 2030**. Adopted four years ago, the Plan is a blueprint for forests and people expressed through **six Global Forest Goals and 26 targets**.
- Outlining a vision for a future where all types of forests and trees are sustainably managed, the Plan is integral to the achievement of the 2030 Agenda for Sustainable Development.

#### Key Highlights of the report

- As per the report, the world had been making progress in key areas, such as increasing the global forest area through afforestation and restoration.
- Many regions, in particular, Asia, Europe and Oceania, appear to be on track to reach one of the key targets of the Global Forest Goals - increasing forest area by three percent by 2030.
- Report calls for greater sustainability and a greener, more inclusive economy to tackle the threats of COVID-19, climate change and biodiversity crisis faced by forests
- The report has highlighted the impact of COVID-19, before the pandemic, many countries were working hard to reverse native forest loss and increase protected areas designated for biodiversity conservation but those gains are now at risk with worrying trends of increased deforestation of primary tropical forests.
- Forests currently cover 31% of the global land area. Climate change and a biodiversity crisis are other big threats to forest ecosystems besides the pandemic.



#### Analytica

#### Challenges associated with Global Forest Goals (GFG)

- ✓ **Climate Change:** The report has highlighted that majority of countries face disturbances and forest damage, both linked to climate change, as significant challenges to achieving GFG1. For instance—Australia, Ghana, Nepal, the Philippines, and Tunisia specifically discussed coping with fire, while Ghana, Lesotho, Morocco, and the State of Palestine highlighted the difficulties of dealing with drought. New Zealand and the Slovak Republic underscored the intricacies of responding to an uncertain outlook.
- ✓ **Inadequate Resources:** Almost all developing countries identified a lack of resources, especially financial, as a major obstacle to achieving GFG1. Many countries have highlighted the need to overcome insufficient human resources and capacity and the difficulty of enforcing laws and combatting illegal logging given institutional weaknesses, inadequate resources, and judicial constraints.

- ✓ **Land Use:** Countries almost universally highlighted competition for land use as a major challenge. Australia, Côte d'Ivoire, Jamaica, and Liberia cited competition from agriculture; Nepal, Nigeria, South Korea, and Thailand identified infrastructure as a competitor; Australia and Mauritius highlighted urbanization as a competitor; and Suriname noted competition from mining. Cameroon pointed out that other sectors with important sources of revenue for government were competing for land use.
- ✓ **Institutional Frameworks:** Many countries considered weak institutions and the lack of high-level policy frameworks as significant obstacles to achieving GFG1. Other countries were more specific, stressing the challenges of reimbursement of agricultural loans; the difficulty of obtaining water licenses for afforestation; inadequate cooperation with nature protection authorities; and excessively strict rules for dealing with insect damage.
- ✓ **Social and Economic Challenges:** Several countries discussed social and economic challenges that included: pressure from growing populations; a lack of community forestry; rural poverty; political instability and insufficient awareness of sustainable forest management; high costs; lack of automation; and difficulties identifying the contribution of forest ecosystem services to gross domestic product.

### AICHI BIODIVERSITY TARGET 18 BEYOND 2020: PRIORITY ACTIONS

<b>Aichi Target 18 Element II:</b> "subject to national legislation and relevant international obligations".		<b>Aichi Target 18 Element III:</b> "fully integrated and reflected in the implementation of the Convention with the full and effective participation of IPLCs, at all relevant levels".		
<b>1</b> UNDRIP: 1, 3, 4, 26, 27, 38 SDG: 5.C, 10.3 ART: 2, 16, 17, 18 ILO: 2, 4, 8, 14, 15, 18 <b>CO-DEVELOP INCLUSIVE NATIONAL LAWS/RULES</b> To strengthen IPLCs' rights to ancestral territories, lands & waters & self-determination in line with international laws.	<b>2</b> UNDRIP: 18, 19, 27, 34 SDG: 10.3, 17.6 ART: 2, 17, 18 ILO: 2.1, 7.1, 8 <b>INTEGRATION OF IPLCs' INDICATORS &amp; GOALS</b> To set ambitious & specific goals to achieve Target 18 post-2020 while contributing to monitoring the protection of IPLCs' rights.	<b>3</b> UNDRIP: 8, 18, 19, 20.1 SDG: 5.3, 10.6 ART: 17, 18 ILO: 2.1, 6, 7.1, 8, 32 <b>IPLCs INCLUSION IN DECISION-PROCESSES</b> To guarantee the full & equitable participation of IPLCs at local, national, regional & international levels as decision-makers.	<b>4</b> UNDRIP: 3, 10, 39 SDG: 9.3, 17.6 ART: 17, 18, 19 ILO: 2.1 <b>CROSS-VALIDATION OF BIODIVERSITY KNOWLEDGE</b> To encourage the intertwining among diverse Biodiversity Knowledge Systems in decision- and policy-making processes.	<b>5</b> UNDRIP: 3-5, 20, 28.1, 32 SDG: 10.8, 17.2, 17.3, 17.9 ART: 3, 18, 20 ILO: 2.2(1), 7, 8 <b>INCREASE IN NATIONAL &amp; INTERNATIONAL FUNDS</b> To support IPLCs' conservation initiatives & organizations to facilitate IPLCs' recognition as custodians of biodiversity.
<b>Aichi Target 18 Element I:</b> "By 2020, the traditional knowledge, innovations and practices of IPLCs relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected".				
<b>6</b> UNDRIP: 10, 26, 27, 29.1 SDG: 14.2, 14.5, 14.7 ART: 1, 5, 10, 11, 14, 15, 18 ILO: 4, 7.4, 13, 14, 15, 16 <b>RECOGNITION OF PLACE-BASED CONSERVATION</b> To endorse IPLCs' rights to govern, manage & use their lands & waters as an effective biocultural conservation scheme.	<b>7</b> UNDRIP: 11.2, 19, 31 SDG: 14.A, 17.9 ART: 1, 18 ILO: 2.1, 5, 7.3, 19, 22.3 <b>IPLCs KNOWLEDGE DOCUMENTATION</b> To protect the rights of IPLCs over their TBK & safeguard TBK for the main benefit & use of IPLCs & biocultural diversity conservation.	<b>8</b> UNDRIP: 8, 11, 14, 15, 31 SDG: 4, 4.5-7, 14.A ART: 1, 18 ILO: 2, 5, 13, 22.1, 26, 27 <b>COMMUNITY-BASED EDUCATION PROGRAMS</b> To preserve, revitalize & promote TBK & indigenous languages & intergenerational transfer based on cultural traditions & customs.	<b>9</b> UNDRIP: 29.1, 31 SDG: 9.3, 14.A, 14.5 ART: 1, 4, 5, 6, 18, 19 ILO: 2.1, 7, 22.3, 9.5 <b>PARTICIPATORY ACTION RESEARCH</b> To enhance community-based research, planning & monitoring built on IPLCs' needs/priorities & Biocultural Community Protocols.	<b>10</b> UNDRIP: 20, 21, 22, 26, 44 SDG: 2.1, 5.5, 5.A, 14.3 ART: 2, 6, 14, 18, 19 ILO: 3.1, 7.2, 23.1 <b>GENDER EQUITY APPROACH</b> To recognize the central role of women in the conservation & wise use of biodiversity & their rights to land & food security.

### State of Forests in India

- The total forest and tree cover of the country is 80.73 million hectare which is 24.56 percent of the geographical area of the country.
- In terms of area, Madhya Pradesh has the largest forest cover in the country followed by Arunachal Pradesh, Chhattisgarh, Odisha and Maharashtra.

### Key policies that govern India's forests

Compensatory Afforestation Fund Act 2016	Forest Conservation Act 1980	National Forest Policy 1988	Indian Forest Act 1927
Wildlife (Protection) Act 1972	Forest Rights Act 2006		

- Top 5 states having highest forest cover as a percentage of total geographical area: Mizoram (85.41%) Arunachal Pradesh (79.63%) Meghalaya (76.33%)
- According to the National Forest Policy (1952) about 33 per cent of the geographical area should be under forest. However, the existing forest area is much below the desired level.
- The forest areas in India is much below the world average of 34.5 per cent and that of Brazil (57 per cent), Sweden (58 per cent), USA (42 per cent). Similarly, the per head forest area in India is only 0.07 hectares as against the world average of 1.10 hectares.

**PEPPER IT WITH**  
 UN Strategic Plan for Forests  
 2017-2030, CBD, UN Forum  
 on Forests, CAMPA, REDD+

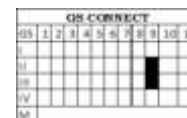
### Way Forward

- ✦ Bold and innovative solutions are needed to make responsible forest management valuable for those who are best positioned to protect forests — local communities. Their right based participation in forest conservation must be included.
- ✦ It is time to innovate and expand the development of approaches that are focused on forest-dependent people, particularly communities and smallholders who are often ignored in the global marketplace but who have a critical role to play in more efficiently and sustainably using the resources they have the rights to, and depend upon.
- ✦ There is need to address the fund issue persistent globally. Institutionalize support in terms of financial measures by way of adaptation of mitigation are need of the hour, and in order to succeeded fund crisis issue must be resolved at global level.

## Protected Planet Report 2020

### News Excerpt

The Protected Planet Report 2020 was released by United Nations Environment Programme (UNEP). The report highlighted the progress the world has made towards the ambitious goals agreed by countries in 2010 at the United Nations Convention on Biological Diversity.



### About the Report

Protected Planet Reports are biennial landmark publications that assess the state of protected and conserved areas around the world.

### Key Finding of the Report

- Globally, Over 21 million square kilometres has been placed within protected and conserved areas since 2010.
- The report finds that the international community has made major progress towards the global target on protected and conserved area coverage, but has fallen far short on its commitments on the quality of these areas.
- 82 per cent of countries and territories increased their share of protected area and coverage of other effective area-based conservation measures since 2010.
- According to the report since 2010, around 42 per cent of the area now within protected and conserved areas has been added in the last decade.
- At least, 22.5 million square kilometres (16.64 per cent) of land and inland water ecosystems and 28.1 million square kilometers (7.74 per cent) of coastal waters and the ocean are within protected areas as of May 2021.
- On an average, 62.6 per cent of key biodiversity areas (KBA) either fully or partially overlap with protected areas. KBAs are sites that contribute significantly to the global persistence of biodiversity, in terrestrial, freshwater and marine ecosystems.

### Why protected areas are important?

- ✓ Protected and conserved areas are no longer associated only with biodiversity conservation, but rather they are linked with their potential social outcomes (both positive and negative) receiving more attention.
- ✓ COVID-19 has devastated lives, livelihoods and economies. It has forced us to recognise that biodiversity loss cannot continue.

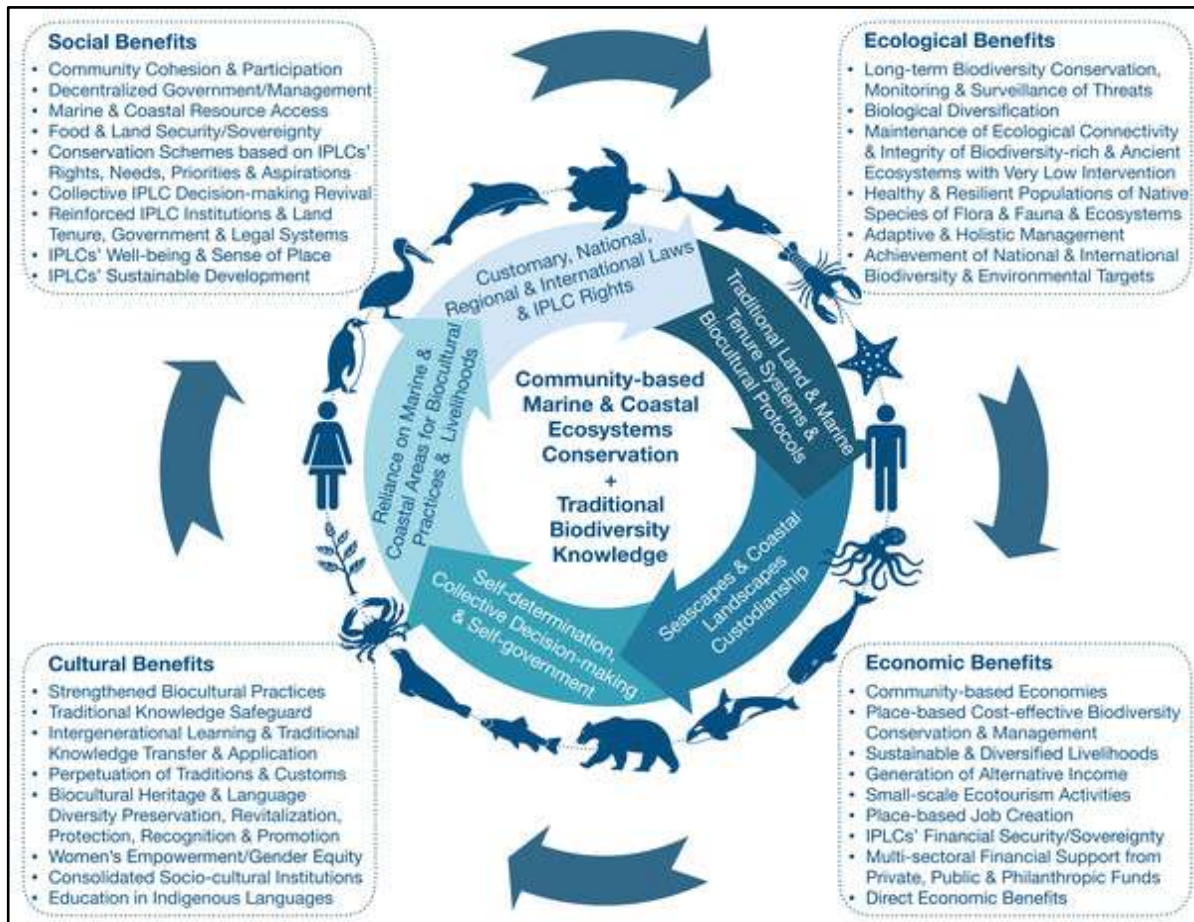
### Protect Areas of India

- Protected areas are those in which human occupation or at least the exploitation of resources is limited.
- The term "protected area" also includes Marine Protected Areas, the boundaries of which will include some area of ocean, and transboundary Protected Areas that overlap multiple countries which remove the borders inside the area for conservation and economic purposes.

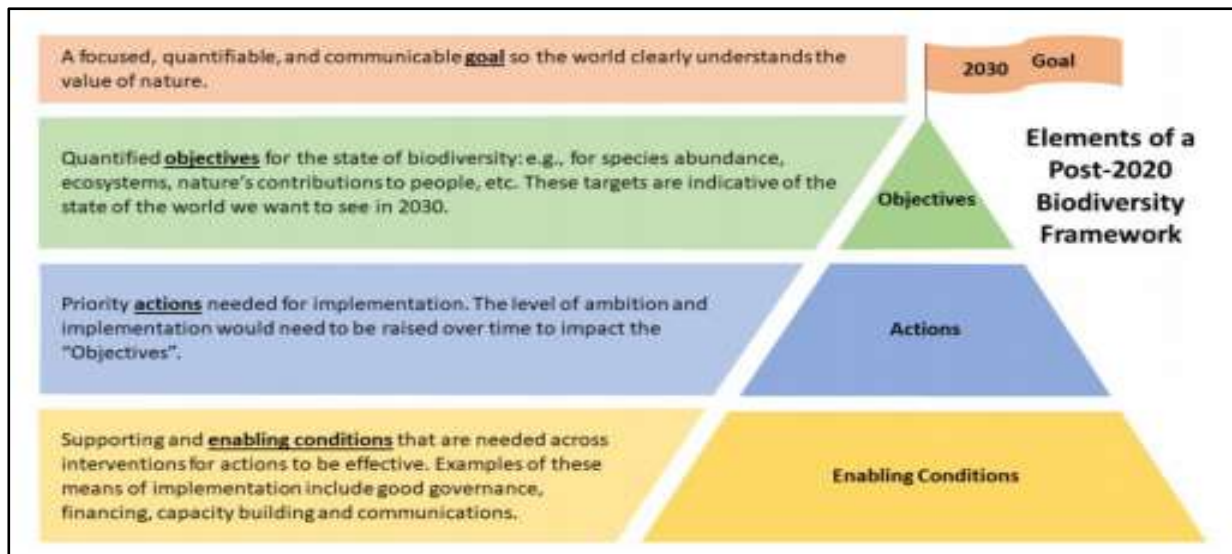
Protected Areas of India (As on December, 2020)

	No.	Total Area (km <sup>2</sup> )	Coverage % of Country
National Parks (NPs)	104	43,716	1.33
Wildlife Sanctuaries (WLSs)	566	1,22,420	3.72
Conservation Reserves (CRs)	97	4,483	0.14
Community Reserves	214	1,302	0.04
<b>Protected Areas (PAs)</b>	<b>981</b>	<b>1,71,921</b>	<b>5.03</b>

### Outcomes of Community Based Conservation



## Post 2020 Global Bio diversity framework



### Way Forward

- For biodiversity loss to be halted, protected and conserved areas must be accompanied by sustainable use across the wider landscape and seascape. They also need to be adequately taken into account across policies, sectors and international conventions. After 2020, greater efforts are needed to integrate protected and conserved areas alongside other land and water uses, including in national spatial plans.
- The Greater focus should be given to the wellbeing and capacity of rangers, including their ability to safeguard the rights of local people.
- Adequate consideration should be given to nationally-differentiated targets to optimise the global network of protected and conserved areas – by providing high levels of connectivity and ecological representation, to prevent the costs of conservation falling disproportionately on poorer economies or local people.

**PEPPER IT WITH**  
Clean Development mechanism,  
Man and Bio sphere programme,  
Wildlife institute of India,  
National Park, Local Reserves

## Climate Change and Shift in Earth's Axis

### News Excerpt

Recently, NASA conducted a study regarding earth's axis. According to NASA, data from the 20th century shows that the Earth's spin axis drifted about 10 centimetres per year. Meaning over a century, polar motion exceeds 10 metres.

GR CONNECT											
05	1	2	3	4	5	6	7	8	9	10	11

### About Earth's axis

- The Earth's axis rotation is the line along which it spins around itself as it revolves around the Sun. The points on which the axis intersects the planet's surface are the geographical north and south poles.
- The location of the poles is not fixed, however, the axis moves due to changes in distribution of Mass over the Earth. Thus, the poles move when the axis moves, and the movement is called "polar motion".
- Generally, polar motion is caused by changes in the hydrosphere, atmosphere, oceans, or solid Earth. But now, climate change is adding to the degree with which the poles wander.

### Reasons for the drift

- The combine impact of natural and anthropogenic factors like —Rising sea levels, heat waves, melting glaciers and storms are some of the well-known consequences of climate change. These have been marked to induce shift in the axis along which the Earth rotates.
- Additionally, due to the significant melting of glaciers because of global temperature rise, Earth’s axis of rotation has been moving more than usual since the 1990s.
- Climate change has caused billions of tonnes of glacial ice to melt into oceans. This has caused the Earth’s poles to move in new directions.
- The North Pole has shifted in a new eastward direction since the 1990s, because of changes in the hydrosphere (meaning the way in which water is stored on Earth). For Instance— From 1995 to 2020, the average speed of drift was 17 times faster than from 1981 to 1995. Also, in the last four decades, the poles moved by about 4 metres in distance.
- The other possible causes are (terrestrial water storage) change in non- glacial regions due to climate change and unsustainable consumption of groundwater for irrigation and other anthropogenic activities.

- ❖ **Climate change poses risks to financial stability in the form of—**
  - **Physical risks** (extreme and slow onset weather events)
  - **Transition risks**(caused by changes in policy, legal and regulatory frameworks, consumer preferences and technological development while transitioning to a low-carbon economy).
- ❖ The Reserve Bank of India (RBI) has just joined the **Network for Greening the Financial System.**
- ❖ It is a voluntary group of central banks. The RBI has joined to share best practices and contribute to the development of environment and climate risk management in the financial sector to mobilise mainstream finance to support the transition towards a sustainable economy.
- ❖ A World Bank report estimates that losses to India’s gross domestic product by 2050 due to climate change could be \$1,178 billion.
- ❖ The RBI has noted the importance of climate-related financial disclosures and private green finance as necessary to generate the enormous amounts of investments required to combat climate change and bring about a transformation towards sustainable and low carbon development.
- ❖ The most important international initiative to make private sector contribute to climate positive action and become resilient to climate risks are the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).
- ❖ Therefore, the Indian government needs to introduce guidelines and regulations to standardise and mandate climate-related disclosures in all financial statements and push private companies and financial institutions to manage their exposure to climate risks in their portfolios and operations.
- ❖ This would help not only in increasing resilience of Indian companies to face physical and transition risks of climate change but also in facilitating greater climate finance flows while minimising ‘greenwashing’.

### Possible Consequences

- ✓ This change is not expected to affect daily life; but it can change the length of the day by a few milliseconds.
- ✓ These shifts can cause significant impact on global air circulation, precipitation pattern, wind pattern and pressure belts.

**PEPPER IT WITH**

Agenda 2030, SDGs, Geo-Magnetism of Earth, Real Axis, Imaginary Axis, Inclination of Earth

- ✓ Shift in earth’s rotation axis may lead to change in biodiversity pattern, vegetation growth and agricultural productivity which may have impact on food security.

### Conclusion

Human-induced climate change has attributed to change the pattern of extreme weather events across the globe, from longer and hotter heat waves to heavier rains climate change has shifted the odds and changed the natural limits, making certain types of extreme weather more frequent and more intense. Climate change has reached to the limit which now, can alter earth’s physical properties which can resulted into multifold increase in instances of extreme events that fuel the cycle of disaster in both predictable and unpredictable ways. Therefore, there is dire need to halt the climate change to break the cycle of disaster.

## COVID-19 in Asiatic Lions

### News Excerpt

Recently, Eight Asiatic lions at Hyderabad’s Nehru Zoological Park (NZP) have tested positive for the deadly coronavirus, it is probably the first known case of the COVID outbreak among animals.

### Pre-Connect

- The “Asiatic Lion Conservation Project” has been launched by the Union Ministry of Environment, Forests and Climate Change (MoEFCC).
- At present Gir National Park and Wildlife Sanctuary is considered as the only natural abode of the Asiatic lion.
- The last surviving population of the Asiatic lions is a compact tract of dry deciduous forest and open grassy scrublands in southwestern part of Saurashtra region of Gujarat.
- Asiatic Lion is listed in schedule I of Wildlife protection act. It is also listed in CITES Appendix I and its IUCN status is Endangered.

### About

- The central zoo authority confirmed that eight Asiatic lions housed in NZP have tested positive for SARS-CoV2 virus. Further analyses of the samples have revealed that the infection was not caused by any variant of concern. The eight lions have been isolated and due care and necessary treatment has been provided
- All the eight lions have responded well to the treatment and are recovering.
- However, Authorities stated that Based on experience with zoo animals elsewhere in the world that have experienced SARS-COV2 positive last year, there is no factual evidence that animals can transmit the disease to humans any further.

### Conservation Issues

- ✓ The lions face the usual threats of poaching and habitat fragmentation. Three major roads and a railway track pass through the Gir Protected Area (PA). Also, there are three big temples inside the PA that attract large number of pilgrims, particularly during certain times of the year. There has been an increase in lion population, and more than 200 lions stay outside the PA. Though the conflict is not high now, with changing lifestyles and values these may increase in the future.
- ✓ There are also cases of lions dying by falling into the unguarded wells around the Gir PA. The Asiatic lion faces threat of genetic inbreeding arising from a single population in one place.

### Zoonotic Diseases in India

- Major public health zoonotic diseases in India include Rabies, Brucellosis, Toxoplasmosis, Cysticercosis, Echinococcosis, Japanese Encephalitis (JE), Plague, Leptospirosis, Scrub typhus, Nipah, Trypanosomiasis, Kyasanur forest disease (KFD) and Crimean-Congo haemorrhagic fever (CCHF).

- According to the National Centre for Disease Control (NCDC), about 75% of emerging and re-emerging infections are zoonotic, and new pathogens (viruses) continue to emerge and spread across countries.
- Zoonoses account for about four fifth of the human infections. The health problems posed by these seem to be increasing. Newer problems are recognised. Older and endemic problems appear in different forms. Zoonosis management is getting complex and complicated.

### Challenges to Controlling Zoonotic Diseases in India

- ✚ Controlling and preventing zoonotic diseases in a country like India is challenging because of a huge human population and its frequent interactions with animals.
- ✚ The unexpected nature of the occurrence of Zoonotic diseases, which transmitted between animals and humans, makes it even more challenging. Emerging infections usually prove more threatening because there is little information on their origin and many of their epidemiological features remain unknown.
- ✚ Poverty-struck communities are primarily dependent on rearing animals as a means of livelihood and, therefore, the intimate human-animal contact puts them at risk for this category of diseases.
- ✚ In India, lack of proper vaccination programmes, poor sero-surveillance and lack of diagnostic facilities make the preventive and precautionary approach more difficult.

**PEPPER IT WITH**  
 Project Lion, Project Tiger,  
 Wildlife Institute of India, NTCA,  
 National Biodiversity Authority

Species in News	
1. Xylophisdeepaki	2. Odisha’s blackbucks
<ul style="list-style-type: none"> <li>○ A tiny snake “Xylophisdeepaki” has been named in honour of Indian herpetologist Deepak Veerappan.</li> <li>○ The common name suggested for the species is 'Deepak’s wood snake'.</li> <li>○ It is a tiny snake of 20 cm length with iridescent scales. This snake was first found on a coconut plantation in Kanyakumari.</li> <li>○ Presently, It is reported to be an endemic species of Tamil Nadu and also been sighted in some parts of the southern Western Ghats. It is found in the drier regions and in lower altitudes around Agasthyamalai hills.</li> </ul>	<ul style="list-style-type: none"> <li>○ Odisha’s blackbuck population has doubled in the last six years, according to figures from the latest population census released recently by the chief conservator of forest (wildlife).</li> <li>○ Blackbucks are found only in the Ganjam district in the southern part of Odisha.</li> <li>○ It used to be sighted in the Balukhand-Konark Wildlife Sanctuary in Puri district till 2012-13, but now has vanished from the area.</li> <li>○ The blackbuck is a Schedule-1 animal according to the Wild Life (Protection) Act, 1972 and is considered as ‘Vulnerable’ according to the Red Data Book.</li> <li>○ Improvement of habitats, protection given by the local people and forest staff were some of the reasons for the increase of the population of the blackbuck.</li> </ul>



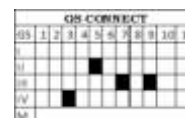
### Way forward

- » As of now, India does not have a proper policy for emerging instances of Zoonotic diseases. Endemic areas should be ear marked and regular monitoring should be done to check early outbreak of zoonotic diseases.
- » For effective prevention and control of zoonotic diseases there is a requirement of multi-sectoral integrated response among medical, veterinary and other related departments. This should be adopted on a “need basis” for preventing zoonosis in the country, along with that there is dire need to adopt ‘One Health’ policy in order to address the emerging issues.
- » There is also a need for strengthening surveillance with a strong laboratory network to pick up diseases both in animals and humans early to launch prompt containment action before an outbreak becomes an epidemic. The “one health” approach bringing veterinarians, health-care providers, and other sectors. Apart from that, it also requires robust public health facilities, trained frontline workers, early diagnosis, treatment, prevention, control, and management of zoonotic diseases.

### Used Cooking Oil-based Biodiesel

#### News Excerpt

The first supply of UCO (Used Cooking Oil) based Biodiesel blended Diesel under the EOI (Expression of Interest) Scheme has been flagged off by Petroleum ministry.



#### Pre-Connect

- In order to promote biofuels in the country, a National Policy on Biofuels was made by Ministry of New and Renewable Energy during the year 2009. Globally, biofuels have caught the attention in last decade and it is imperative to keep up with the pace of developments in the field of biofuels.
- To create an eco-system for collection and conversion of UCO into Biodiesel and developing entrepreneurship opportunities, Petroleum ministry, along with Minister of Health & Family Welfare, Science & Technology and Earth Sciences, had initiated Expressions of Interest for “Procurement of Bio-diesel produced from Used Cooking Oil” on the occasion of World Biofuel Day.

#### National Mission on use of Biomass in coal based thermal power plants

- ❖ In order to address the issue of air pollution due to farm stubble burning and to reduce carbon footprints of thermal power generation, Ministry of Power has decided to set up a **National Mission on use of Biomass in coal based thermal power plants.**
- ❖ This would further support the energy transition in the country and our targets to move towards cleaner energy sources.
- ❖ The "**National Mission on use of biomass in thermal power plants**" will have the following objectives—
  1. To increase the level of co-firing from present 5% to higher levels to have a larger share of carbon neutral power generation from the thermal power plants.
  2. To take up R&D activity in boiler design to handle the higher amount of silica, alkalis in the biomass pellets.
  3. To facilitate overcoming the constraints in supply chain of bio mass pellets and agro- residue and its transport upto to the power plants.
  4. To consider regulatory issues in biomass co-firing.

#### Key Points

- Biodiesel is an alternative fuel, similar to conventional or ‘fossil’ diesel. It can be produced from vegetable oils, animal fats, tallow and waste

**PEPPER IT WITH**  
Ethanol Blending, E20 Fuel,  
Octane Number, 2 Generation  
Bio-refinery, Standing Crops

cooking oil. A significant advantage of Biodiesel is its carbon-neutrality, i.e. the oilseed absorbs the same amount of CO2 as is released when the fuel is combusted in a vehicle. Also, Biodiesel is rapidly biodegradable and largely non-toxic.

- It is a landmark in India’s pursuance of Biofuels and will have a positive impact on the environment. This initiative will garner substantial economic benefits for the nation by shoring up indigenous Biodiesel supply, reducing import dependence, and generating rural employment.
- Feedstock availability in Biodiesel is a challenge, and leveraging UCO can be a major breakthrough that will enable us to reach the target of 5% Biodiesel blending. It will also help divert the unhealthy used oil from the food chain to a more productive purpose.

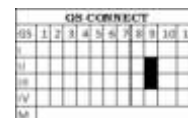
**Advantages and Disadvantages of Bio-fuels**

Advantage	Disadvantage
Produced from Renewable Resources	Variation in Quality of Biodiesel
Can be Used in existing Diesel Engines	Not Suitable for use in Low Temperatures
Less Greenhouse Gas Emissions	Fuel Distribution
Grown, Produced and Distributed Locally	Slight Increase in Nitrogen Oxide Emissions
Cleaner Biofuel Refineries	
Biodegradable and Non-Toxic	
Better Fuel Economy	
Positive Economic Impact	
Reduced Foreign Oil Dependence	
More Health Benefits	

**Global Methane Assessment**

**News Excerpt**

The report, titled Global Methane Assessment: Benefits and Costs of Mitigating Methane Emissions was released by the Climate and Clean Air Coalition and the United Nations Environment Programme.



**Pre-Connect**

- Methane is a short-lived climate pollutant (SLCP) with an atmospheric lifetime of roughly a decade. It is a potent greenhouse gas tens of times more powerful than carbon dioxide in terms of warming the atmosphere.
- Methane contributes to the formation of ground-level ozone, a dangerous air pollutant.
- Ozone attributable to anthropogenic methane emissions causes approximately half a million premature deaths per year globally and harms ecosystems and crops by suppressing growth and diminishing production.

**The Global Methane Initiative**

- ❖ The Global Methane Initiative (GMI) is a voluntary, multilateral partnership that aims to reduce global methane emissions and to advance the abatement, recovery, and use of methane as a clean energy source.
- ❖ GMI achieves this goal by creating an international network of partner governments, private sector members, development banks, universities and nongovernmental organizations to conduct assessments, build capacity, create partnerships, and share information to facilitate project development for methane reduction in GMI Partner Countries.

**Key Findings**

- Methane amounts have risen rapidly over the past decade, reaching five-year average growth rates not seen

since the 1980s.

- More than half of global methane emissions stem from human activities. Methane's atmospheric concentration has more than doubled since pre-industrial times and is second only to carbon dioxide in driving climate change during the industrial era.
- The atmospheric concentration of methane is increasing faster now than at any time since the 1980s. Methane emissions are projected to continue rising through at least 2040.
- Current concentrations are well above levels in the 2° C scenarios used in the IPCC's 2013 Assessment. The Paris Agreement's 1.5° C target cannot be achieved at a reasonable cost without reducing methane emissions by 40–45 per cent by 2030.

### Methane Emission in India

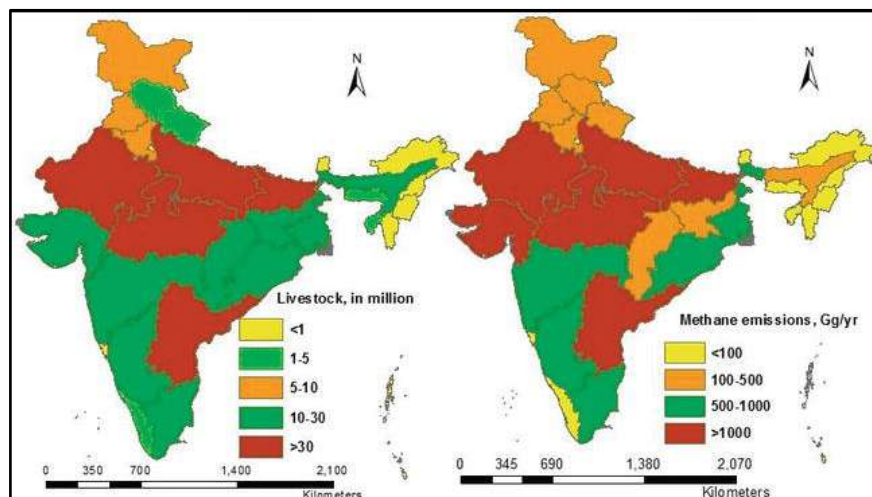
- ✓ The main human-generated sources of methane in India are cattle production, wastewater, landfills, rice agriculture, biomass burning, and fossil fuels.
- ✓ Methane emissions in India are increased in June-September and February-March Month which is due to the rice cultivation and winter heating. Among the 29 states, the top three most emitting states are Uttar Pradesh, followed by Rajasthan and Madhya Pradesh, and the lowest is in Mizoram.
- ✓ The major emitting states are distributed across the western and the Indo-Gangetic plains of India. CH<sub>4</sub> emission contributions from all the eight northeastern states are only 3.88% of total national emission. The low CH<sub>4</sub> emission is due to less livestock population in comparison with the other states.
- ✓ For India, methane emissions are to be at 45 million tonnes (Mt) of CO<sub>2</sub> equivalent emissions over a 20-year horizon. During mining, fractured coal seams and surrounding strata emit methane into the atmosphere.
- ✓ India's energy sector is heavily relied on coal, therefore methane emission are very high.

### India's Initiative for Methane Mitigation

- ❖ India Greenhouse Gas Program builds comprehensive measurement and management strategies to reduce emissions and drive more profitable, competitive and sustainable businesses and organisations in India.
- ❖ The National Action Plan on Climate Change (NAPCC) was launched in 2008, which aims to mitigate on the threat posed by climate change and the steps to counter it.
- ❖ Central Salt & Marine Chemical Research Institute (CSMCRI) in collaboration with the country's three leading institutes developed a seaweed-based animal feed additive formulation that aims to reduce methane emissions from cattle and also boost immunity of cattle and poultry.
- ❖ India shifted from Bharat Stage-IV (BS-IV) to Bharat Stage-VI (BS-VI) emission norms.

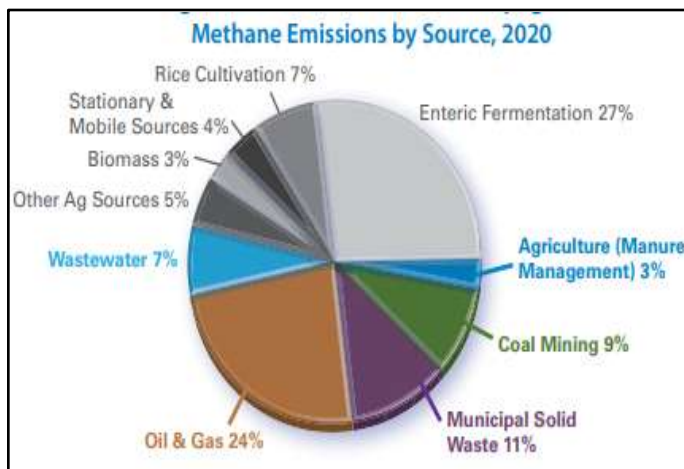
### Conclusion

Urgent steps must be taken to reduce methane emissions this decade. Given the wide range of impacts from methane, the societal, economic, and environmental benefits of acting are numerous and far outweigh the costs. The existence of readily available, low-cost, targeted



measures, and methane’s short-lived atmospheric lifetime means significant climate and clean air benefits can be achieved by 2030. Targets and performance indicators to reduce methane must address the combined and multiple impacts methane has on climate, air quality, public health, agricultural production and ecosystem health.

To keep warming to 1.5° C, focused strategies specifically targeting methane emissions need to be implemented alongside substantial and simultaneous mitigation of all other climate pollutants including carbon dioxide and short-lived climate pollutants.



## Great Nicobar Development Plan

### News Excerpt

NITI Aayog’s ambitious project for Great Nicobar Island has given ‘for grant of terms of reference’ for Environmental Impact Assessment (EIA) studies.

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### Pre-Connect

- In March, NITI Aayog has proposed plan to develop Andaman and Nicobar Island as international Financial-tourist complex to facilitate trade and services.
- Earlier, Environment Appraisal Committee has flagged concerns over proposed project on the lines of widespread damage to biodiversity. This Island is ecologically sensitive and such project may result into huge damages. Along with it indigenous communities’ rights are being sidelined and their interests may be undermined. Now, the committee has recommended to broad studies.

### Development Plan of Great Nicobar Island

- Through a series of de-notifications, amendments, special committee meetings and correspondence with other states the forests, tribal reserves and coastal areas of the islands are being prepped for mega projects.
- The proposed plan included rail construction, a port, a petrochemical complex, special economic zones and tourism projects. The purposed plan also includes the development of an “integrated tourism complex”, an international airport and a new harbour at Dugong creek. In June 2017, the government formed an Island Development Agency to oversee the progress on the plan.

### Environmental Implications of the Move

- ✓ Andaman and Nicobar Island have some of India’s largest mangroves, a natural defence against extreme events such as cyclones and key to climate change mitigation and adaptation in coastal areas. Purposed development plan at such scale may give huge blow to regional biodiversity.
- ✓ The Andaman forests are recognised as a distinct eco-region in the World Wide Fund for Nature global list with high endemism. Ecologically and ethnically fragile pockets of the Andaman and Nicobar Islands are being gradually stripped of protection for commercial interests.
- ✓ Over half the species of butterflies, 40% of birds and 60% of mammals found here are endemic. Scholars cited that to explore new species in field research this island is critically important. Further explorations will reveal even more new species. Losing this area to development will be a big blow to the species resides in the region.

- ✓ The purposed mega project would require large diversion of forest land and shall have obvious environmental loss leading to irreversible damage and will also act adversely on mitigation of impact of climate change.

### Analytica

#### Key Concerns

- The projects could bring prosperity to the region but it is alleged that they are designed to benefit outsiders. Locals do not have the skill and capacity, they cannot invest at the scale required to benefit off these huge plans. These plans will only help people from the mainland. Islanders will not gain much.
- The islands are home to particularly vulnerable tribal groups such as the Great Andamanese, Jarawas, Onges, Sentinelese and Shompen that live off forest resources. These communities are vulnerable because their numbers are either stagnant or declining, and their members are economically backward and have low levels of literacy.
- According to the 2019 report of the Intergovernmental Panel on Climate Change, the Andaman and Nicobar Islands are at extreme risk of becoming uninhabitable because of rising sea levels. Many low-lying cities and small islands at most latitudes will experience such [extreme sea level] events annually by 2050.
- The islands fall in the seismically active Alpine-Himalayan belt and are categorized under zone V, most prone to earthquakes.
- This project is often alleged to sideline the provisions of the CAMPA act. The Government has reduced the afforestation scope even in the compliance of CAMPA act. Such projects could ignore the historical, social, ecological and legal context of the unique island systems.

#### Possible Outcomes

NITI Aayog's reports have claimed that development will augment economic growth in the islands, bring jobs and benefit islanders. Development of the trans-shipment port in Great Nicobar will help the locals. Robust development would be assured to establish social infrastructure along with physical infrastructure.

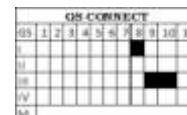
#### Conclusion

There is no doubt that the region needs connectivity, electricity and better water supply. Indigenous communities need basic amenities and small, sustainable eco-tourism projects which give them livelihoods, not the mega plans which rather exclude them, it could lead to huge ecological and cultural change. Moreover, Purposed plan take care of outsiders rather than indigenous communities. Development plans for the islands need to be designed keeping its vulnerabilities in mind.

## Cyclones

### News Excerpt

Recently, Cyclone Tauktae made landfall along Gujarat's Saurashtra coast around 20 km north east of Diu, leaving a trail of destruction in the other four states on the country's western coast.



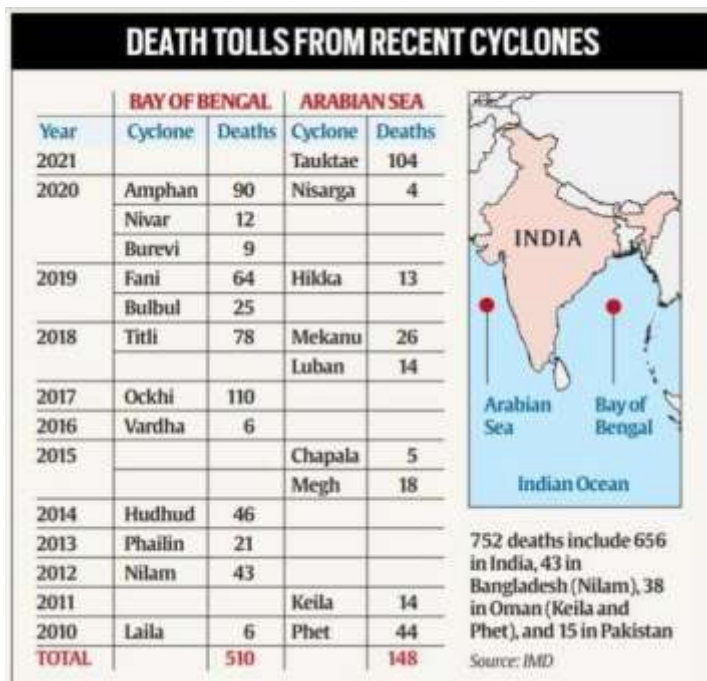
### About

- Cyclone Tauktae, classified as a very severe cyclonic storm (VSCS) and developed in the Arabian Sea. In recent years, strong cyclones have been developing in the Arabian Sea more frequently than earlier.
- Tauktae is the fourth cyclone in consecutive years to have developed in the Arabian Sea, that too in the pre-monsoon period (April to June).
- Tauktae makes its landfall; three of these will have hit either the Gujarat or Maharashtra coast. After Cyclone Mekanu in 2018, which struck Oman, Cyclone Vayu in 2019 struck Gujarat, followed by Cyclone Nisarga in 2020 that struck Maharashtra.

- Tauktae has been intensifying very rapidly. From a depression formed in the southeast Arabian Sea. Also, the first cyclones to form in 2020 and 2021 were in the Arabian Sea during the pre-monsoon period, both in the VSCS category.
- Tauktae intensified from a depression to severe cyclone in two days which is a new record. Previously, cyclones took four-five days.
- Cyclone Tauktae has affected more than half of India and badly hit all states on India’s west coast. Starting off from Lakshadweep, the remnants caused rainfall up to Delhi, Bihar and Nepal on Thursday, and its clouds have even advanced into China.

### Reason for rapid intensification

- Any tropical cyclone requires energy to stay alive. This energy is typically obtained from warm water and humid air over the tropical ocean. Currently, sea water up to depths of 50 metres has been very warm, supplying ample energy to enable the intensification of Cyclone Tauktae.
- Cyclones are likely to become deadlier due to ocean surface warming — an impact of human-induced climate change.
- Role of Global Warming: Recent research papers have found clinching evidence for the correlation between **rapid intensification of cyclones, their increased intensity and warming ocean waters** even in usually cooler waters like the Arabian Sea.
- The more the heat released through condensation of water vapour, the steeper the drop in pressure. A low-pressure system undergoes multiple stages of intensification to form cyclones. Such factors contribute immensely to develop Cyclone.



### Arabian Sea's increasing proximity to Cyclones

- ✓ Annually, five cyclones on average form in the Bay of Bengal and the Arabian Sea combined. Of these, four develop in the Bay of Bengal, which is warmer than the Arabian Sea. In the Arabian Sea, cyclones typically develop over Lakshadweep area and largely traverse westwards, or away from India’s west coast.
- ✓ Typically, tropical cyclones in the North Indian Ocean region (Bay of Bengal and Arabian Sea) develop during the pre-monsoon and post-monsoon (October to December) periods. May-June and October-November are known to produce cyclones of severe intensity that affect the Indian coasts.
- ✓ However, in recent years, meteorologists have observed that the Arabian Sea, too, has been warming. This is a phenomenon associated with global warming.

### Mitigation Measures

Mitigation measures can help in effective disaster management during the cyclones. They are as follows—

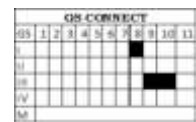
- Maintenance of embankments should be crafted with fine workmanship to mitigate flooding risk during cyclones.

- Support should be provided through amateur radio in preferred local languages at normal times so that they can effectively handle the cyclone. Early warning RADAR based model should be developed in order to make early action.
- Long term mitigation measures should also be in place in district plans. In coastal towns and cities, building rules need to be revisited and structural safety is a must; cyclone resilient structures must be constructed. Ageing test and assessment of retrofitting requirements should be mandatory for major city buildings beyond 15 to 20 years old
- Coastal Regulation Zone norms should be strictly enforced. Planning as well as balancing of the coastal vegetation and green cover should be taken up.
- Underground power cable and utility lines should also be planned in a manner that they are functional and financially viable. Last mile connectivity should be ensured.

### World's Largest Iceberg Breaks off

#### News Excerpt

Recently, a huge ice block has broken off from western Antarctica into the Weddell Sea, becoming the largest iceberg in the world which named as A-76.



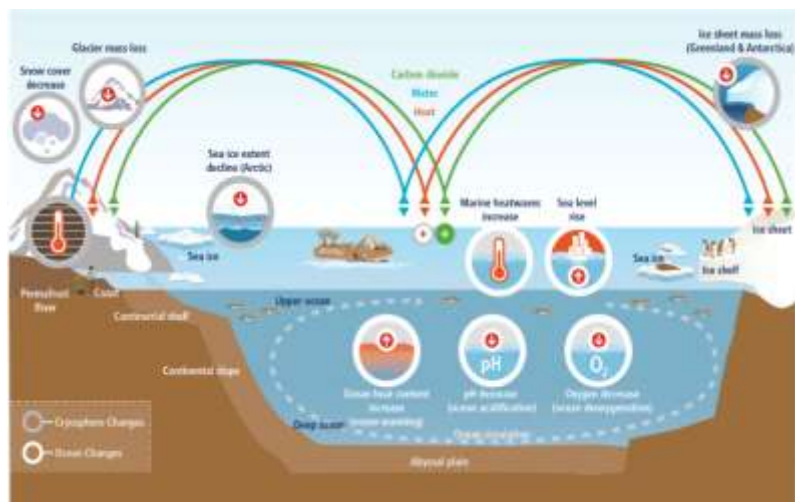
#### About Break Off

- Icebergs form when hunks of ice break off from ice shelves or glaciers and begin to float in open water.
- It is the latest in a series of large ice blocks to dislodge in a region acutely vulnerable to climate change; although scientists said in this case it appeared to be part of a natural polar cycle.
- Slightly larger than the Spanish island of Majorca, A-76 had been monitored by scientists. It began to separate from the Ronne Ice Shelf.
- The iceberg, measuring around 170 km long and 25 km wide, with an area of 4,320 sq km is now floating in the Weddell Sea.



### Cryosphere, Climate Change and its impact

- The cryosphere plays a significant role in the Earth climate system, being a sensitive and informative indicator of climate change.
- The Intergovernmental Panel on Climate Change (IPCC) Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC) states that **“over the last decades, global warming has led to widespread shrinking of the cryosphere, with mass loss from ice sheets and glaciers, reduction in snow cover, and Arctic sea ice extent**



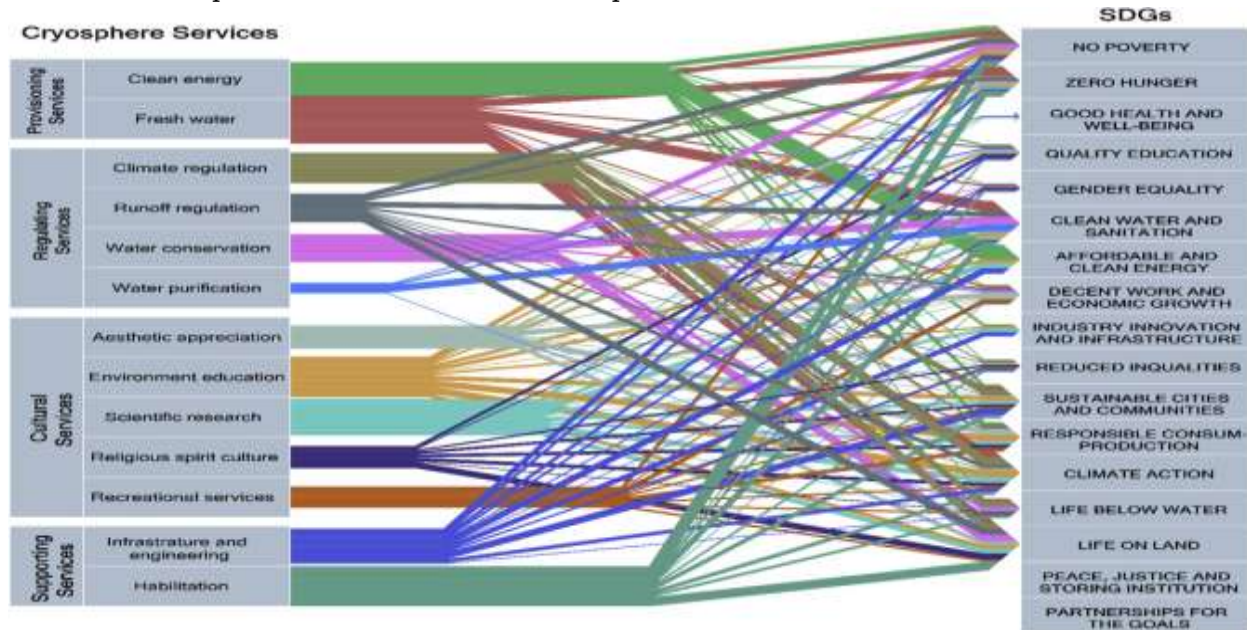
**and thickness, and increased permafrost temperatures.**

- Links between the cryosphere and climate change are numerous. Major factors are the high albedo/reflectivity of snow and ice surfaces, the insulating effects of snow cover, and the latent heat associated with the phase changes between ice and liquid water. The delaying effects of seasonal snow and ice cover on annual energy and water cycles, the fresh water stored in ice sheets and glaciers, and the greenhouse gases locked up in permafrost are also very important.
- Through these factors and associated feedback processes, the cryosphere plays a significant role in global climate.
- Albedo changes from the loss of sea ice and snow cover, along with accelerating methane emissions from thawing permafrost, are heating the planet at a rate equivalent to approximately 3 billion metric tons of CO<sub>2</sub>, comparable to about 42% of global warming emissions.
- The emission of GHGs and changes in albedo from a melting Arctic are projected to more than double the Arctic’s contribution to global warming by 2100.
- Permafrost is potentially a major source of methane and carbon dioxide. Permafrost contains about 1,400 to 1,600 billion tons of carbon (more than twice that currently in the atmosphere).
- In terms of carbon budgets, in the 1.5°C climate warming scenario, the melting of permafrost is estimated to result in a range of 150–200 Gt CO<sub>2</sub>-eq emissions, while at 2+°C degrees would result in at about 220–300 Gt CO<sub>2</sub>-eq by 2100, comparable to the total emissions of countries like Canada or the entire EU.

**Analytica**

**Link between Cryosphere and Sustainable development Goals**

- ✓ Ocean and cryosphere change affect our ability to meet the United Nations Sustainable Development Goals (SDGs).
- ✓ Progress on the SDGs support climate action that will reduce Future Ocean and cryosphere change, and as well as the adaptation responses to unavoidable changes.
- ✓ There are also trade-offs between SDGs and measures that help communities to adjust to their changing environment, but limiting greenhouse gas emissions opens more options for effective adaptation and sustainable development.





### Way Forward

The cryosphere is changing fast as a result of climate change and if warming continues unabated, the risks to human societies and sensitive ecosystems rise dramatically. A continued warming in the cryosphere could cause a rise in sea levels that would affect more than 100 million people globally in terms of water and food security and along with varying magnitude of disaster. Therefore, there is dire need to reduce pollutants such as methane and black carbon to halt warming in critical snow and ice-covered regions while benefitting human welfare.

## Deep Sea Diversity in India

### News Excerpt

Recently, Zoological Survey of India has revealed the Deep Sea Diversity of India. This publication is the first detailed work on deep-sea organisms of the country.

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### Key Points

- This publication, the first of its kind, provides baseline information on all groups of fauna and biological organisms in the Indian deep seas. It is likely to support our knowledge on conserving and managing deep sea faunal resources, and it will also pave way for their sustainable utilization.
- India is home to 4,371 species of deep-sea fauna, including 1,032 species under the kingdom Protista and 3,339 species under the kingdom Animalia.
- The deep-sea ecosystem is considered to be below a depth of 200 metres, where solar energy cannot support primary productivity through photosynthesis.
- India is surrounded by the Arabian Sea, the Bay of Bengal, the Andaman Sea and the Laccadive Sea (Lakshadweep Sea). Of the 4,371 species, the maximum of 2,766 species has been reported from deep sea areas of the Arabian Sea, followed by 1,964 species from the Bay of Bengal, 1,396 species from the Andaman Sea, and only 253 species from the Laccadive Sea.
- According to the marine biologist the deep sea fauna had a vast diversity, starting from unicellular eukaryotes, sponges, corals, echinoderms and fishes, and also mammals.
- Till Now, the deep sea ecosystem was the most unexplored ecosystem across the world. It included hydrothermal vents, submarine canyons, deep sea trenches, sea mounts, cold seeps, and mud volcanoes.
- India is one of the countries that made a pioneering exploration in the deep Indian Ocean region in 1874 by commissioning a RIMS (Royal Indian Marine Survey) ship investigator, which conducted enormous studies in seas around India.

### The Deep Ocean Mission

- ❖ "Deep Ocean Mission", has been launched with a view to explore Deep Ocean for resources and develop deep sea technologies for sustainable use of ocean resources.
- ❖ Deep Ocean Mission will be a mission mode project to support the Blue Economy Initiatives of the Government of India. Ministry of Earth Sciences (MoES) will be the nodal Ministry implementing this multi-institutional ambitious mission.
- ❖ The Deep Ocean Mission consists of the following six major components–
  - Development of Technologies for Deep Sea Mining, and Manned Submersible
  - Development of Ocean Climate Change Advisory Services
  - Technological innovations for exploration and conservation of deep-sea biodiversity
  - Deep Ocean Survey and Exploration
  - Energy and freshwater from the Ocean
  - Advanced Marine Station for Ocean Biology.

### Key Findings about Species

- **There are 31 species of sea mammals** which are found in deep sea ecosystem of Indian waters, including the Critically Endangered Irrawaddy Dolphin. Two other species, the Indo-Pacific Finless Porpoise and the Sperm Whale, are recorded as 'Vulnerable' in the International Union for Conservation of Nature (IUCN) classification.
- The list of mammals includes Cuvier's Beaked Whale and Short-beaked Common Dolphin, which dive as deep as 8,000 metres below the Earth's surface.
- **Out of the seven species of marine turtles** found across the world, five species have been recorded from Indian waters. India is known as one of the best and largest breeding grounds for sea turtles, especially for Olive Ridley and Leatherback Turtles, across the world.

### Benefits of the 'Deep Sea Mission'

- ✓ The technologies required for deep sea mining have strategic implications and are not commercially available. Hence, attempts will be made to indigenise technologies by collaborating with leading institutes and private industries.
- ✓ A research vessel for deep ocean exploration would be built in an Indian shipyard which would create employment opportunities. This mission is also directed towards capacity development in Marine Biology, which will provide job opportunities in Indian industries.
- ✓ Additionally, design, development and fabrication of specialized equipment, ships and setting up of required infrastructure are expected to spur the growth of the Indian industry, especially the MSME and Start-ups.
- ✓ For India, with its three sides surrounded by the oceans and around 30 per cent of the country's population living in coastal areas, ocean is a major economic factor supporting fisheries and aquaculture, tourism, livelihoods and blue trade. Oceans are also storehouse of food, energy, minerals, medicines, modulator of weather and climate and underpin life on Earth.

**PEPPER IT WITH**  
Decade of Ocean Science for Sustainable Development, Marine Protected Areas (MPAs), EEZ, Continental Shelf, Plate tectonics, Abyssal Plain, Biodiversity Hotspot

### Issues with Deep Sea

- There are various challenges associated with Deep Sea biodiversity. For instance–Sea bed mining, Oil Spill, under water nuclear explosion and pollution created by vessels. These factors affect deep sea biodiversity at large.
- Presently, Plastic pollution has catastrophic impact over surface and deep sea bio diversity.
- Deep sea fishery over the years has undergone several changes like modernisation of fishing practices along with diversification, intensification and extension of fishing to new grounds and landing from incidental by catch to targeted commercial fishery. In India the coastal fishery sector is now facing challenges like the sustainability, resources conservation and management.
- Climate change is likely to have irreversible impact on deep sea biodiversity. It can impact the distribution pattern as well as biodiversity.

### Way Forward

- ✚ Although the publication pointed out a baseline figure of 4,371 species, there is an urgent need for greater exploration of Indian deep seas. Most of the earlier explorations were carried to maximum depth of 2,000 metres, whereas parts of Indian seas are deeper than 6,000 metres, Therefore, more potential is there which remains untapped.
- ✚ The Government should introduce new development scheme for enhancing the skills and capabilities of the traditional fishermen to undertake deep sea fishing including modernization of existing indigenous deep sea fishing fleet, introduction of new indigenous deep sea fishing boats through fishermen cooperatives/self-help groups, on-board training and linkages to markets and export.



- This is why the price of the antiviral drug remdesivir, which is currently in great demand for the treatment of serious cases of Covid-19, is not regulated by the government.
- However, recent notification by the Ministry of Chemicals & Fertilizers said that on the intervention of the government, major manufacturers/marketers of the remdesivir injection had reported voluntary reduction in the Maximum Retail Price (MRP).
- Globally, the American biotechnology firm Gilead Sciences owns the patent for the drug. Several pharma companies have obtained a licence from Gilead to manufacture remdesivir.
- To bring vaccines or drugs used in the treatment of Covid-19 such as remdesivir under the DPCO policy, an amendment can be brought.

**PEPPER IT WITH**  
TRIPS, Compulsory Licensing,  
Patent Waive off, CoWin Platform

### Legal avenues are available for the government to address differential pricing for vaccines

#### **THE PATENTS ACT, 1970:**

- ✓ This law, which was mentioned by the Supreme Court, has two key provisions that could be potentially invoked to regulate the pricing of the vaccine.
- ✓ **Section 100 of the Patents Act** gives the central government the power to authorise anyone (a pharma company) to use the invention for the “purposes of the government”. This provision enables the government to license the patents of the vaccine to specific companies to speed up manufacturing and ensure equitable pricing.
- ✓ **Under Section 92 of the Act**, which deals with compulsory licensing, the government can, without the permission of the patent holder, license the patent under specific circumstances prescribed in the Act.
- ✓ “If the Central Government is satisfied, in respect of any patent in force in circumstances of national emergency or in circumstances of extreme urgency or in case of public non-commercial use, that it is necessary that compulsory licenses should be granted at any time after the sealing thereof to work the invention, it may make a declaration to that effect, by notification in the Official Gazette, and thereupon the following provisions shall have effect,” the provision says.
- ✓ After the government issues a notification under Section 92, pharma companies can approach the government for a licence to start manufacturing by reverse engineering the product.
- ✓ However, in the case of biological vaccines like Covid-19, even though ingredients and processes are well known, it is difficult to duplicate the process from scratch. The process will also entail new clinical trials to establish safety and efficacy, which makes compulsory licensing less attractive.
- ✓ The World Health Organisation (WHO) is working to expand the capacity of low- and middle-income countries (LMICs) to produce Covid-19 vaccines and scale up manufacturing to increase global access to them.
- ✓ WHO invited expressions of interest to enable “transfer of technology” and “appropriate know-how” to existing or new manufacturers in LMICs to enable them to develop and produce Covid-19 mRNA vaccines.

#### **THE EPIDEMIC DISEASES ACT, 1897:**

- ✓ Another legal route suggested by experts to regulate the pricing of vaccines is the Epidemic Diseases Act. This has been the main legal weapon for the government in dealing with the pandemic.
- ✓ **Section 2** of this law gives the government “power to take special measures and prescribe regulations as to dangerous epidemic disease”.

Apart from these legislative options, experts suggest that the central government procuring directly from the manufacturers could be the most beneficial route to ensure equitable pricing. As the sole purchaser, it will have greater bargaining power.

### Covid-19: Connection with Primitive Cavemen

#### News Excerpt

A series of recently published studies provide cues on how certain host genome regions confer an increased risk of developing the severe disease while others protect against the virus.

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#### Pre-Connect

- Viruses can only survive and multiply in host cells.
- As the viral genome takes the help of host machinery, understanding the host genome is paramount to studying both susceptibility and protection against the virus in a given population.
- Thus, studying the genomes of individuals in a group (for example, a particular genetic population group in India) can make us predict whether the individuals in that group are more or less likely to develop severe disease.

#### Analytica

- The recent papers pointed out that a region on host chromosome 3 acts as a significant genetic risk factor towards getting seriously ill and, at the same time, a group of genes on chromosomes 6,12,19, and 21 protect us against the virus.
- Enzymes coded by the OAS gene family on chromosome 12, a component of the interferon-induced antiviral system, are of particular importance as they can act as a drug target against the virus.
- Evolutionary biologists in Sweden and Germany showed that the regions of host genomes that increase the risk of getting severely ill and protect against the virus were inherited from Neanderthals.
- According to research, Neanderthals and modern humans once came in contact with each other, and they interbred. As a result, genetic content between Neanderthals and humans got mixed in their offspring.
- In the study published in *Nature*, the researchers showed that modern-day humans share a stretch of 50,000 nucleotides (nucleotides are the basic building blocks of DNA) in chromosome 3 with Neanderthals.

### Homo Sapien-Neanderthal

**Brain:**  
Larger than average modern human brain - 1500 cubic centimeter. Used intelligence to become skilled toolmakers and develop a sense of community.

**Facial Characteristics:**  
Skull shape was long and low, with a rounded brain case; eye sockets were large and rounded; nose was broad and large; larger jaws than modern humans

**Shelter:**  
Built hearths and could control fire. Wore animal hides. Caves were often used as shelter but open air shelters were also made.

**Height:**  
Males averaged 5.5 feet; female 5.1. Shorter and robust skeleton than modern humans.

**Tools:**  
More than 60 types of Neanderthal tools have been found. They created knives, scrapers, and spear points. They learned how to make sharp, thin blades.

**Society/Culture:**  
Created burial rituals for dead. Worked together while hunting. Learn from experience and wisdom of older members of the group.

**Diet:**  
Hunted big game. Fossils show they ate significant amounts of meat supplements with vegetation.

- It is this stretch that increases their risk of getting severe COVID-19. They predicted that having a copy of this region of chromosome 3 nearly doubles the risk of getting severe COVID-19.
- The same researchers published a second paper in *PNAS* showing that a part of host chromosome 12, previously shown to protect against the virus, also was inherited from Neanderthal genomes.
- While specific genes from Neanderthals are working against the virus and protecting us from getting a severe disease, others are associated with an increased risk of getting critically ill. This push and pull effect may be one of the intriguing facts about how the selection of genes happens during evolution.

### **Significance of the Study for India**

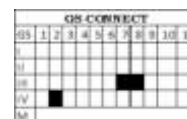
- ✓ About 50% of South Asians carry the region in chromosome 3 from Neanderthal genomes, the same region that make us more prone to getting severely sick with the virus.
- ✓ On the good Neanderthal gene front, nearly 30% of South Asians bear the chromosome 12 region that protects us from getting severely ill.
- ✓ As Indians are a diverse genetic group, the above risk was determined using samples used previously in an international consortium called the 1,000 genome project.
- ✓ The project is represented by Indian Gujaratis and Telugus, Pakistani Punjabis, and Bangladeshi Bengalis in the South Asian group.

- ❖ **Chromosomes** are thread-like structures located inside the nucleus of animal and plant cells. Each chromosome is made of protein and a single molecule of deoxyribonucleic acid (DNA). Passed from parents to offspring, DNA contains the specific instructions that make each type of living creature unique.
- ❖ **The 1000 Genomes Project**- It ran between 2008 and 2015, creating the largest public catalogue of human variation and genotype data. The 1000 Genomes Project created a catalogue of common human genetic variation, using openly consented samples from people who declared themselves to be healthy. The reference data resources generated by the project remain heavily used by the biomedical science community. The International Genome Sample Resource (IGSR) maintains and shares the human genetic variation resources built by the 1000 Genomes Project.

## **Plasma Therapy for Covid-19**

### **News Excerpt**

According to the recent advisory from the Indian Council of Medical Research (ICMR), the use of convalescent plasma has been dropped from the recommended treatment guidelines for COVID-19.



### **Pre-Connect**

#### **Convalescent plasma therapy in SARS CoV-2**

- In SARS-CoV-2 infected individuals, 90-99 per cent of individuals develop detectable neutralising antibodies within four weeks following infection.
- Convalescent plasma therapy (CPT) uses blood from people who've recovered from a Covid-19 infection.
- Basically, it is a method of passive immunity where there is a transfer of antibodies from an individual who has recovered from the disease to a person who has not developed their own antibody response yet.
- In the early part of Covid-19 infection, there was great enthusiasm for donating plasma by voluntary donors after recovery from Covid-19 infection. This was because of its great

benefit during 1918's influenza pandemic. Some people develop more neutralising antibodies after Covid-19 infection.

- Plasma derived from such individuals is called High titre convalescent plasma or HTCP. Similarly, less antibody carrying plasma after the disease is called Low titre convalescent plasma (LTCP).

### Analytica

- Though a trial by the ICMR on 400 patients last year — called the PLACID trial — had found no significant benefit from the use of plasma it continued to find a place in the recommended guidelines, in 'off label' use.
  - Several other international trials had also found no benefit from plasma therapy. In fact some experts have said the use of such plasma may have even played a role in the facilitating new worrisome mutations to the virus.
  - The most recent study published in the British medical journal *The Lancet* reported that in a double blinded trial involving about 5,000 patients who got the treatment in the United Kingdom, again no benefit was found in reducing mortality, or improving patient outcomes.
  - In spite of no evidence, doctors have frequently put the onus on caregivers to source such plasma from recovered patients that has often led to fraught attempts from desperate kin.
  - The ICMR guidelines continue to recommend Ivermerctin and hydroxychloroquine for mild disease but has also underlined that both drugs had “low certainty of evidence.
- ❖ DRDO's new anti-Covid oral drug, 2-deoxy-D-glucose (2-DG), was recently granted emergency use approval by the Drug Controller General of India (DCGI) as an adjunct therapy in moderate cases of COVID-19.
  - ❖ The 2-DG drug is expected to help hospitalised COVID-19 patients and reduce their supplemental oxygen dependence.
  - ❖ According to DRDO, Clinical trial results have shown that this molecule helps in faster recovery of hospitalised patients and reduces supplemental oxygen dependence.
  - ❖ The 2 DG drug, like glucose, spreads through the body, reaches the virus-infected cells and prevents virus growth by stopping viral synthesis and destroys the protein's energy production. The drug also works on virus infection spread into lungs which helps to decrease patient's dependability on oxygen.
  - ❖ The DRDO stated that the 2-deoxy-D-glucose (2-DG) drug can easily be produced in India and made available in plenty to the citizens as it is a generic molecule and analogue of glucose.

## Covid-19 Cases with Fungal Infections

### News Excerpt

Amid the pandemic, there have been some serious concerns about the increase in Covid-19 cases along with a number of fungal infections.

### Types of Fungal Infections

#### Mucormycosis- Black Fungus

- A rare but serious fungal infection, known as mucormycosis and colloquially as “black fungus”, is being detected relatively frequently among Covid-19 patients in some states.
- The disease often manifests in the skin and also affects the lungs and the brain.
- Although rare, it is a serious infection. It is caused by a group of moulds known as mucormycetes present naturally in the environment.
- According to experts from the Covid-19 task force, it mainly affects people who are on medication for health problems that reduces their ability to fight environmental pathogens.

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- Sinuses or lungs of such individuals get affected after they inhale fungal spores from the air. Doctors in some states have noted a rise in cases of mucormycosis among people hospitalized or recovering from Covid 19, with some requiring urgent surgery.
- Usually, mucormycetes does not pose a major threat to those with a healthy immune system.
- The central government has asked states to notify **black fungus or mucormycosis anepidemic.**

### White Fungus

- An infection called white fungus has also been found to affect some people.
- New cases of white fungus have been found in Patna, Bihar, and according to doctors this infection is more dangerous than black fungus.
- This infection can be caused due to low immunity or if people come in contact with things that contain these moulds like water, etc. Thus, sanitation is the key.
- Patients of white fungus show Covid-like symptoms but test negative; the infection can be diagnosed through CT-Scan or X-ray.
- White fungus can affect not just the lungs but also other parts of the body including nails, skin, stomach, kidney, brain, private parts and mouth.

### **Why are COVID patients prone to white fungus?**

- According to the doctors, COVID-19 patients are more prone to white fungus as it affects the lungs and similar symptoms are created like that of coronavirus.
- Those who have weak immunity like diabetes, cancer patients, and those who are taking steroids for a long period of time possess high risk. It is also affecting those coronavirus patients who are on oxygen support.

### Yellow Fungus

- Yellow fungus initially develops by the presence of moulds (a type of fungi) in the environment.
- It may be present with unnecessary fatigue, rashes, burning sensation on skin etc.
- It may not start from the lungs but it invades internal organs of the body and affects the entire functioning.
- It may be dangerous, but the focus should be on its prevention.
- As far as its severity and risk factors are concerned, like any other infection, yellow fungus can be severe if not treated early.
- Its sheer development and spread in the body depends upon the prevailing medical and physical condition of a patient.

### **Potential causes of yellow fungus-**

- Prolonged use of steroid
- Contaminated environment
- Uncontrolled diabetes
- Unhygienic or dirty surroundings
- Unhygienic habits
- Lesser immunity
- Co-morbidities

### Way Forward

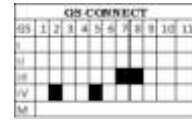
- ✓ According to doctors, such fungal infections prevailed even before this pandemic, just that people were not that aware.
- ✓ Instead of associating every fungal infection with COVID, one needs to look at the diverse range of other reasons responsible for the disease.
- ✓ COVID itself is aggravating the severity of already prevailing physical conditions but other responsible factors should not be ignored.



## SUTRA Model

### News Excerpt

With exponential rise in Covid-19 cases in second wave, questions are being raised by many scientists on whether a government-backed model, called SUTRA, to forecast the rise and ebb of the COVID-19 pandemic, may have had an outsized role in creating the perception that a catastrophic second wave was unlikely in India.



### Second Wave of Covid-19 in India

- According to experts, the sudden increase in cases in India occurred due to two reasons. First, the appearance of new virus variants that are more infectious. Second, the country began to open up in December and after.
- Schools reopened in some parts of the country; crowding in public spaces began to become significant again; political activity began and public transport in high density areas, such as in Mumbai, resumed.
- While all these together led to an increase in the number of cases, this sharp rise would likely not have happened in the absence of the variants.
- It is impossible to predict something that arises due to such random events. However, we could have been warned by the experience of countries like Brazil and the UK where variants changed the course of the disease dramatically.

### Criticism of SUTRA Model

- SUTRA (Susceptible, Undetected, Tested (positive), and Removed Approach) first came into public attention when one of its expert members announced in October 2020 that India was “past its peak”.
- The predictions of the SUTRA model were too variable to guide government policy.
- Critics believe that unlike many epidemiological models that extrapolated cases based on the existing number of cases, the behaviour of the virus and manner of spread, the SUTRA model chose a “data centric approach”. The equation that gave out estimates of what the number of future infections might be and the likelihood of when a peak might occur needed certain ‘constants’. These numbers kept changing and their values relied on the number of infections being reported at various intervals. However, the equation couldn’t tell when a constant changed. A rapid acceleration of cases couldn’t be predicted in advance.
- The SUTRA model was problematic as it relied on too many parameters, and recalibrated those parameters whenever its predictions “broke down”.
- Critics say that one of the main reasons for the model not gauging an impending, exponential rise was that a constant indicating contact between people and populations went wrong.
- Further the model was ‘calibrated’ incorrectly. The model relied on a sero-survey conducted by the ICMR in May that said 0.73% of India’s population may have been infected at that time. This calibration led our model to the conclusion that more than 50% population was immune by January. In addition, there is also the possibility that a good percentage of immune population lost immunity with time.
- The SUTRA model’s omission of the importance of the behaviour of the virus; the fact that some people were bigger transmitters of the virus than others (say a barber or a receptionist more than someone who worked from home); a lack of accounting for social or

**National AI Portal (INDIA-ai)**

- ❖ The ‘National AI Portal’, recently celebrated its first anniversary in a virtual event.
- ❖ The National AI Portal is a joint initiative by Ministry of Electronics and IT (MeitY), National e-Governance Division (NeGD) and NASSCOM and serves as a central hub for AI related news, learning, articles, events and activities etc., in India and beyond.

geographic heterogeneity and not stratifying the population by age as it didn't account for contacts between different age groups also undermined its validity.

### Arguments in Favour of SUTRA Model

- ✓ As far as the model is concerned, it is observing changes in parameter values. It does not care about what is the reason behind the change. And computing new beta value is good enough for the model to predict the new trajectory well.
- ✓ Time-series based predictions are good at detecting changes in data patterns. So they can flag, early on, phase changes.
- ✓ SUTRA-type data-centric models can explain the past very well [and in studying what was the effect of policy actions, leading to a better knowledge base for the future]. They are also very good at predicting future trajectory assuming phase does not change.

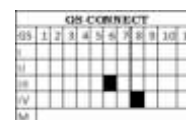
### What needs to be done?

- Ideally, there should be multiple groups using different models, funnelling their predictions into the corridors of government. These can be combined to make ensemble predictions which are better than individual predictions.
- Projections need to be made at the granular level, more at district level than for the whole country. There is a lot of noise in the data and most of it is of low quality. Modellers should find a way to deal with these problems.

## **Chinese Space Station**

### News Excerpt

China recently launched an unmanned module containing what will become living quarters for three crew on a permanent space station that it plans to complete by the end of 2022.



### Highlights

- The module, named "Tianhe", or "Harmony of the Heavens", was launched on the Long March 5B, China's largest carrier rocket from the Wenchang Space Launch Centre on the southern island of Hainan.
- Tianhe is one of three main components of what would be China's first self-developed space station, rivalling the only other station in service - the International Space Station (ISS).
- The ISS is backed by the United States, Russia, Europe, Japan and Canada. China was barred from participating by the United States.
- Tianhe forms the main living quarters for three crew members in the Chinese space station, which will have a life span of at least 10 years.
- The Tianhe launch was the first of 11 missions needed to complete the space station, which will orbit Earth at an altitude of 340 to 450 km (211-280 miles).
- In the later missions, China will launch the two other core modules, four manned spacecraft and four cargo spacecraft.
- Work on the space station programme began a decade ago with the launch of a space lab Tiangong-1 in 2011, and later, Tiangong-2 in 2016.
- Both helped China test the programme's space rendezvous and docking capabilities.
- China has prioritised space exploration in recent years, with the aim of becoming a major space power by 2030. By 2045, it hopes to establish a programme operating thousands of space flights a year and carrying tens of thousands of tonnes of cargo and passengers.

### China-Emerging Space Power

- In three short decades since the founding of the China National Space Administration (CNSA), China has raced to become one of the world's leading space-faring nations.
- China became the first nation to land a lunar probe on the mythical dark side of the moon and the second to dispatch a rover on the surface of Mars.

- While there is no direct threats of increasing Chinese space power, security experts consider space technology to be inherently “dual use,” meaning such tech can be deployed for civilian or military purposes.
- Satellites are a prime example of dual use space tech. The U.S.-developed Global Positioning Satellite (GPS) system guides missiles as well as helps in civilian applications. China’s communication satellites are already advancing beyond U.S. capabilities.
- Last year, China’s Menciuis satellite pioneered a method of transmitting information using quantum entanglement—a technique that proponents describe as “unhackable.” In 2020, China also finished deployment of its home-grown alternative to GPS, called Beidou.
- According to reports, Beidou already provides more coverage than GPS does in the capital cities of 165 countries, jeopardizing the global dominance of GPS and scoring more “soft power” for Beijing.
- To an extent, just the presence of more satellites in orbit is a threat to U.S. interests. The Department of Defense tracks over 27,000 pieces of space debris whizzing across space—each piece is a risk to active satellites. A high-velocity collision could knock vital services offline.
- China’s mishandling of space debris, like its discarded rocket modules, has stoked concern over how the CNSA will safely decommission its new satellites.
- Critics point to a 2007 incident, in particular, in which China tested an Earth-to-orbit anti-satellite missile, hitting and destroying one of its own satellites. As of 2019, the U.S. military continued to track 3,000 pieces of space debris from that incident, each of which poses a risk to the International Space Station (ISS).
- China plans to add some 13,000 low-orbit satellites in coming years, to develop an Internet service akin to SpaceX’s Starlink, which is planning capacity for 30,000 satellites.
- Yet China’s growing presence in orbit might encourage Beijing to adopt more cautious practices, as space junk poses a threat to its own space assets—including the Tiangong space station. If the ISS is decommissioned as planned in 2024, the Tiangong will soon be the only active space station imperilled by orbital debris.

### **Space race**

- ✓ The race to hedge against China’s ambitions has encouraged other nations to strengthen national space programs and prompted international dialogue on how to ensure “sustainable” space exploration.
- ✓ Last year, for instance, the U.K. sponsored a program with the UN “to secure the continued safety and sustainability of space” and agreed to implement sustainable space guidelines devised by the UN Committee on Peaceful Used of Outer Space.
- ✓ China has its own grand ambitions for space. The state-owned China Aerospace Science and Technology Corporation (CASTC) has set a target for China to be a “world-leading” space power by 2045 and to launch an “Earth-moon economic zone” by 2050.
- ✓ In March, the CNSA signed a memorandum of understanding with Russia’s Roscosmos space agency to develop an International Lunar Research Station.
- ✓ In February, the two nations also proposed a treaty against weaponizing space with the UN. But the U.S. and its allies refuse to join, suspecting the legislation is a trap that will protect weapons systems Russia and China have developed already.
- ✓ Deteriorating relations between China and the U.S. have enhanced distrust and made it challenging to develop consensus on rules of the road. That has a negative impact on other stakeholders.

### **Space- the opportunity in India**

- In India, there is an inherent interest in the domain of space, defence, aeronautics and satellites.

- Earlier in 2020, the government announced a policy to boost private participation in space activities, providing an opportunity for private companies in satellites, launches, and space-based services.
- Along with this, the new Indian National Space Promotion and Authorisation Centre (IN-SPACe) was formed to assess the need and demand of private players, including educational and research institutions, and explore ways to accommodate these requirements in consultation with ISRO.
- This opens up new avenues for private players in not just space explorations but in satellites, sub-assemblies, electronic components, materials and other associated domains.
- Space and satellite are the backbone for predictions that help us in sectors like agriculture, weather, communications, military, defence, banking, monitoring, and surveillance and in several other domains.
- With these announcements, India now stands on the cusp of building a space ecosystem with ISRO being the guiding body, large enterprise and conglomerates diversifying into the sector, pulling up the value chain- the SMEs to produce sub-assemblies.
- With startups and technology innovators, India can now evolve as a space startup hub for the world. Industry estimates there are over 40+ startups working in India with funding, teams and structure on space and satellite projects complementing the efforts of the government, ISRO, VSSC and others. This number is likely to increase, and this is where technology will play a big role.
- India has the required provisions, evolving infrastructure, and young talented minds to master this cusp of space technology and evolve into a global leader in the sector.
- India needs to ensure that we enable the emerging companies with accurate know-how, profound knowledge, and expertise experience to close the gap between two worlds with unlocking new prospects with new stellar technologies.

**PEPPER IT WITH**  
Outer Space Treaty, Low Earth Orbit, Mir Space Station, Zhurong Rover

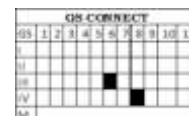
**What needs to be done?**

- ✦ **Establish new partnerships with the industry and entrepreneurs:** It will bring in expertise on bridging the real and virtual worlds, and enabling companies to extend the boundaries of rocketry and satellite innovation and make space more accessible.
- ✦ **Bring in a business platform** that helps them shorten rocketry and satellite development time to achieve first-time-right quality for successful launches. This business platform will enable integrating different departments and information while providing digital capabilities to accelerate design and manufacturing, including virtual validation.
- ✦ Lastly, to win the space race with successful satellite launches, companies must **reduce the gap between the virtual and real world** and bring in a framework to manage complex systems of systems through effective global collaboration with international space organizations, thus achieving innovation in program execution. This can accelerate the product life-cycle from concept to take-off and give a critical first-to-market advantage.

**Tianwen-1 lands on Mars**

**News Excerpt**

China became the second country to land on the surface of the red planet, Mars. The Chinese spacecraft Tianwen-1 landed a rover, Zhurong, on Mars to study the Martian atmosphere and geology. This is a big scientific and technological achievement for China; previously, only the United States has successfully landed on Mars (Technically, the Soviet Union made a landing on Mars in 1971, but its Mars lander transmitted radio signals for a mere 14 seconds before it went silent).



**Highlights**

- China’s Tianwen-1 Mars mission was launched using its heavy-lift carrier rocket, Long March 5, from Wenchang Spacecraft Launch Site in Hainan Province in July 2020.
- The mission included an orbiter, a lander, and a rover and is reported to have undertaken four trajectory correction maneuvers before entering Martian orbit in February 2021.
- China is only the sixth to successfully get a probe to Mars, after the U.S., Soviet Union, the European Space Agency, India, and the United Arab Emirates (UAE). The latest of these missions, the UAE’s Hope Probe made it to the Mars orbit in February, too.
- The Chinese spacecraft landed on a large plain located in the northern hemisphere of Mars, called the Utopia Planitia.
- Chinese media reports say that the mission is to “study Mars’ geological structure, soil characteristics and distribution of surface water ice, surface material composition, surface climate and environment, as well as its physical field and internal structure.”
- The craft has a magnetometer probe to measure the magnetic field on Mars, and a climate station to measure the temperature, pressure, wind speed, and wind direction, which will enable a closer understanding of the Martian surface meteorology.
- There are three scientific payloads that will be useful in analyzing the composition of Mars. These include a multispectral camera that will be used for surveying the elements, minerals, and rock types; a Mars surface composition detector to look for hydrated minerals by vaporizing rocks and analyzing their composition; and ground-penetrating radar that can peer deeper into the surface, 10 to 100 meters down into the ground, in order to survey the soil structure and search for water ice.
- The primary mission is supposed to last around 90 days. The Tianwen-1 mission is an excellent steppingstone for its next Mars mission around 2028, which involves a sample return attempt. China’s ambitious plans also include undertaking a Jupiter probe, with a possible landing on one of its moons, Callisto.

**MASCARA-5b**

- ❖ Researchers at the University of Southern Queensland's Centre for Astrophysics have discovered a new planet. TOI-1431b — or MASCARA-5b — which is about 490 light years away from earth and one of the hottest planets ever recorded, with temperatures high enough to vaporise most metals.
- ❖ Daytime temperatures on the planet can reach 2,700 degrees Celsius, or 3,000K, and its night side temperature of 2,300C is the second hottest ever measured.
- ❖ This planet is a gas giant planet so it doesn't really have a solid surface like the terrestrial planets in the solar system.

**PEPPER IT WITH**

Perseverance Rover, ingenuity (helicopter), Path finder, Mars orbiter Mission

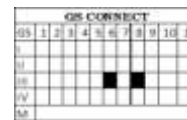
**Conclusion**

China’s Mars mission, as well as its future plans, will drive further competition in the Indo-Pacific and beyond. On the positive side, such competition can lead to greater investment in space science and technology and innovation, which will have additional benefits for all. On the other hand, this will be yet another arena for power politics. It is also likely that China’s achievement will lead to greater collaboration between other major spacefaring nations such as India, the U.S., Australia, and Japan. India is making efforts to step up cooperation with each of its Quad partners bilaterally and these bilateral partnerships have potential to coalesce into a Quad space network. Such political competition will likely have negative effects, especially on governing this global common. Coming at a time when global governance of space is already facing myriad challenges, more political competition is not necessarily good news.

### 3D Distribution of Molecular & Atomic Hydrogen in Galaxies

#### News Excerpt

A scientist has estimated the three-dimensional distribution of molecular and atomic hydrogen in a nearby galaxy which can help lead to clues to the star formation processes and the evolution of the galaxy.



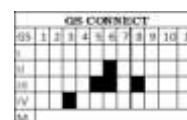
#### Analytica

- Galaxies like the one we reside in, the Milky Way, consist of discs containing stars, molecular and atomic hydrogen, and helium. The molecular hydrogen gas collapses on itself in distinct pockets, forming stars, its temperature was found to be low close to 10 kelvin, or -263 °C and thickness is about 60 to 240 light-years. The atomic hydrogen extends both above and below the discs.
- However, more sensitive observations in the past two decades have surprised astronomers. They have estimated that molecular hydrogen extends farther from the disc in both directions, up to about 3000 light-years. This gaseous component is warmer than the one straddling the disc and has comparatively lesser densities, thus escaping earlier observations. They called it the 'diffuse' component of the molecular disc.
- How much of the total molecular hydrogen is this diffuse component of the disc remains unclear. In a new study, a researcher has carried out mathematical calculations on the computer and used publicly available astronomical data of a nearby galaxy to pin down the ratio of the narrow and diffuse gaseous components.
- The molecular hydrogen gas converts to individual stars under the pull of gravity, thus holding clues to the star formation processes and the evolution of the galaxy.
- If a significant part of the gas extends beyond the thin disc of a few hundred light-years, it may explain why astronomers also observe stars at a few thousand light-years perpendicular to the galactic disc. It is also essential to understand why the gas has two components, he says, and maybe tell-tale signatures of supernovae or exploding stars.
- For the study, researcher focussed on a single galaxy about 20 million light-years away from the Milky Way. The distance is relatively small compared to the size of the universe, more than 10 billion light-years. The galaxy's proximity makes it easier to observe with telescopes, and spectral lines of carbon monoxide (CO) are available for public research.
- The carbon monoxide molecule is known to accurately trace molecular hydrogen, whose spectral lines are more difficult to observe.
- The researcher used the observed spectral lines of the CO molecule to infer the three-dimensional distribution of both the narrow disc component and the diffuse component of molecular hydrogen.
- Estimating how the ratio of the two components varies with the distance away from the centre of the galaxy, he found that the diffuse component makes up about 70 percent of the molecular hydrogen, and this fraction remains roughly constant along the radius of the disc. This is the first time that such a calculation has been done for any galaxy.
- The method, although new, relies on calculations that can be carried out on computers with the help of publicly available data. Attempts are already going on to check whether this method can be employed on other nearby galaxies.

### National Programme on Advanced Chemistry Cell Battery Storage

#### News Excerpt

The Cabinet has approved the proposal of Department of Heavy Industry for implementation of the Production Linked Incentive (PLI) Scheme 'National Programme on Advanced Chemistry Cell (ACC) Battery Storage' for achieving manufacturing capacity of Fifty (50) Giga Watt Hour (GWh) of ACC and 5 GWh of "Niche" ACC with an outlay of Rs.18,100 crore.



### Pre-Connect

- ACCs are the new generation of advanced storage technologies that can store electric energy either as electrochemical or as chemical energy and convert it back to electric energy as and when required.
- The consumer electronics, electric vehicles, advanced electricity grids, solar rooftop etc. which are major battery consuming sectors are expected to achieve robust growth in the coming years.
- It is expected that the dominant battery technologies will control some of the world's largest growth sectors.

### Analytica

- While several companies have already started investing in battery packs, though the capacities of these facilities are too small when compared to global averages, but there still is negligible investment in manufacturing, along with value addition, of ACCs in India. All the demand of the ACCs is currently being met through imports in India.
- The National Programme on Advanced Chemistry Cell (ACC) Battery Storage will reduce import dependence. The scheme will also support the Atmanirbhar Bharat initiative.
- ACC battery Storage manufacturers will be selected through a transparent competitive bidding process. The manufacturing facility would have to be commissioned within a period of two years. The incentive will be disbursed thereafter over a period of five years.
- The incentive amount will increase with increased specific energy density & cycles and increased local value addition.
- Each selected ACC battery Storage manufacturer would have to commit to set-up an ACC manufacturing facility of minimum five (5) GWh capacity and ensure a minimum 60% domestic value addition at the Project level within five years.

### The outcomes/ benefits expected from the scheme are as follows:

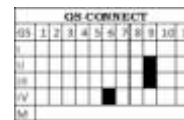
- ✓ Setup a cumulative 50 GWh of ACC manufacturing facilities in India under the Programme.
- ✓ Direct investment of around Rs.45,000crore in ACC Battery storage manufacturing projects.
- ✓ Facilitate demand creation for battery storage in India.
- ✓ Facilitate Make-In-India: Greater emphasis upon domestic value-capture and therefore reduction in import dependence.
- ✓ Net savings of Indian Rs. 2,00,000crore to Rs.2,50,000 crore on account of oil import bill reduction during the period of this Programme due to EV adoption as ACCs manufactured under the Programme is expected to accelerate EV adoption.
- ✓ The manufacturing of ACCs will facilitate demand for EVs, which are proven to be significantly less polluting. As India pursues an ambitious renewable energy agenda, the ACC program will be a key contributing factor to reduce India's Green House Gas (GHG) emissions which will be in line with India's commitment to combat climate change.
- ✓ Import substitution of around Rs.20,000crore every year.
- ✓ Impetus to Research & Development to achieve higher specific energy density and cycles in ACC.
- ✓ Promote newer and niche cell technologies.

**PEPPER IT WITH**  
National Mission on  
Transformative Mobility &  
Battery Storage, FAME,  
Switch Delhi Campaign,

## The Third Arctic Science Ministerial

### News Excerpt

India recently participated in the Third Arctic Science Ministerial (ASM3) - the global platform for discussing research and cooperation in the Arctic region.



### Pre-Connect

- Since 2013, India enjoys '**Observer**' status in the Arctic Council with twelve other countries (Japan, China, France, Germany, UK, Italy, Switzerland, Poland, Spain, Netherlands, Singapore, and South Korea).
- The Arctic Council is a high-level intergovernmental forum to promote cooperation, coordination, and interaction towards sustainable development and environmental protection in the Arctic.
- As part of the Arctic Council, India contributes to the international deliberations to develop effective cooperative partnerships towards a safe, stable, and secure Arctic.
- India's engagement with the Arctic dates back to 1920 with the signing of the Svalbard Treaty in Paris.
- Since July 2008, India has a permanent research station in the Arctic called Himadari.
- It has also deployed a multi-sensor moored observatory called IndARC in the Kongsfjorden since July 2014.
- The research in the Arctic region from India is coordinated, conducted, and promoted by the National Centre for Polar and Ocean Research (NCPOR), Goa, under the Ministry of Earth Sciences, Government of India.
- The first two meetings—ASM1 and ASM2—were held in the USA in 2016 and Germany in 2018, respectively.

Arctic warming and its ice melt are global concerns as they play a pivotal role in regulating climate, sea levels, and maintaining biodiversity. Moreover, there is growing evidence of connection between the Arctic and the Indian Ocean (which modulates the Indian monsoon). Hence, improving the understanding of physical processes and quantifying the impact of Arctic ice melt on the Indian summer monsoon has become very important.

### Highlights

- ASM3, jointly organised by Iceland and Japan, is the first Ministerial meeting being held in Asia.
- The meeting is designed to provide opportunities to various stakeholders, including academia, indigenous communities, governments and policymakers, to enhance collective understanding of the Arctic region, emphasize and engage in constant monitoring, and strengthen observations. The theme for this year is '**Knowledge for a Sustainable Arctic**'.
- India shared its plans to contribute observing systems in the Arctic, both in-situ and by remote sensing.
- The country would deploy open ocean mooring in the Arctic for long-term monitoring of upper ocean variables and marine meteorological parameters.
- The launch of NISER (NASA-ISRO Synthetic Aperture Radar) satellite mission, in collaboration with the USA, is underway.
- NISER aims to conduct global measurements of the cause and consequences of land surface changes using advanced radar imaging. India's contributions to the Sustained Arctic Observational Network (SAON) would also continue.

#### PEPPER IT WITH

Ottawa Declaration, India's Draft Arctic Policy, Doomsday vault, Cryosphere, Permafrost



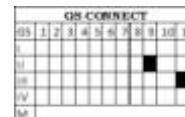


## SECURITY

### Goa Maritime Symposium (GMS) - 2021

#### News Excerpt

Recently, the Indian Navy hosted ‘GMS-21’ under the aegis of Naval War College, Goa as part of its efforts toward fostering friendly relations with its maritime neighbours.



#### Highlights

- The theme for GMS-21 was focused on “**Maritime Security and Emerging Non-Traditional Threats: A Case for Proactive Role for IOR Navies,**” with emphasis on capacity building amongst the Indian Ocean Region Navies to tackle emerging common maritime threats.
- The event for the first time was hosted in virtual mode, with online participation of Naval representatives from 13 Indian Ocean Littoral countries.
- The 13 countries included India, Bangladesh, Comoros, Indonesia, Madagascar, Malaysia, Maldives, Mauritius, Myanmar, Seychelles, Singapore, Sri Lanka and Thailand.

#### Analytica

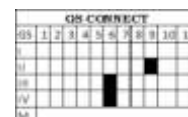
- ✓ With the Indian Ocean becoming the locus of 21st century strategic landscape, the symposium will play a constructive role in bringing together the stakeholders who have a role in evolving strategies, policies and implementation mechanisms on the issues of common interest in maritime domain.
- ✓ In addition to presenting cooperative strategies for enhancing interoperability among partner maritime agencies, the event provided a forum for articulation of views on the crucial maritime issues, followed by theme based discussions.

**PEPPER IT WITH**  
 Indian Ocean Region,  
 Sagarmala, Indo-Pacific,  
 Quad, BIMSTEC

### Iron Dome Air Defence System

#### News Excerpt

Recently, in the conflict between Israel and Palestine, rockets fired from Gaza were being intercepted by the Israeli Iron Dome air defence system.



#### Pre-Connect

- The development of Iron Dome air defence system was prompted after a series of rocket attacks on Israel by Hezbollah and Hamas in the 2000s.
- In the 2006 Lebanon war, around 4,000 rockets were fired on the northern parts of Israel resulting in the death of about 44 Israeli civilians and evacuation of around 250,000 citizens following the development of the system was taken up.

#### Highlights

- Iron Dome is manufactured by Rafael Advanced Defence Systems Limited and has been in service with Israeli Air Force since 2011.
- Iron Dome is a multi-mission system capable of intercepting rockets, artillery, mortars and Precision Guided Munitions like very short range air defence systems as well as aircraft, helicopters and Unmanned Aerial Vehicles (UAV) over short ranges of up to 70 km.
- It is an all-weather system and can engage multiple targets simultaneously and be deployed over land and sea.
- One of the system’s important advantages is its ability to identify the anticipated point of impact of the threatening rocket, to calculate whether it will fall in a built-up area or not, and to decide on this basis whether or not to engage it.

- This prevents unnecessary interception of rockets that will fall in open areas and thus not cause damage.
- The I-DOME is the mobile variant with all components on a single truck and C-DOME is the naval version for deployment on ships.

**How does it work?**

- ✓ An Iron Dome battery consists of a battle management control unit, a detection and tracking radar and a firing unit of three vertical launchers, with 20 interceptor missiles each.
- ✓ The interceptor missile uses a proximity fuse to detonate the target warhead in the air.
- ✓ The Iron Dome is deployed in a layered defence along with David’s Slingshot and Arrow missile defence system which are designed for medium- and long-range threats.

**Limitations**

- The system has a ‘saturation point’. It is capable of engaging a certain number of targets at the same time, and no more. Additional rockets fired in a crowded salvo could succeed in breaching defences and cause damage.
- The system’s inability to cope with very short range threats as estimates put the Iron Dome’s minimum interception range at 5-7 kilometres.
- The cost of interception is high.

**PEPPER IT WITH**  
S-400 air defence system, Terminal High Altitude Area Defense (THAAD)

**Python-5 Air to Air Missile**

**News Excerpt**

Recently, India’s Indigenous Light Combat Aircraft Tejas has added capability of firing Israeli-origin Python-5 air-to-air missile (AAM) after successful tests.

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**Pre-Connect**

- The same sets of tests were also aimed to validate the enhanced capability of the already integrated Israeli-origin Derby Beyond Visual Range (BVR) AAM on Tejas.
- The Derby missile can engage targets at a range of 50km.
- The test was conducted by the Defence Research and Development Organisation (DRDO).

**Highlights**

- Python-5 is a fifth generation air-to-air missile (AAM) manufactured by Rafael Advanced Defense Systems. It is the newest member in the range of Python AAMs.
- The missile can be launched from very short to beyond-visual ranges with greater kill probability, excellent resistance to countermeasures, irrespective of evasive target manoeuvres or deployment of countermeasures.
- Python-5 is a dual use missile suitable for air-to-air and surface-to-air missions.
- Python-5 is also equipped with lock-on-before launch (LOBL) and lock-on-after launch (LOAL) capabilities.
- Python-5 is powered by a solid propellant rocket engine. The propulsion system provides a speed of Mach 4 and an operational range of more than 20km.

**Light Combat Aircraft Tejas**

Tejas is an Indian single-engine, multirole light fighter designed by the Aeronautical Development Agency (ADA) in collaboration with Aircraft Research and Design Centre (ARDC) of Hindustan Aeronautics Limited (HAL) for the Indian Air Force and Indian Navy. The aircraft can be armed with air-to-air, air-to-ground and anti-ship missiles, precision-guided munitions, rockets and bombs.

**Analytica**

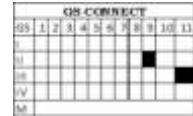
- ✓ Astra is India’s first beyond-visual-range (BVR) air-to-air missile indigenously designed and developed by DRDO.

- ✓ A beyond-visual-range missile (BVR) is an air-to-air missile (BVRAAM) that is capable of engaging at ranges of 20 nmi (37 km) or beyond.
- ✓ This range has been achieved using dual pulse rocket motors or booster rocket motor and ramjet sustainer motor.

## **P-8I patrol aircraft**

### **News Excerpt**

The U.S. State Department has approved the sale of six P-8I patrol aircraft and related equipment to India.



### **Pre-Connect**

- The Defence Acquisition Council has approved the procurement of the long-range maritime surveillance aircraft manufactured by Boeing.
- Since India has signed the Communications Compatibility and Security Agreement (COMCASA) foundational agreement with the U.S., the six aircraft will come fitted with encrypted systems.

### **Highlights**

- P-8I is a long-range, multi-mission maritime patrol aircraft offered by Boeing for the Indian Navy. P-8I will replace the ageing fleet of the Indian Navy's Tupolev Tu-142 aircraft.
- It was designed to protect the vast coastline and territorial waters of India. It can conduct anti-submarine warfare (ASW), anti-surface warfare (AsuW), intelligence, maritime patrol, and surveillance and reconnaissance missions.
- The P-8I is based on the Boeing 737 commercial aircraft and India was its first international customer.

**PEPPER IT WITH**  
 BECA, GSOMIA, LEMOA,  
 CISMOA, and Defence  
 Acquisition Council

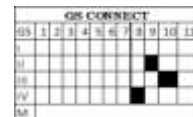
### **Analytica**

India's 7500-km coastline and its numerous islands are vulnerable to attacks from patrolling enemy submarines and vessels. The P-8I aircraft were chosen for their endurance and state of the art Anti-submarine warfare (ASW) capability.

## **Operation Samudra Setu II**

### **News Excerpt**

Indian Navy has launched Operation Samudra Setu II for shipment of liquid medical oxygen-filled cryogenic containers and associated medical equipment from various countries to India.



### **Pre-Connect**

- Operation Samudra Setu was launched last year by the Navy and around 4000 Indian citizens stranded in neighbouring countries, amidst COVID 19 outbreak, were successfully repatriated back to India.
- It was launched along with 'Vande Bharat Mission'.
  - The Vande Bharat Mission started to evacuate Indians stranded abroad due to coronavirus-induced travel restrictions.
  - It was one of the world's largest expatriation exercises to bring back stranded Indians from foreign destinations.
- Indian Naval Ships Jalashwa (Landing Platform Dock), and Airavat, Shardul and Magar (Landing Ship Tanks) participated in this operation.
- The Navy has previously undertaken similar evacuation operations as part of Operation Sukoon in 2006 (Beirut) and Operation Rahat in 2015 (Yemen).

**PEPPER IT WITH**  
 Operation Nistar (2018),  
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 Operation Sukoon (2006),  
 Operation Insaniyat (2017)

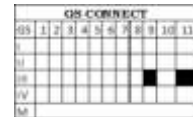
### Highlights

- The operation is intended to augment India’s much needed medical supplies by transporting Liquid Medical Oxygen (LMO) and other associated medical equipment from friendly foreign countries, both in the Persian Gulf and Southeast Asia.
- It has deployed nine warships as part of ‘Operation SamudraSetu II’, to supplement the oxygen requirement in the country.
- Indian Naval ships viz. Kolkata, Kochi, Talwar, Tabar, Trikand, Jalashwa, and Airavat have been deployed.

### Offshore Patrol Vessel (OPV) ‘Sajag’

#### News Excerpt

National Security Advisor (NSA) commissioned the Indian Coast Guard (ICG) Offshore Patrol Vessel (OPV) Sajag recently.



#### Pre-Connect

- The Indian Coast Guard was created through an Act of Parliament in 1978 and has today emerged as the fourth largest in the world, with almost 160 ships and 62 aircraft.
- The concept of forming ICG came into being post 1971 war, when it was assessed that maritime borders are equally vital as land borders.
- The blueprint for a multi-dimension Coast Guard was conceived by the visionary **Rustamji Committee**.

### Highlights

- Sajag is third of five OPVs indigenously designed and built by the Goa Shipyard Limited in line with 'Make in India' vision.
- It is fitted with advanced technology, navigation and communication equipment, sensors, and machinery.
- Sajag will strengthen its concurrent multiple operations' capability towards ensuring safe, secure and clean seas as also responding promptly to maritime emergencies in neighbourhood.
- The ship is designed to carry one twin-engine helicopter and four high-speed boats including two inflatable boats for **boarding operation, Search and Rescue, Law Enforcement, and Maritime Patrol**.
- The ship is **also capable of carrying pollution response equipment to contain oil spills** at sea.

### About Coast Guard

- ✓ The Indian Coast Guard is a multi-mission organization, conducting round-the-year real-life operations at sea. Despite being relatively small, it has a wide range of task capabilities for both surface and air operations.
- ✓ The organization is headed by the Director General Indian Coast Guard (DGICG) exercising his overall command and superintendence from the Coast Guard Headquarters (CGHQ) located at New Delhi.
- ✓ For effective command and control, the Maritime Zones of India are divided into five Coast Guard Regions, namely, North-West, West, East, North-East and Andaman & Nicobar, with the respective Regional Headquarters located at Gandhinagar, Mumbai, Chennai, Kolkata and Port Blair.
- ✓ The service has recently undertaken various pollution response, firefighting and interdiction operations beyond IoR, when called upon by littoral countries.

**PEPPER IT WITH**  
Project 15B, Samudra Prahari, Vajra, Operation Olivia



## Maharana Pratap Jayanti

### News Excerpt

The Prime Minister has paid tribute to Maharana Pratap on his Jayanti.

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### Highlights

- Maharana Pratap was born on May 9, 1540, in Kumbhalgarh Fort to Jaiwanta Bai and Udai Singh II. His father, Udai Singh II, was the king of Mewar and his capital was Chittor.
- Maharana Pratap hailed from the Sisodiya clan of Rajputs.
- He was titled as "Mewari Rana" and was notable for his military resistance against the expansionism of the Mughal Empire and was known for his participation in the **Battle of Haldighati and Battle of Dewair**.
- In January 1597, he was seriously injured in a hunting accident. He passed away, aged 56, on January 29th 1597. His eldest son, Amar Singh I, succeeded him to the throne of Mewar.

### Battle of Haldighati

- The Battle of Haldighati was fought on 18 June 1576 between Pratap Singh and Akbar's forces led by Man Singh I of Amer.
- The site of the battle was a narrow mountain pass at Haldighati near Gogunda, modern day Rajsamand in Rajasthan.
- Maharana Pratap was badly wounded but escaped to the nearby hills. Though Mughals were able to claim several parts of Mewar, including Gogunda and the nearby areas except some regions of Aravallis, but they were unable to oust Maharana Pratap who continued to harass the Mughals through guerrilla tactics.

### Resurgence

- ✓ In the wake of Mirza Hakim's incursion into Punjab and rebellions in Bihar and Bengal, Akbar diverted his attention to deal with these problems. It resulted into slackening of Mughal pressure on Mewar.
- ✓ In 1582, the Mughal post at Dewair was attacked and occupied by Maharana Pratap.
- ✓ Akbar moved to Lahore in 1585 and stayed there to keep an eye on the situation in the north-west for next twelve years. During this period no Mughal expedition was sent to Mewar.
- ✓ Pratap took advantage of this situation and regained control over western Mewar, including Gogunda, Kumbhalgarh and Udaipur. He built a new capital at Chavand, near Dungarpur.

## Gopal Krishna Gokhale Jayanti

### News Excerpt

The Prime Minister has paid tribute to great freedom fighter Gopal Krishna Gokhale on his Jayanti.

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### Highlights

- Born on May 9, 1866, in Ratnagiri district of Maharashtra (then Bombay Presidency), Gopal Krishna Gokhale was one of the founding leaders of the Indian national movement.
- A protégé of Ranade and influenced by the British philosopher-parliamentarian Edmund Burke, Gokhale worked towards realising constitutional ideals in India for three decades and abjured the use of reactionary or revolutionary ways and made outstanding contributions towards social empowerment.
- Gokhale was from one of the first generations of Indians who got a college education. At the age of 18, he graduated in Arts from Elphinstone College. He, in those times, represented the category of highly-educated Indians.

- Before joining politics, Gokhale worked as a professor. He used to teach history and political economy at the Fergusson College in Pune.
- Gokhale, a respected 'moderate' Congress leader, was a mentor to both Mahatma Gandhi and Mohammed Ali Jinnah.
  - Gandhi wrote a book in Gujarati dedicated to the leader titled 'Dharmatma Gokhale'.
- Gokhale founded the Servants of India Society in Maharashtra's Pune on June 12, 1905.
  - The Servants of India Society launched campaigns for the promotion of education, health care and sanitation. It also made efforts to eradicate social evils such as untouchability and oppression of women. It is noteworthy that **Gokhale was one of the first big political leaders who raised the demand for free primary public education.**
- He is also associated with a Gokhale Institute of Politics and Economics, Pune. The institute was founded by Gokhale's Servants of India Society in 1930.
- He started working with Ranade in the Poona Sarvajanic Sabha of which he later became the Secretary. Gokhale also worked with Ranade in a quarterly Journal, called "Sarvajanic".

### Positions in colonial legislatures

- Gokhale is best remembered for his extensive work in colonial legislatures. Between 1899 and 1902, he was a member of the Bombay Legislative Council and later at the Imperial Legislative Council from 1902 till his death in 1915.
- At Bombay, Gokhale opposed the British government's onerous land revenue policies, advocated free and compulsory primary education, and asked for the creation of equal opportunities to fight against untouchability.
- At the Imperial legislature, Gokhale played a key role in framing the **Morley-Minto reforms of 1909** and advocated for the expansion of legislative councils at both the Centre and the provinces.

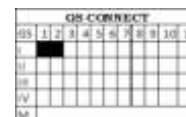
### Work in the Indian National Congress

- ✓ Under the mentorship of Ranade, Gopal Krishna Gokhale became a member of Indian National Congress in 1889, emerging as one of the main leaders of its 'moderate' wing.
- ✓ Gokhale became Congress president at its Banaras session in 1905.
- ✓ This was also the time when bitter differences had arisen between his group of 'Moderates' and the 'Extremists' led by LalaLajpatRai and BalGangadharTilak among others. Matters came to a head when the two factions split at the Surat session of 1907.
- ✓ Despite ideological differences, in 1907, he fervently campaigned for the release of LalaLajpatRai, who was imprisoned that year by the British at Mandalay in present-day Myanmar.

## Basava Jayanthi

### News Excerpt

The Prime Minister of India paid tribute to Jagadguru Basaveshwara on Basava Jayanthi. In Nov 2015, The Prime Minister of India unveiled a Basaveshwara Statue at Lambeth in London.



### Highlights

- Basavanna was born around 800 years ago in 1131 A.D in a village called Bagewadi in Karnataka.
- He was a 12th century philosopher, social reformer and preacher whose teachings are cherished not only by Karnataka but the whole country.
- He is also known as Bhaktibhandari (literally, the treasurer of devotion), Basavanna (elder brother Basava) or Basaveswara (Lord Basava).

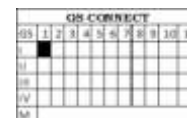


- Basavanna is a seminal figure in the Bhakti movement, who challenged the dominance of Brahminical Hinduism, and especially institutions like the caste system.
- The twelfth century witnessed the emergence of a new movement in Karnataka, led by a Brahmana named Basavanna who was initially a Jain and a minister in the court of a Chalukya king.
  - His followers were known as Virashaivas (heroes of Shiva) or Lingayats (wearers of the linga).
  - They worship Shiva in his manifestation as a linga, and men usually wear a small linga in a silver case on a loop strung over the left shoulder.
- Basavanna spread social awareness through his poetry, popularly known as Vachanas.
- Several important lingayat works are credited to Basavanna, including Vachana such as the Shat-sthala-vachana, Kala-jnana-vachana, Mantra-gopya, Ghatachakra-vachana and Raja-yoga-vachana.
- The Sharana movement he presided over attracted people from all castes, and like most strands of the Bhakti movement, produced a corpus of literature, the vachanas that unveiled the spiritual universe of the Veerashaiva saints.
- Basava believed that man becomes great not by his birth but by his conduct in the society.
- Basava taught the dignity of manual labour by insisting on work as worship.
- He set up the AnubhavaMandapa, where the Sharanas, drawn from different castes and communities, gathered and engaged in learning and discussions.

## World's Oldest Cave Art

### News Excerpt

Recently, Researchers have reported that Pleistocene-era rock paintings dating back to 45,000-20,000 years ago in cave sites in southern Sulawesi, on the Indonesian island of Sulawesi, are weathering at an alarming rate.



### Highlights

- Archaeologists have discovered the world's oldest known cave art which is a life-sized picture of a wild pig that was painted at least 45,500 years ago in Indonesia.
- The Sulawesi warty pig painting we found in the limestone cave of Leang Tedongnge is now the earliest known representational work of art in the world, as far as we are aware.
- The previously oldest dated rock art 'scene' at least 43,900 years old, was a depiction of hybrid human-animal beings hunting Sulawesi warty pigs and dwarf bovids.
- The cave art of Sulawesi is much older than the prehistoric cave art of Europe.

### Significance of the painting

- The archaeologists' note that the dated painting of the Sulawesi warty pig seems to be the world's oldest surviving representational image of an animal.
- The painting was made using red ochre pigment and depicts a pig with a short crest of upright hairs and a pair of horn-like facial warts in front of the eyes.
- These pigs have been hunted by humans for tens of thousands of years and are the most commonly depicted animal in the ice age rock art of the island. It suggests that they have long been used as food and form a "focus of creative thinking and artistic expression" for people of that time.
- With increased rapid environmental degradation, the researchers have recommended regular physical and chemical monitoring of the sites, akin to the preservation efforts at the French and Spanish prehistoric cave art sites such as Lascaux and Altamira.

**PEPPER IT WITH**  
Ajanta, Ellora and Elephanta  
Caves, Bhimbetka caves

### How did the archaeologists date it?

- ✓ The painting was first discovered in 2017 as part of surveys the team was carrying out with the Indonesian authorities.
- ✓ For this painting archaeologists used a method called **U-series isotope analysis**, which uses calcium carbonate deposits that form naturally on the cave wall surface to determine its age.
- ✓ They used a calcium carbonate deposit, also referred as “cave popcorn” that had formed on the rear foot of one of the pig figures.
- ✓ They were able to figure out a minimum age for the painting at around 45,500 years, which means the painting was made before this.

### **Sulawesi: A long history of human occupation**

- Sulawesi is the largest island in Wallacea, a biogeographically distinct zone of oceanic islands situated between continental Asia and Australia.
- The Sulawesi Island contains some of the oldest directly dated rock art in the world and also some of the oldest evidence for the presence of hominins beyond the southeastern limits of the Ice Age Asian continent.
- Hominins include modern humans, extinct human species and our immediate ancestors.
- Homo sapiens are the first modern humans who evolved from their hominid predecessors between 200,000-300,000 years ago. It is estimated that these modern humans started migrating outside of Africa some 70,000-100,000 years ago.
- Even so, it is not yet clear as to when modern humans first colonised Sulawesi.

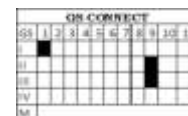
## **6 UNESCO heritage sites added in tentative list: India**

### **News Excerpt**

Recently, Six Indian places have been added to India’s tentative list of UNESCO world heritage sites.

### **Highlights**

- The submissions were made by Archaeological Survey of India, which is responsible for the conservation and preservation of Indian monuments.
- The six sites are namely Satpura Tiger Reserve, Iconic riverfront of the historic city of Varanasi, Megalithic site of Hire Benkal, Maratha Military Architecture in Maharashtra, Bhedaghat-Lametaghat in Narmada Valley- Jabalpur, and temples of Kanchipuram.
- As per Operational Guidelines, 2019, it is mandatory to put any monument/site on the Tentative List (TL) before it is considered for the final nomination dossier.
- India has 48 sites in the TL as of now.
- UNESCO has already added 30 of India's cultural sites, 7 natural, and 1 mixed site.
  - The Walled City of Jaipur, known for its iconic architectural legacy and vibrant culture, on July 6, 2019 made its entry into the UNESCO World Heritage Site list.



### **Satpura Tiger Reserve (Madhya Pradesh):**

- Located in Madhya Pradesh, the Satpura National Park is home to 26 species of the Himalayan region including reptiles, and 42 species of Nilgiri areas.
- It is the largest tiger-occupied forest and also has one of the largest tiger populations. It has more than 50 rock shelters with paintings that are 1500 to 10,000 years old.

### **Ghats of Varanasi (Uttar Pradesh):**

- The Ganges riverfront of Varanasi, Uttar Pradesh, has been vying for the UNESCO tag for several years now.
- The Ganga River with its riverfront Ghats also fulfill the criteria of Cultural Landscapes as designated in Article 1 of the Convention and specifically that of a cultural landscape.
- It retains an active social role in contemporary society closely associated with the traditional way of life, and in which the evolutionary process is still in progress.

### **Megalithic site of Hire Benkal (Karnataka):**

- The 2,800-years-old megalithic site of Hire Benkal in Karnataka is one of the largest prehistoric megalithic settlements where some funerary monuments are still intact.
- The granite structures are burial monuments that may also have served many ritual purposes. Due to the extremely valuable collection of Neolithic monuments, the site was proposed for recognition.

### **Maratha Military Architecture in Maharashtra:**

- There are 12 forts in Maharashtra dating back to the era of the 17th-century Maratha king Chhatrapati Shivaji.
- They are namely Shivneri (the birthplace of Shivaji); Raigad (the capital fort rebuilt for the coronation of the Maratha king), Torna (the first fort of the Maratha empire), Rajgad, Salher-Mulher, Panhala, Pratapgad, Lohagad, Sindhudurg, Padmadurga (Kasa), Vijaydurg and Kolaba.
- This highlights how the formation of Military Landscape in the form of hill and sea forts as a response to hilly terrain in the area is of outstanding universal value.

### **Bhedaghat-Lametghat in Narmada Valley- Jabalpur (Madhya Pradesh):**

- Bhedaghat, often referred to as the Grand Canyon of India, is a town in the Jabalpur district, around 25 kms from Jabalpur.
- It is **known for its marble rocks** and their various morphological forms on either side of the Narmada River which flows through the gorge.
- It has also been observed that the magical marble mountains assume different colours and even shapes of animals and other living forms as one move through them.
- Several dinosaur fossils have been found in the Narmada valley, particularly in Bhedaghat-Lametghat area of Jabalpur. In 1828, the first Dinosaur fossil was collected from Lameta Bed by William Sleeman.
- River Narmada narrows down on its way through marble rocks and plunges in a waterfall giving out the appearance of a smoke cascade.

### **Temples of Kanchipuram (Tamil Nadu):**

- Synonymous with spirituality, serenity, and silk, the temple town of Kanchipuram in Tamil Nadu, is dotted with ancient temples that are architectural marvels and a visual treat.
- Situated on the banks of River Vegavathi, this historical city once had 1,000 temples, of which only 126 (108 Shaiva and 18 Vaishnava) now remain.
- Its rich legacy has been the **endowment of the Pallava dynasty**, which made the region its capital between the 6th and 7th centuries and lavished upon its architectural gems that are a fine example of Dravidian styles.

## **Buddha Purnima**

### **News Excerpt**

The Prime Minister of India delivered a keynote address on the occasion of Vesak Global Celebrations on Buddha Purnima through video conference.

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### **Highlights**

- Buddha Purnima is an auspicious day that marks the birth anniversary of Gautam Buddha, the founder of Buddhism. Buddha Purnima falls on a full moon night, usually between April and May.
  - Also known as Vesak or Buddha Day and Buddha Jayanti, is the most important festival for the followers of Buddhism across the world.
- It was also on the Day of Vesak that the Buddha attained enlightenment, and it was on the Day of Vesak that the Buddha in his eightieth year passed away.

- Lord Buddha was born as Prince Siddhartha Gautama on the PurnimaTithi (full moon day) in 563 BC in Lumbini (modern day Nepal).
  - The Buddha belonged to a small gana known as the Sakyagana, and was a kshatriya.
  - He attained enlightenment under a peepal tree at Bodh Gaya, Bihar.
- Gautama Buddha preached Dharma (duty), non-violence, harmony and kindness. He left his worldly possessions and princedom at the age of 30 to lead a life searching for the truth, seeking penance in the hopes of liberating himself from suffering (duhkha).

### **Buddha Purnima significance**

- ✓ Many devotees visit Mahabodhi Temple, a UNESCO World Heritage Site, located in Bodh Gaya, Bihar, on the occasion of Buddha Purnima. Bodhi Temple is the location where Lord Buddha is said to have attained enlightenment.
- ✓ Buddha Purnima celebration is all about praying with the purest of feelings, and adopting what Buddhism stands for – peace, non-violence and harmony.



The advertisement features a world map background. At the top left is the KSG logo. The main title is "Geography Optional 'Maxima'" in bold black and red text. Below the title, the word "By" is written in a large, elegant script. Two portraits of men are shown: Chandramouli Sir on the left and B M Panda Sir on the right. Below their names, it says "Online Journey" in a red script font. Further down, it states "Starting: 18<sup>th</sup> July 2021" and "Limited Entries for better Targeting!!". At the bottom, there are contact details: "Call For More Info: 981 159 8995 | 901 381 1020" and "Visit Our Website: www.ksgindia.com".

## Miscellaneous

### **Covid-19 self-testing kit CoviSelf**

Recently, The Indian Council of Medical Research (ICMR) approved the self-use Rapid Antigen Test for Covid-19 developed by Mylab Discovery Solutions. The test is developed in India and is named as CoviSelf.

- The test is designed to be done using a nasal swab (not the deep nasopharyngeal swab) to reduce the discomfort.
- CoviSelf will provide results in 15 min.

Self-testing should slow down the spread of COVID-19 significantly.

### **Sunderlal Bahuguna**

Sunderlal Bahuguna, the Gandhian who was the driving force behind the legendary Chipko movement against deforestation that marked a key milestone in Indian environmentalism, died with Covid-19 aged 94.

- Bahuguna's life was dedicated to social causes, activism, and writing.
- He participated in the Independence movement and was subsequently a part of Vinoba Bhave's Sarvodaya movement.
- He, along with local women, founded the Chipko movement in the Seventies to prevent the felling of trees in the ecologically sensitive zones.
- The movement's success led to enactment of a law to ban the felling of trees in ecologically sensitive forest lands.
- He also coined the Chipko slogan: 'ecology is permanent economy'.
- He led the charge against the construction of big dams in the Himalayas in the 1980s. He was fervently opposed to the construction of the Tehri dam.
- Despite the changing times, the symbolism of Bahuguna's movement lives on. In 2017, activists in Mumbai hugged trees to protect more than 3,000 of them from being axed to make way for a metro railway facility.
- Bahuguna was a charismatic ascetic, a spartan man of Gandhian principles. He lived in a small ashram, denounced violence and was essentially non-political. He believed in self-reliance and not in "so much foreign trade". He despised materialism.
- Bahuguna was awarded the Padma Vibhushan in 2009. In 1981, he had refused to accept the Padma Shri over the government's refusal to cancel the Tehri dam project despite his protests.

Sunderlal Bahuguna will be remembered as a man of the earth, who strove all his life to save it.

### **BioHub facility**

The World Health Organization (WHO) and Switzerland have launched a BioHub facility that will allow rapid sharing of pathogens between laboratories and partners to facilitate a better analysis and preparedness against them.

- Pathogens are now shared bilaterally between countries: A process that can be sluggish and deny the benefits to some.

#### **Significance**

- The facility will help in safe reception, sequencing, storage and preparation of biological materials for distribution to other laboratories, so as to facilitate global preparedness against these pathogens.
- It will enable member states to share biological materials with and via the BioHub under pre-agreed conditions, including biosafety, biosecurity, and other applicable regulations.

- The move is significant in the view of the novel coronavirus disease (COVID-19) pandemic and the need to underline the importance of sharing pathogen information to assess risks and launch countermeasures.
- The move will help contribute to the establishment of an international exchange system for novel coronavirus SARS-CoV-2 and other emerging pathogens.
- This will ensure the timely sharing of epidemiological and clinical data as well as biological materials.

### **Begum Sultan Jahan**

Born in 1858, Begum Sultan Jahan ascended the throne in 1901. While she was the fourth female ruler of Bhopal, she is credited with many firsts.

These were Kudsia Begum, Sikander Begum, Shah Jahan Begum and Sultan Jahan Begum.

#### **Begum Sultan Jahan, the ruler of Bhopal:**

- She was the last Begum of Bhopal, ruled from 1909 to 1926 after which she stepped down and was succeeded by her son.
- She set up the municipality system and even introduced municipal elections.
- She took steps for improving public health, sanitation, and water supply in the walled city and implemented widespread vaccination drives for its residents.
- Her progressive policies for women, at a time when they were shackled by the forces of patriarchy, have made her a feminist icon even today.
- She laid the foundation stone for a meeting hall in Lahore in 1913.
- She organised an exhibition called 'Numaish Masunuaat e Hind' in Bhopal, to encourage women and promote handicrafts.

#### **Begum Sultan Jahan as an educationist:**

- She authored over 40 books, translated a number of English books into Urdu.
- She Authored a book, Dars-e-Hayat, about the education and parenting of young girls.
- She even revamped the syllabus and added subjects such as English, Urdu, Arithmetic, Home Science and crafts.
- She also started a nursing school called Lady Minto Nursing School.
- She was the first female Chancellor of Aligarh Muslim University.
- She established the Sultan Jahan Endowment Trust with a corpus of Rs three lakhs for helping needy students.

### **Veer Savarkar Jayanti**

Pioneering Hindutva ideologue Vinayak Damodar Savarkar was born in 1883 in Maharashtra.

#### **About Savarkar:**

- He founded a secret society called Abhinav Bharat Society.
- In 1906, Savarkar left for the UK, involved himself with organizations such as India House and the Free India Society.
- In his book 'The History of the War of Indian Independence', he analysed the circumstances of 1857 uprising.
- In 1911, Savarkar was sentenced to 50 years in the cellular jail of Andamans, also known as Kala Pani for revolting against the Morley-Minto reforms (Indian Councils Act 1909). After several mercy petitions for not participating in politics, he was released in 1924.
- He served as president of the Hindu Mahasabha from 1937 to 1943.
- He worked on the abolishment of untouchability and caste-based discrimination in Ratnagiri.

- In 1964, he felt that his goal of independence India is achieved and he declared his wish to attain Samadhi. He started a hunger strike on February 1, 1966, and passed away on February 26, 1966.
- Savarkar's ideas of modernity, social and religious reforms, cultivation of scientific temper and embracing technological tools continue to be relevant for building a new India in the post COVID-19 era.

### Eruption of Mount Nyiragongo

Nyiragongo is one of the world's most beautiful and active volcanoes. It is a large strato-volcano near Lake Kivu at the eastern border of DR Congo with Rwanda in the Virunga National Park.

#### About Nyiragongo:

- It has a 1.2 km diameter summit caldera containing the world's most active and largest lava lake.
- The last time Nyiragongo erupted was January 17, 2002, killing more than a hundred people and covering almost all of the eastern part of Goma with lava, including half of the airport's landing strip.
- Goma is a regional hub for many humanitarian agencies in the region, as well as the UN peacekeeping mission. While Goma is home to many UN peacekeepers and aid workers, much of surrounding eastern Congo is under threat from myriad armed groups vying for control of the region's mineral resources.
- As the active volcano in Congo, Mount Nyiragongo, erupted again, the Indian Army contingent under the United Nations peace keeping mission (MONUSCO) assisted in protecting civilians and U.N. officials as well as assets during the evacuation.
- India is one of the largest troops contributing nations to MONUSCO, which is headquartered in the Eastern town of Goma and bordering Rwanda.



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### Concept Clearing Assignment

1. What is the impact of Covid-19 Pandemic on core sector industries in India? Discuss the steps taken by the Government for the growth of the core sector industries in India.
2. What are parliamentary standing committees? Critically analyse their role in the functioning of the Indian Parliamentary System.
3. Discuss the opportunities available for the India in the domain of the space. What steps are taken by the Indian Government to make India a formidable power in the space sector?
4. Comment on the impact of Covid-19 Pandemic on the unorganised sector in India. What steps are being taken by the government for ensuring sustainable livelihood of the unorganised sector workforce?
5. Discuss the contribution of the Rabindra Nath Tagore in the Indian Freedom Struggle. Also, comment on the relevance of the Tagore's philosophy in the contemporary era.
6. Discuss the concept of vaccine tourism in brief. Also, comment on how India can benefit from it in such crucial times of pandemic.
7. The Code on Social Security, 2020 envisioned to provide a more comprehensive social security package for the unorganized sector workers. Explain? What are the major hurdles faced in the implementation of such schemes? Suggest Way Forward
8. Explain the role of Unique Disability Identification Card (UDID) as a tool for inclusion of beneficiaries in the society? And also analyse the Rights of Persons with Disabilities Act in delivering effective mechanism for empowerment of Disables?
9. It is often cited that climate change will extend well beyond an increase in temperature, affecting ecosystems and communities. In this context, discuss the role and importance of cryosphere?
10. Do you agree that Palestine - Israel tangle is the flashpoint in world politics? In your opinion what are the fuelling factors due to which consensus has not been reached to the final Solution. Substantiate your views.
11. Discuss the active role of Judiciary and its involvement in Election Reforms. Explain the key verdict delivered by apex court in this regard?
12. Explain the contribution of veer Savarkar in social upliftment of Indian society during colonial era?
13. Do you agree that economic growth comes with a hidden environmental cost? In context of development of Great Nicobar Island, How India can strike a balance between development and environment protection along with rights of indigenous inhabitants?
14. Recently, Cyclone Tauktae has brought many parts of India to a standstill. What are the conditions which facilitate generation of Tropical Cyclones in Arabian Sea? Give a comparative analysis of impact of Tropical Cyclones originated in Arabian Sea and Bay of Bengal.
15. Explain the salient features of National Policy on Bio-fuels, 2018. Also highlight the potential benefits and prospective challenges faced by the biofuel sector in India.



**P.T. Oriented Questions**

1. Consider the following statements regarding the MCA21 Version 3.0:
1. It is an e-Governance initiative launched by NITI Aayog.
  2. It aims to create new functionalities like e-adjudication and advance helpdesk.
- 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

2. With reference to the falling of Bond Yield, consider the following statements:
1. The fall is because Reserve bank of India purchase the government securities under the government securities acquisition programme (G-SAP).
  2. Bond Yield could also fall due to Sharpe rising in US Treasury yields.
  3. When bond yield goes up then corporates will have to pay a higher interest cost debt.
- Which of the statements given above are correct?
- (a) 1 and 2 only
  - (b) 2 and 3 only
  - (c) 1 and 3 only
  - (d) 1, 2 and 3

3. Which of the following can be cited as possible reasons for sharp rise of prices of edible oil?
1. India meets 56% of its domestic demand of edible oil.
  2. Making biofuel from vegetable oil.
  3. Impact La Nina on palm and soya producing areas.
- Select the correct answer using the code given below:
- (a) 1 and 2 only
  - (b) 2 and 3 only
  - (c) 1 and 3 only
  - (d) 1, 2 and 3

4. Recently, The Cryptocurrency Market Crashes. In this context, consider the following statements:
1. The crash is because China has barred financial institutions and payment companies from providing any services related to cryptocurrency transactions.
  2. The transaction of cryptocurrency is a highly intensive process required high electricity consumption.
- 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

5. On which of the following fertilizers the Government has announced a 137% increase in the subsidy?
1. Ammonium Sulphate nitrate
  2. Di- ammonium phosphate (DAP)
  3. Ammonium Chloride
- Select the correct answer using the code given below:
- (a) 1 and 2 only
  - (b) 2 only
  - (c) 2 and 3 only
  - (d) 1, 2 and 3

6. Consider the following statements regarding the China's 17+1 Cooperation Forum:
1. It is initiative aims to expands cooperation between Beijing and Western European States.
  2. The platform is largely seen as an extension of China's flagship Belt and Road initiative (BRI).
- 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. Recently, Researchers have reported that Pleistocene-era rock paintings dating back to 45,000-20,000 years

ago. In this context, consider the following statements:

1. The painting was found on the Indonesian island of Sulawesi.
2. The Sulawesi Island contains some of the oldest directly dated rock art in the world.
3. Archaeologists used method of radiocarbon dating to date this painting.

Which of the statements given above are correct?

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

8. Which of the following sites have been added to India's tentative list of UNESCO world heritage sites?

1. Satpura Tiger Reserve
2. Megalithic Site of Hire Benkal
3. Temple of Kanchipuram

Select the correct answer using the code given below:

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

9. Recently, BioHub facility was launched WHO. In this context, consider the following statements:

1. It allows rapid sharing of pathogens between laboratories and partners to facilitate a better analysis and preparedness against them.
2. The move is significant in the view of the novel coronavirus disease (COVID-19) pandemic.

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

10. Mount Nyiragongo is situated at—

- (a) Western Border of DR Congo
- (b) Southern Border of DR Congo
- (c) Northern Border of DR Congo
- (d) Eastern Border of DR Congo

11. Consider the following statements regarding the Farzad B Gas Field:

1. It was discovered by India's ONGC Videsh Ltd (OVL).
2. Recently, Iran announced that with the help of India it will develop the offshore gas field.
3. Farzad-B's recoverable reserves are about half of total reserves of India.

Which of the statements given above are correct?

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

12. Which of the following statements are correct regarding Asiatic Lion?

1. It is listed in schedule I of Wildlife protection act.
2. At present, Gir National Park and Wildlife Sanctuary is considered as the only natural abode of the Asiatic lion.
3. It is also listed in CITES Appendix I and its IUCN status is Endangered.

Select the correct answer using the code given below:

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

13. Which of the following characteristics are associated with Bio-fuels?

1. Highly Suitable for use at low and very temperature.
2. Zero Emissions of Nitrogen Oxide emissions.
3. Reduce foreign oil dependency.
4. Produced from renewable energy sources.

Select the correct answer using the code given below:

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

14. Consider the following statements regarding Methane:

1. Methane contributes to the formation of ground-level ozone

2. The main human-generated sources of methane are cattle production, wastewater, landfills, rice agriculture, biomass burning, and fossil fuels.  
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
15. The M G Gaikwad Commission is associated with which of the following?  
(a) Maratha Reservation  
(b) Environmental impact Assessment  
(c) COVID-19 Task force  
(d) None of the above
16. With reference to the tribunals, consider the following statements:  
1. The original Constitution did not contain provisions with respect to tribunals.  
2. The 44th Amendment Act has added a new part entitled as 'Tribunals'.  
3. In pursuance of Article 323 A, the Parliament has passed the Administrative Tribunals Act in 1985.  
Which of the statements given above are correct?  
(a) 1 and 2 only  
(b) 1 and 3 only  
(c) 2 and 3 only  
(d) 1, 2 and 3
17. Which of the following statements are correct regarding standing committee system in the Parliamentary Proceedings?  
1. The system ensures economy and efficiency in public expenditure.  
2. The system makes parliamentary control over executive much more detailed, close, continuous, in-depth and comprehensive.  
3. This system provides opportunities to all the members of Parliament to participate and understand the functioning of the government and contribute to it.

- Select the correct answer using the code given below:  
(a) 1 and 2 only  
(b) 2 and 3 only  
(c) 1 and 3 only  
(d) 1, 2 and 3
18. Consider the following statements regarding the Right of Persons with Disabilities Act, 2016:  
1. In accordance to the provisions of act, the persons are provided reservation during allocation of land.  
2. Every child with benchmark disability between the age group of 6 and 18 years shall have the right to free education.  
3. India is yet to fulfill the obligations to the United National Convention on the Rights of Persons with Disabilities (UNCRPD).  
Which of the statements given above are correct?  
(a) 1 and 2 only  
(b) 2 and 3 only  
(c) 1 and 3 only  
(d) 1, 2 and 3
19. Which of the following statements are correct regarding Vaccination?  
1. The immunization agenda 2030 was solely launched by the Ministry of Health and Family Welfare.  
2. Universal Immunization Programme was introduced by replacing Expanded Programme of Immunization.  
Select the correct answer using the codes given below:  
(a) 1 only  
(b) 2 only  
(c) Both 1 and 2  
(d) Neither 1 nor 2
20. Consider the following statements regarding the Model Insurance Village:  
1. Insurance Regulatory and Development Authority of India (IRADI) has come out with the concept of model insurance villages.

2. The model village concept offers comprehensive insurance protection to villagers and avail covers at affordable or subsidised cost.
- 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
21. Operation SamudraSetu is related to—
- (a) Shipment of liquid medical oxygen-filled cryogenic containers  
(b) Mega plan to bring back Indian Citizens amidst COVID.  
(c) Second phase of bridge construction connecting India and Sri-Lanka  
(d) Operation of resource extraction from deep waters of Indian Ocean.
22. Consider the following statements regarding Gopal Krishna Gokhale:
1. He was a mentor to both Mahatma Gandhi and Mohammed Ali Jinnah.  
2. He founded the Servants of India Society.  
3. He became Congress president at its Banaras session in 1905.
- Which of the statements given above are correct?
- (a) 1 and 2 only  
(b) 2 and 3 only  
(c) 1 and 3 only  
(d) 1, 2 and 3
23. Which of the following statements are correct regarding Indian Coast Guard's ship "Sajag"?
1. It is built in line with the "Make in India" vision.  
2. The ship is designed to carry out search and rescue operations.  
3. It can carry pollution response equipment to contain oil spills.
- Select the correct answer using the codes given below:
- (a) 1 and 2 only  
(b) 2 and 3 only  
(c) 1 and 3 only  
(d) 1, 2 and 3
24. Consider the following statements regarding the Tianwen-1:
1. It is the Chinese mission, for lunar surface.  
2. The mission included an orbiter, a lander, and a rover.  
3. The craft has a magnetometer probe to measure the magnetic field.
- Which of the statements given above are correct?
- (a) 1 and 2 only  
(b) 2 and 3 only  
(c) 1 and 3 only  
(d) 1, 2 and 3
25. Which of the following statements is/are correct regarding the third Arctic Science Ministerial?
1. The ministerial meet every year takes place in Iceland.  
2. It aims at discussing research and cooperation in the Arctic region.
- 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
26. Regarding the taxation system of Krishna Deva, the ruler of Vijayanagar, consider the following statements: (UPSC-2016)
1. The tax rate on land was fixed depending on the quality of the land.  
2. Private owners of workshops paid an industries tax.
- 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
27. In the context of Indian history, the principle of "Dyarchy (diarchy)" refers to— (UPSC-2017)
- (a) Division of the central legislature into two houses.  
(b) Introduction of double government i.e., Central and State governments.

- (c) Having two sets of rulers, one in London and another in Delhi.
- (d) Division of the subjects delegated to the provinces into two categories.
28. Which of the following is/are famous for Sun temples? (UPSC-2017)
1. Arasavalli
  2. Amarakantak
  3. Omkareshwar
- Select the correct answer using the code given below:
- (a) 1 only
  - (b) 2 and 3 only
  - (c) 1 and 3 only
  - (d) 1, 2 and 3
29. Consider the following statements: (UPSC-2018)
1. The Fiscal Responsibility and Budget Management (FRBM) Review Committee Report has recommended a debt to GDP ratio of 60% for the general (combined) government by 2023, comprising 40% for the Central Government and 20% for the State Governments.
  2. The Central Government has domestic liabilities of 21% of GDP as compared to that of 49% of GDP of the State Governments.

3. As per the Constitution of India, it is mandatory for a State to take the Central Government's consent for raising any loan if the former owes any outstanding liabilities to the latter.

Which of the statements given above is/are correct?

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

30. With reference to 'Organization for the Prohibition of Chemical Weapons (OPCW)', consider the following statements: (UPSC-2016)

1. It is an organization of European Union in working relation with NATO and WHO.
2. It monitors chemical industry to prevent new weapons from emerging.
3. It provides assistance and protection to States (Parties) against chemical weapons threats.

Which of the statements given above is/are correct?

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

### ANSWERS

- |       |       |       |
|-------|-------|-------|
| 1. B  | 11. C | 21. A |
| 2. D  | 12. D | 22. D |
| 3. D  | 13. B | 23. D |
| 4. C  | 14. C | 24. B |
| 5. B  | 15. A | 25. C |
| 6. B  | 16. B | 26. C |
| 7. A  | 17. D | 27. D |
| 8. D  | 18. A | 28. A |
| 9. C  | 19. B | 29. C |
| 10. D | 20. C | 30. B |