



North Delhi	Central Delhi	Jaipur	Bhopal	Patna	Indore	Bengaluru
2521, Hudson Line, Vijay Nagar Near GTB Nagar Metro Stn	B-5/4 Poorvi Marg Old RajenderNgr. Market Near Karol Bagh Metro Stn	403-404 Apex Tower Lal Kothi Tonk Road	43-44 2nd Floor R.R. Arcade Zone - II M.P.Nagar	Above Toyota Showroom Exhibition Road Near Gandhi Maidan	232-233 2nd Floor Veda Building Bhawar Kuan Square	116/C-1 3 <sup>rd</sup> Floor, 5 <sup>th</sup> Block KHB Colony Koramangala Bengaluru
Delhi 110009 9717380832	Delhi 110060 9811293743	Jaipur 302015 8290800441	Bhopal 462011 7509975361	Patna 800001 7463950774	Indore 452001 9893772941	Karnataka 560095 7619166663
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GS-I	Culture-Art Forms, Literature and Architecture from ancient to modern times.	Indian history significant events, personalities, issues and the Freedom Struggle	Post independence issues, National boundary and disputes	Indian society features, 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	Culture-Art Forms, Literature and Architecture from ancient to modern times.		
GS-II	Indian constitution- Amendments, acts and bills.	Legislative, executive and judicial processes.	Constitutional, non-constitutional, judicial, quasi judicial, administrative and other types of bodies.	Federal structure and local bodies. Their powers and functions.	Government policies and various governance issues like transparency, accountability and - governance	Committees and schemes.	Non-government issues, self-help groups and role of civil society	Vulnerable sections of our society and social sector issues and initiatives.	International Relation-India and other countries, various Indian and international agreements, effects of other countries on India and international institutions.		
GS-III	Various measures to boost Indian economy- planning, policies, management.	Government budgeting and issues related to budget.	Agriculture, animal husbandry and transport	Food security- measures to boost food security and food processing, issues related to land- land reforms	Industries and infrastructure to their growth and investment model	Space and technology, IT space, robotics and computer	Disease, biotechnology and human welfare	Innovations, intellectual property, Awards, POI and other import and aspects of S&T	Environment and disaster; government initiatives, various judgment, pollution, degradation and conservation efforts	International agreements and works of various international bodies, awards, effort by individuals and misc.	Challenges to internal security, Various Security forces and agencies and their mandate. Cyber security; money laundering and its prevention.
GS-IV	Ethical issues related to family, society, education, Corruption etc.	Ethics in public and private administration	Issues	Related laws and rules	Governance/e-Governance	Ethics in international issues	Personalities and their teachings	Other important topics			
Mis.											

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## Committee on CIC and IC

### In News

An RTI demanding to know how complaints against Central Information Commissioners (CIC) Information Commissioners (ICs) are handled has provoked the government to propose the formation of a committee of bureaucrats under the cabinet secretary to probe them.

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### About Committee

- The proposal is to create **two bureaucratic panels** which will receive complaints against CIC and ICs.
- For the CIC, the committee is proposed to include **the Cabinet Secretary; Secretary, DoPT; and a retired CIC**. For ICs, the committee will include **Secretary (Coordination) in the Cabinet Secretariat; Secretary, DoPT; and a retired IC**.

### Criticism

1. The move is criticised on the ground that it will reduce the CIC and IC to the level of a glorified clerk without glory, eroding its independence and undermine its role as per the RTI Act.
2. **Under Section 12(4) of RTI Act**, Central Information Commission must function autonomously without being subjected to directions by any other authority. The committees proposed are outside the purview of the RTI Act.
3. It is seen as totally against the RTI Act, and violative of letter and spirit of our democratic constitution which gave independence to information tribunal.
4. Critics see the proposed committees as bureaucracy's desperate attempt to annex the transparency panel under their hierarchy. As a committee with majority bureaucrats scrutinising complaints against Information Commissioners will skew checks and balances in favour of the political executive.
5. It is been argued that the statutory status of CIC and ICs is above the level of Cabinet Secretary etc. As the RTI Act gave CIC and ICs the power to direct and impose penalties on these officers if they don't give information.

### Checks and balances under RTI Act, 2005

#### Section 14 (1)

CIC or ICs shall be removed from his office only by order of the President on the ground of proved misbehaviour or incapacity after the Supreme Court, on a reference made to it by the President has, on inquiry, reported that the CIC or any ICs, as the case may be, ought on such ground be removed.

#### Section 14 (2)

The President may suspend from office, and if deem necessary prohibit also from attending the office during inquiry, the CIC or IC in respect of whom a reference has been made to the Supreme Court under above mentioned section.

#### Section 14 (3)

The President may by order remove from office CIC or IC, as in the case may be, —

- is adjudged an insolvent; or
- has been convicted of an offence which, in the opinion of the President, involves moral turpitude; or
- engages during his term of office in any paid employment outside the duties of his office; or
- is, in the opinion of the President, unfit to continue in office by reason of infirmity of mind or body; or
- has acquired such financial or other interest as is likely to affect prejudicially his functions as the CIC or IC

### Significance

- ✓ The democracy of India needs to save RTI by insulating CIC/IC from these kinds of onslaughts from the government and their subordinate officers who are trying to prevent people from asking for embarrassing disclosures using RTI. This attempt is highly



undemocratic, unconstitutional and smacks of high-level dictatorship and authoritarianism. This must be totally opposed.

- ✓ "Democracy requires an informed citizenry and transparency of information which are vital to its functioning and also to contain corruption and to hold governments and their instrumentalities accountable to the governed," declares the preamble of the Right to Information (RTI) Act, 2005.
- ✓ The government's latest proposal is an "attempt by the political dispensation to influence the working of the ICs. This will take away the independence of an institution that has served the citizen's demand for more transparency in the government. It will make the Commission more vulnerable to government pressure."

All Information Commissioners, including the CIC, are appointed by the President of India based on recommendations of a committee chaired by the **Prime Minister, including the Leader of Opposition in the Lok Sabha, and a Union Cabinet Minister nominated by the PM.**

## **Rule 49MA**

### **In News**

The Supreme Court has sought the Election Commission's response on a plea which sought striking down of a provision in election rules that envisages prosecution of an elector if a complaint alleging malfunctioning of EVMs and VVPATs cannot be proven.

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### **Issue**

- The plea said that **49MA of the Conduct of Elections Rules** was unconstitutional as it has criminalised reporting of malfunctioning of EVM or VVPATs.
- The plea contended that the onus of proving an allegation cannot be on a voter when machines used for voting showed 'arbitrary deviant behaviour'.
- Under the **Rule 49MA**, where printer for paper trail is used, if an elector after having recorded his vote under rule alleges that the paper slip generated by the printer has shown the name or symbol of a candidate other than the one he voted for, the presiding officer shall obtain a written declaration from the elector as to the allegation, after warning the elector about the consequence of making a false declaration.
- The rules outline that if after investigation, the allegation of EVM malfunctioning is found to be false or incorrect, then the complainant can be prosecuted under **Section 177** of the Indian Penal Code for "furnishing false information".
- In such a case, a jail term of **6 months or a fine of Rs 1,000** or both is guaranteed.

### **Test Vote**

If the elector gives the written declaration referred to in sub-rule (1) of Rule 49MA, the presiding officer shall permit the elector to record a test vote in the voting machine in his presence and in the presence of the candidates or polling agents who may be present in the polling station, and observe the paper slip generated by the printer.

### **Argument made by Plea**

1. The petition contended that the obligation of proving an allegation cannot be on the voter when machines used for voting showed 'arbitrary deviant behaviour'.
2. It also alleged that putting the responsibility on the elector in cases of arbitrary deviant behaviour of machines used in the election process, **infringes upon a citizen's right to freedom of expression under the Constitution.**
3. The plea sought a direction to the **EC to register a complaint of any deviant behaviour of equipment used in the election process.**

There are 3 categories of electors in India: –  
 (i) General electors,  
 (ii) Overseas (NRI) electors  
 (iii) Service Electors

4. The petition said that presently, the burden of proof rests on the elector for reporting any deviant behaviour of EVMs and VVPATs, who will face criminal charges irrespective of whether the complaint was truthful and honest.
5. When an elector is asked to cast test vote as prescribed under Rule 49MA, he may not be able to reproduce the same result which he was complaining about, one more time in a sequence, **because of the pre-programmed deviant behaviour of the electronic machines.**
6. It also added that since only an elector could be a witness to the secrecy of his vote cast, it would violate **Article 20(3) of the Constitution which says that no person accused of an offence shall be compelled to be a witness against himself.**

### **Terminologies**

- **Electoral Roll**: Ordinarily known as 'voter list', electoral roll is a list of persons registered as electors residing in a constituency. Electoral Registers or Electoral Rolls are prepared **under the provisions of Representation of People Act, 1950 and Registration of Electors Rules, 1960.** The Rolls are prepared Assembly Constituency-wise.
- **Supplementary roll**: It is a list of additions, deletions and modifications separately done in an electoral roll.
- **Electoral Roll Management System**: It covers the entire process of Electoral Roll preparation in the states from electoral roll revision, data management process, electors' registration, correction and data modification to final publication of Electoral Roll and preparation of Electors Photo Identity Card (EPIC).
- **ASD List**: In order to prevent impersonation of Absentee, Shifted and Dead Voters, whose names continue to appear in the electoral rolls, list of such voters (ASD List) is prepared polling station wise and provided to the concerned Presiding Officer.
- **Mother Roll**: Whenever the Election Commission orders revision of electoral roll, the existing rolls are integrated into a single roll and published as a draft. After disposing of the claims & objections received during revision period, a supplement is prepared. Thus, at the final publication, there are two electoral rolls – the draft roll and the supplement, prepared during revision period. The basic roll published as draft is called mother roll.
- **Special Voters**: The persons holding declared offices like President, Vice-President, Governors etc. are to be included in the part of the roll pertaining to the locality in which they, according to the address given by them, would have been ordinarily resident in the declaration prescribed for this purpose. These voters are called special voters.
- **Tendered Vote**: According to **Section 49P of the Conduct of Election Rules, 1961**, if a voter realises that someone has already voted in her name, she can approach the presiding officer at the polling booth and flag the issue. Upon answering the presiding officer's questions about her identity satisfactorily, the voter will be allowed to cast a tender vote. Tender votes are cast on ballot papers and sealed and locked away. These votes are useful when the margin between the winning candidate and the runner-up is slim. However, if the difference is large, tender votes are not counted.

**PEPPER IT WITH**  
SVEEP, Overseas Indian  
Elector, National Voters' Day

### **In-house Procedure**

#### **In News**

The allegations made by a former Supreme Court employee against the Chief Justice of India have brought the focus on the mechanism that exists to examine charges of misconduct against members of the higher judiciary.

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#### **In-house procedure**

- The idea of self-regulation as a method by which allegations of misconduct against judges can be approached came up first in a 1995 case concerning the then Chief Justice of the Bombay High Court.
- A five-judge committee was formed to devise the procedure. The report of the committee was adopted by a resolution of the Full Court (Bench of five judges) in 1999.



- Allegations of misconduct against serving judges of the superior judiciary, that is, the various high courts and the Supreme Court, are dealt with through an 'in-house procedure'.
- In 2014, a Supreme Court Bench directed the court's registry to make the in-house procedure public for the sake of transparency.

### **Purpose**

1. When the allegations are examined by the judge's peers, **outside agencies are kept out, and the independence of the judiciary is maintained.**
2. The awareness about the existence of a mechanism to examine such complaints will preserve the faith of the people in the impartiality and independence of the judicial process.
3. The **in-house procedure envisages that false and frivolous allegations can be rejected at an early stage** and only those that are not baseless, and may require a deeper probe, are taken up for inquiry.

### **Beijing Declaration (1995)**

The Beijing Platform for Action is an agenda for women's empowerment. **It aims at removing all the obstacles to women's active participation in all spheres of public and private life** through ensuring women a full and equal share in economic, social, cultural and political decision-making.

This means that the principle of shared power and responsibility should be established between women and men at home, in the workplace, and in the wider national and international communities.

**Twelve critical areas of concern it involves are: Women and poverty, Education and training of women, Women and health, Violence against women, Women and armed conflict, Women and the economy, Women in power and decision-making, Institutional mechanisms for the advancement of women, Human rights of women, Women and the media**

### **Procedure**

1. When a complaint is received against a High Court judge, the Chief Justice concerned must examine it. If it is frivolous or concerns a judicial matter, she (chief justice) may just file the complaint and inform the Chief Justice of India. (If a complaint is made to the President it is forwarded to the CJI)
2. If she considers it serious, she should get a response from the judge concerned. If she is satisfied with the response and feels no further action is required, she may close the matter and inform the CJI.
3. However, if the CJI feels a deeper probe is needed, she should send the complaint as well as the judge's response to the CJI, with her own comments for further action.
4. The procedure is the same if the CJI receives the complaint directly. The comments of the high court Chief Justice, the judge concerned, and the complaint would be considered by the CJI. If a deeper probe is required, a three-member committee, comprising **two Chief Justices from other High Courts and one High Court judge** must be formed.
5. The committee will hold a fact-finding inquiry at which the judge concerned would be entitled to appear. It is **not a formal judicial proceeding** and does not involve lawyers or examination or cross-examination of witnesses.
6. If the charge is **against a high court Chief Justice**, the same procedure of getting the person's response is followed by the CJI. If a deeper probe is deemed necessary, a three-member committee comprising a **Supreme Court judge and two Chief Justices** of other High Courts will be formed.
7. If the charge is against a Supreme Court judge, the committee would comprise three Supreme Court judges. **There is no separate provision in the in-house procedure to deal with complaints against the CJI.**

### In-house inquiry plausible outcomes:

- If it finds that there is substance in the allegations, the committee can either hold that the misconduct is serious enough to warrant removal from office, or that it is not so serious as to warrant removal.
- In case of warrant of removal, **judge concerned would be advised to resign or take voluntary retirement. If the judge is unwilling to quit, the Chief Justice of the High Court concerned would be advised to withdraw judicial work from him, and the President of India and the Prime Minister would be informed of the situation.**
- After **that it will allow Parliament to begin the political process for impeachment.**

**PEPPER IT WITH**  
CJI appointment, POCSO, She-Box, Sexual Harassment of Women at Workplace Act 2013

## **Service Voter**

### In News

The soldiers of **Indo-Tibetan Border Police (ITBP)** were the first to cast their vote for the 2019 Lok Sabha elections at **Lohitpur, Arunachal Pradesh** as Service Voters.

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### Who is a Service Voter?

According to the provisions of **sub-section (8) of Section 20** of Representation of People Act, 1950, Service Voters are:

1. Those serving in the Armed Forces of the Union.
2. Those serving in a Force to which the **Army Act 1950** applies (Assam rifles, CRPF, BSF, ITBP, SSB, NSG, GREF in BRO (Border Road organisation), CISF etc.
3. Member of an Armed Police Force of a State, serving outside that state.
4. Those employed under the Government of India, in a post outside India.

**Wife of a Service Voter**, if she is ordinarily residing with him, shall also be eligible to be enrolled in the part meant for Service Voters in the constituency concerned. This facility is not available to the **husband of a female service voter** under the existing law. A son / daughter / relative / servant etc. residing ordinarily with a service voter cannot be enrolled as service voter.

### Who is a Classified Service Voter?

A Service Voter who belongs to Armed Forces or forces according to the available provision of Army Act, 1950, he or she has option of either voting through **postal ballot or through a proxy voter duly appointed by him**. When a Service Voter opts for voting through a proxy is called Classified Service Voter (CSV).

### Tool for Service Voter to cast their vote

#### **1. Proxy Voter**

By applying to Returning Officer in Form 13F of Conduct of Elections Rules, 1961- Forms are also available at the website of Election Commission; a Service Voter may appoint any person as his or her proxy to give vote on his or her behalf that too in his or her name at the polling station. But the proxy shall have to be ordinary resident of that constituency. One thing to note here is that he or she need not be a registered voter but he or she must not be disqualified to be registered as a voter.

ETPBS is developed by **Election Commission of India** with the help of Centre for Development of Advanced Computing (**C-DAC**), for the use of the Service Voters. It is a fully secured system, having two layers of security. Secrecy is maintained through the use of **OTP and PIN** and no duplication of casted ETPB is possible due to the unique **QR Code**.

#### **2. Postal Ballot**

The Returning officer of the constituency sends the service voter the postal ballot in which the service voter can record their vote and seal the cover. The voter has to sign the declaration in Form 13A after which the Commanding officer of the unit will attest

the voter's signature which needs to be given to the Returning Officer by post or messenger.

### 3. **Electronically transmitted Postal Ballot System (ETPBS)**

ETPBS is implemented in line with the existing Postal Ballot System. ETPBS enables the entitled service voters to cast their vote using an electronically received postal ballot from anywhere outside their constituency. The voters who make such a choice will be entitled for Postal Ballot delivered through Electronic Media for a particular election.

- ❖ There are roughly **30 lakh** service voters who will cast their votes.
- ❖ A person, at a particular time, cannot be enrolled as a voter at more than one place in view of the provisions contained under **Sections 17 and 18 of Representation of People Act, 1950**. Likewise, no person can be enrolled as an elector more than once in any electoral roll.
- ❖ The ETPBS was first used in a byelection in the Nellithope Assembly constituency in **Puducherry in 2016**.

## Press Council of India guidelines

### In News

The Election Commission of India (ECI) and the Press Council of India (PCI) had issued certain guidelines to regulate the media coverage with regard to elections and exit polls, etc in order to ensure fair elections.

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### Guidelines

1. The Press **should avoid reports** which tend to **promote feelings or enmity or hatred between people on the grounds of region, religion, race, caste, community or language**.
2. The Press **should refrain from publishing false or critical statements** about any party or candidate and not accept any kind of financial or other offers to promote a candidate or party.
3. The PCI also cautioned against publishing unverified allegations against any candidate or party.
4. The Press **should not publish any advertisement about the achievements** of a candidate or party **at the cost of public exchequer**.
5. The Press should follow the ECI Guidelines regulating media coverage during Prohibited Period and otherwise.
6. The **print or electronic media should not be used as a forum for distortions and manipulations of the elections**.
7. The news channels should disclose any political affiliations, either towards a party or candidate.
8. Whenever the newspapers publishes pre-poll surveys, they should take care to preface them conspicuously by indicating the institutions which have carried on such surveys, the individuals and organisations which have commissioned them, **the size and nature of sample selected and the method of selection of the sample for the findings**.

Invoking religion to seek votes, or making statements to the effect of creating disharmony between two communities, is a violation of the poll conduct and may invite prosecution under **Section 125 of the Representation of the People Act, 1951 (Promoting enmity between classes in connection with election), Sections 153A, 153B, 171C, 295A and 505(2) of the Indian Penal Code and Religious Institutions (Prevention of Misuse) Act, 1988**.

### VVPAT

- The Voter Verified Paper Audit Trail is a method that provides feedback to voters. It is an independent verification printer machine and is attached to electronic voting machines.

- VVPAT consist of a **printer** that gives a record of voters' selection and a **display unit {VVPAT Status Display Unit (VSDU)}**.
- The slip contains the **poll symbol, candidate serial number** and **name of the candidate**.
- The printed VVPAT slip is displayed for **7 seconds** before it is automatically cut and delivered to a sealed ballot compartment.
- It is manufactured by **Bharat Electronics Limited and Electronics Corporation of India Limited**.

### **EVM**

- An Electronic Voting Machine (EVM) is an electronic device used for recording votes.
- An EVM comprises of a **control unit** which is placed with the polling officer and a **balloting unit** which is placed inside the voting compartment.
- It is manufactured by **Bharat Electronics Limited, Bangalore and Electronics Corporation of India Limited, Hyderabad**.
- Only engineers from Bharat Electronics Limited and Electronics Corporation of India Limited conduct checking of EVMs and VVPATs.

**PEPPER IT WITH**  
White Paper on 'Online Harms', Article 327, Article 324, cVigil

## **Voting rights of prisoners**

### **In News**

Court issued notice to the Election Commission of India (ECI) in a PIL pertaining to the denial of voting rights to prisoners – both under-trials and convicts.

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### **Issue**

1. **Section 62(5) of the RPA 1951** is violative of **Article 14, 19 and 21** in so far as it prevents a prisoner from exercising his right to expression (voting being a medium of expression as per the Apex Court in PUCL & ors. v. UOI (PUCL 2013))
2. A blanket ban on prisoners' right to vote "is a violation of the spirit and soul of the constitution as well as the basic principle of equality."
3. Section sees both an undertrial and a convicted person equally. A person is innocent until proven guilty by law. Despite this, it denies an undertrial the right to vote but allows a detainee the same. However, a person out on bail can cast his vote.

### **Section 62(5) of the Representation of People Act of 1951**

It mandates that "no person shall vote at any election if he is confined in a prison, whether under a sentence of imprisonment or transportation or otherwise or is in the lawful custody of the police".

The provisions however exempt a person held under **preventive detention**.

### **Arguments made in support of extending voting rights**

1. All categories of the prison population—convicts, under-trials, and those in custody—are treated alike and denied their right to vote. **There should be differentiation between convicts and under-trial giving chance to vote to under-trial as crime is not yet proved.**
2. While changes in laws governing prison conditions and the criminal justice system directly impact them, the prisoners themselves have no say in the choice of representatives who make those changes.
3. **It is logical to ask that if incarceration doesn't strip a person of citizenship, why it should lead to the denial of voting rights.** This form of exclusion disproportionately affects the socioeconomically disadvantaged.

4. It is **ironic that while those charged with crimes can contest elections, they cannot vote**. In this case, the prisoners are deemed to be lesser citizens even before their crimes have been proven.
5. The provision **also violates the rights to equality, vote (Article 326) and is arbitrary. It is not a reasonable restriction.**
6. **"Innocent until proven guilty" is a central tenet of the justice system.** In this context, prisoner voting can prove to be a major component of rehabilitative justice and a step towards in the easier integration of these people into the mainstream after serving time.

There are the around 400,000 prisoners housed across Indian jails.

The 'Prison Statistics India, 2014' published by the National Crime Records Bureau, says there were 2,82,879 undertrials and 1,31,517 convicts lodged across 1,387 prisons in the country.

### Global Scenario

- The principle of **'felony disenfranchisement'** upon which s. 62(5) is based, finds its moorings **in the doctrine of 'civic death' – that a convict forfeits all his family and political rights.**
- In the UK and Russia, a convicted prisoner still does not have the right to vote on the reasoning that the **conviction brings with it a restriction of liberties.**
- **In Europe, Switzerland, Finland, Norway, Denmark, Ireland, the Baltic States, and Spain already allow prisoner voting.**
- **Countries like Romania, Iceland, the Netherlands, Slovakia, Luxembourg, Cyprus and Germany have opted for a middle path: Voting is allowed subject to certain permits and conditions such as the quantum of sentence served.**

### PEPPER IT WITH

Jammu and Kashmir Criminal Laws (Amendment) Bill, 2018

### Way Ahead

It is debatable whether denial of voting rights to prisoners comes under 'reasonable restriction' thesis of the judiciary. **The impugned provisions of the RP Act seem flawed since they violate the fundamental right of Right to life. Right to life includes right to choose.** The laws made in the parliament are equally applicable to prisoners. Therefore, all including those behind the bars, have the right to choose their representatives.

## ECI

### In News

The Election Commission of India (ECI) admitted to the Supreme Court that it was "toothless" and did not have enough powers to deal with inflammatory or divisive speeches in the election campaign.

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### About ECI

- The Election Commission of India is an autonomous constitutional authority responsible for administering Union and State election processes in India. The body administers elections to the Lok Sabha, Rajya Sabha and State Legislative Assemblies in India, and the offices of the President and Vice President in the country.
- **Appointment**  
**The President appoints** Chief Election Commissioner and Election Commissioners. **They have tenure of six years, or up to the age of 65 years, whichever is earlier.** They enjoy the same status and receive salary and perks as available to Judges of the Supreme Court of India. The Chief Election Commissioner can be removed from office only through impeachment by Parliament.
- **Removal**  
The procedure for **the removal of Chief Election Commissioner is like the removal of Judge of Supreme Court of India.** The Chief Election Commissioner **can only be removed by a resolution passed by both houses of Parliament (Lok Sabha and Rajya Sabha)** with two-thirds majority on the ground of proved misbehaviour or incapacity.



### **The main functions of the ECI:**

1. The Election Commission of India is considered the custodian of free and fair elections.
2. It issues the Model Code of Conduct in every election for political parties and candidates so that the dignity of democracy is maintained.
3. It regulates political parties and registers them for being eligible to contest elections.
4. It **publishes the allowed limits of campaign expenditure per candidate to all the political parties and monitors the same.**
5. The **political parties must submit their annual reports to the ECI for getting tax benefit on contributions.**
6. It ensures that all the political parties regularly submit their audited financial reports.

### **Where does the ECI derive its powers?**

**Article 324** says the **superintendence, direction and control of all elections** to Parliament, the State legislatures, and the offices of the President and Vice-President shall be vested in the ECI. The Article has been interpreted by courts and by orders of the ECI from time to time to mean that **the power vested in it is plenary in nature.** In other words, the ECI can take any action it deems fit to ensure **that elections and the election process are free and fair.**

### **Instant of violation of MCC**

1. In a letter to the President of India, a group of retired bureaucrats and diplomats, in the context of recent incidents, expressed concern over the EC's "*weak kneed conduct*" and the **institution "suffering from a crisis of credibility today"**.
2. More than 100 FIRs have been filed for violations of the model code of conduct in Delhi alone. However, a majority of these cases had nothing to do with elections.
3. The credibility of ECI has come under scrutiny with people pointing out several instances of violations of Model Code of Conduct, especially by members belonging to the ruling dispensation.
4. Other instances: Transfers of top officials, voter verifiable paper audit trail (VVPAT) audits.

#### **PEPPER IT WITH**

CIC Citizenship Rules, 2009,  
Intermediaries Guidelines  
(Amendment) Rules 2018

## **Khasi Kingdom**

### **In News**

A federation of 25 Himas or Khasi kingdoms that have a cosmetic existence, plan to revisit the 1948 agreements that made present-day Meghalaya a part of India.

### **Aim of move**

1. The revisiting in consultation with legal experts and academicians is aimed at **safeguarding tribal customs and traditions from Central laws in force or could be enacted, such as the Citizenship (Amendment) Bill.**
2. Though the Constitution has provided self-rule to a considerable extent through tribal councils, there has been an increasing demand for giving more teeth to the Khasi states.
3. **The move is to strengthen the Federation of Khasi States that was ruled by a Syiem (king-like head of a Hima).**
4. The Citizenship bill would grant citizenship to non-domicile of north east which in turn bring assimilation that could diminish the cultural value of tribal areas.

### **Background**

- During the British rule, the Khasi domain was divided into the **Khasi states and British territories.** At that time, the British government had no territorial right on the Khasi states, and they had to approach the chiefs of these states if they needed land for any purpose.
- After independence, the British territories became part of the Indian dominion, but the Khasi states had to sign documents beginning with the **Standstill Agreement** that provided a few rights to the states.



- The 25 Khasi states had signed **the Instrument of Accession and Annexed Agreement** with the Dominion of India. The conditional treaty with these states was signed by Governor General Chakravarty Rajagopalachari.
- The Khasi states, though, did not sign the **Instrument of Merger** unlike most other states in India.

### **Present scenario**

- The Agreement", which formed part of the Instrument of Accession, provided, inter alia, for unified legislation on subject of common interests to Assam and the Khasi Hills States; but administrative powers relating to excise, forest, land and water were to remain, subject to certain conditions, with the States.
- While merging these areas with the **Province of Assam**, it was considered desirable to preserve some of the tribal traditions and customs of the Khasi States with the result that though the Khasi States were included in the **Sixth Schedule** along with other tribal areas of Assam, large measure of local autonomy was conceded to the **District Councils in the tribal areas**.
- With the coming into force of the Constitution the Khasi Hills States along with the adjoining tribal districts known as Jaintia Hills District' were constituted into a separate autonomous district known as 'United Khasi Jaintia Hills District.'

## **Community radio station and SVEEP**

### **Why in News?**

In a first of its kind initiative, the Election Commission of India has reached out to over 150 Community Radio stations from across the country to help educate and inform the voters.

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### **Community Radio**

- Community Radio (CR) is a type of radio service that caters to the interests of a certain area, broadcasting content that is popular to a local audience, but which may often be overlooked by commercial or mass-media broadcasters.
- Community Radio **affords a unique advantage of receiving transmission through low cost**, battery-operated portable receiving sets. Community listeners would mean people living in the **coverage zone** (confined to a small geographical covering not more than 20-30 km radius) of the Community Radio station.
- It is a two-way process that empowers people to identify problems and create solutions. **CR enables the most vulnerable to participate in decisions for positive change in their lives**. Through CR people can collaborate to produce and broadcast programme that focus on local concerns.

### **Challenges to Community Radio**

- ❖ Long term sustainability, less possession of radio, less broadcast time on agriculture programme, less community involvement, low frequency, poor sound quality etc.
- ❖ Community Radio is by definition relatively small and often situated in locations where basic services, like a constant supply of electricity, are lacking. **Due to these conditions'** equipment suffers and needs to be vigorously maintained and/or regularly replaced
- ❖ Without proper management skills, as well as some knowledge of financial management and income generation, it is very hard for Community Radio to survive **without donor funding**, therefore, long term sustainability is the major issue in community radio.
- ❖ The participation from the people is the major one and no community radio can survive without participation of people as it demands 70% participation of the community people.

- Today, **there are more than 180 community radio stations across India**, broadcasting in languages like Bundelkhandi, Garhwali, Awadhi and Santhali — tongues that typically find little or no space on television.

### SVEEP

- ✓ **Systematic Voters' Education and Electoral Participation program is the flagship program of the Election Commission of India** for voter education, spreading voter awareness and promoting voter literacy in India.
- ✓ Its primary goal is **to build a truly participative democracy in India** by encouraging all eligible citizens to vote and make an informed decision during the elections.
- ✓ The programme is based on multiple general as well as targeted interventions which are designed according to the socio-economic, cultural and demographic profile of the state as well as the history of electoral participation in previous rounds of elections and learning thereof.

### **PEPPER IT WITH**

Community Radio Station Rules, cVigil, Voter Helpline App, AIR

## **SC quashes RBI circular on debt resolution**

### In News

The Supreme Court struck down the circular issued by the Reserve Bank of India on directing banks to initiate insolvency proceedings against companies having bad debts of Rs 2000 crores or above.

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### Background

1. The SC of India struck down the RBI's order on non-performing assets, as a result of which all cases referred to or admitted under the Insolvency and Bankruptcy Code (IBC) due to the RBI order is **declared as ultra vires**.
2. The decision comes after several **power companies had moved the top court challenging the constitutional validity of the RBI February circular**.
3. The power sector had contended that **they were not willful defaulters and were facing sectoral and market issues**, including non-availability of fuel and **power purchase agreement (PPAs) and non-payment by state utilities issues**.
4. They had stated that this hampered their ability to generate revenue and maintain their loan repayment schedule with banks.

### Key highlight of RBI Circular

- The RBI Circular mandated lenders to initiate insolvency resolution under the Bankruptcy Code if a borrower fails to pay even at the end of the 180 days of first default i.e **delay in payment for even one day should begin resolution of the stressed assets (One Day Default Rule)**.
- The bankers had to mandatorily **refer all accounts with over Rs 2,000 crore loans to the National Company Law Tribunal (NCLT) or the bankruptcy court** if they failed to resolve the problem within 180 days of default.
- The RBI Circular's new framework for restructuring was not applicable to the micro, small and medium enterprises (MSMEs) with loans of Rs 25 crore or less
- As per the circular, **34 power companies were declared stressed by the standing committee on energy and some of them were referred for insolvency under the new bankruptcy code**.

### Impact of SC verdict

1. All action taken under the RBI Circular becomes void. But doesn't means cases in NCLT go away automatically.
2. Parties in NCLT will have to prove if insolvency was under circular or not. If under circular, it will be withdrawn, else the process will continue.
3. Huge relief for the stressed asset in sectors such as power, sugar and fertiliser.
4. **Ruling restores banks' discretion to take call on whether to invoke insolvency proceedings in IBC on case-to-case basis.**

5. Unravels many pre-IBC cases which were on way to resolution, set clock back on resolutions in advances stages. These will have to be reworked.
6. Whittles down RBI powers to deal with NPA mess. **The RBI would have to get government authorisation under the existing statutory scheme for any such omnibus orders.**
7. The current judgement impacts only those insolvency cases which were specifically referred under the circular. **The corporate borrowers do not have a carte blanche to challenge reference to insolvency as a result of this judgment.**
8. RBI's general power to issue a wide variety of directions will not be impacted by the judgment as the Supreme Court has noted.

**PEPPER IT WITH**

Sections 35AA, 35AB,  
NCLT, CRILC-Main Report,  
Project Sashakt

**Traditional Knowledge Digital Library (TKDL)**

**In News**

MOU was signed between the Ministry of AYUSH and Council of Scientific and Industrial Research (CSIR) for cooperation in research and education in areas of traditional systems of medicine and its integration with modern science.

**TKDL**

1. CSIR jointly with Department of AYUSH (now Ministry) developed the Traditional Knowledge Digital Library (TKDL).
2. It is a globally recognized proprietary database on Indian systems of medicine for **preventing bio-piracy and misappropriation of our traditional knowledge.**
3. It has structured and classified the Indian Traditional Medicine System in approximately 25,000 subgroups for Ayurveda, Unani, Siddha and Yoga.
4. **It is available in five languages: English, German, French, Japanese and Spanish.**

**Objective**

- seeks to prevent the granting of patents for products developed utilizing TK where there has been little, if any, inventive step
- intends to act as a bridge between information recorded in ancient Sanskrit and patent examiners **(with its database containing information in a language and format understandable to patent examiners)**
- facilitates access to information not easily available to patent examiners, thereby minimizing the possibility that patents could be granted for "inventions" involving only minor or insignificant modifications

The **Drugs Technical Advisory Board** recently recommended that government procurement agencies should take necessary steps in the tendering process to include the regional language, along with English, on the label of iron tablets and polio drops in government programmes.

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**Sexual Assault Evidence Collection Kits**

**In News**

Over 3,100 special kits for collecting blood and semen samples, besides other evidence, to carry out immediate investigations into sexual assault cases have been distributed among states and union territories by the Ministry of Home Affairs.

**About SAECK**

- The **Sexual Assault Evidence Collection Kits (SAECK)** or 'rape investigation kits' are designed to carry out immediate **medico-legal investigation** and **aid in furnishing evidence in sexual assault and rape cases.**
- Each of these kits comprises essential items that will aid in furnishing evidence such as **blood and semen samples in sexual assault and rape cases.**

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- The kit has a **set of test tubes and bottles**, which mention contents and specifications.
- The SAECKs or 'rape investigation kits' were procured with financial support under the **central government's 'Nirbhaya Fund'**.
- The **Directorate of Forensic Sciences (DFSS)**, a wing of the Home Ministry, has issued two guidelines -- one for investigators and prosecutors for collection, storage and transportation of forensic evidence in sexual assault cases; **and the second for medical officers dealing with sexual assault cases.**
- The kits are expected to help law enforcement agencies to ensure effective investigation in a timely manner for better prosecution and convictions in sexual assault cases.
- In 2015, as many as 34,651 cases of rape were registered in the country. The figure increased to 38,947 in 2016, according to the data of the **National Crime Records Bureau.**

### Also, in News

A petition has been filed in the Supreme Court to frame guidelines to protect the reputation and dignity of persons accused of sexual offences.

- A person was considered innocent unless proven guilty by a court of law. If a person was falsely accused, his reputation would be lost forever and exposed to public ridicule for no fault of his. This would be a violation of the fundamental right to life enshrined under **Article 21** of the Constitution.
- Disclosure of the identity, **especially during trial, would lead to media trial. Besides, considering the wide reach of social media**, the person's name and even that of his family, which might include minors, would be exposed on the Internet. This would be a violation of their fundamental right to privacy.
- **Section 228-A** of the Indian penal Code that provides punishment for disclosing the identity of the victims but does not provide any safeguard for protection of the identity and integrity of the accused in case of false accusation. This need to be amended to provide safeguard against identity reveal.

**PEPPER IT WITH**  
NIRF, NIIF, CRIS, PR, C.  
auris, MERA

## **FAME II**

### In News

The NITI Aayog and the Rocky Mountain Institute (RMI) released a report on opportunities for the automobile sector and government under the Faster Adoption and Manufacturing of Electric Vehicles II (FAME II) scheme.

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### About Report

The technical report titled '**India's Electric Mobility Transformation: Progress to Date and Future Opportunities**', quantifies the direct oil and carbon savings that the vehicles incentivized under FAME II will deliver. **RMI** is an Indian and global non-profit organisation focused on driving the efficient and restorative use of resources.

The report also quantifies the catalytic effect that FAME II and other measures could have on the overall Electric Vehicle (EV) market. According to the analysis, if FAME II and other measures – in public and private space - are successful, India could realize EV sales penetration of **30% of private cars, 70% of commercial cars, 40% of buses and 80% of two and three-wheelers by 2030.**

### FAME II

- **Aim:** To further accelerate the government of India's commitment to a clean mobility future, sees the electrification of transportation as a primary focus area. FAME II intends to catalyse the market for faster adoption of EVs to ensure durable economic growth and global competitiveness for India's automotive industry.
- **Target:** The outlay of **₹10,000 crore** has been made for three years till 2022 for FAME 2 scheme.
- **Criteria:** It is based on minimum top speed, minimum range per charge, and minimum acceleration and energy consumption efficiency of EVs. The new rules also mandated

that all EVs, except e-rickshaws and e-carts, should have **regenerative braking** capability to be eligible for incentive.

- **Subsidy:** To avail the subsidy, e-scooters need to have a **range of at least 80 km**. Most e-bikes in India currently have a range of around 60 km. **Cap of 20% on ex showroom price** may adversely affect the affordable bike segment.
- **Duration:** The FAME 2 scheme, that will be implemented for a period of three years, starting from **2019 to 2022**, will also offer exemption from road tax and registration charge for hybrids and EVs.
- The benefits of the FAME 2 scheme will be only available on the vehicles powered by **lithium-ion batteries** or more efficient power source.

FAME India is a part of the **National Electric Mobility Mission Plan**. FAME focuses on **4 areas** i.e. Technology development, Demand Creation, Pilot Projects and Charging Infrastructure.

#### **Key highlights from the report:**

1. Effects of FAME II will go beyond the vehicles that are eligible under the FAME II
2. There is considerable energy and **CO2 savings** associated with the two, three, and four-wheeled vehicles and buses covered by FAME II over their lifetime, as well as the potential savings associated with greater adoption levels by 2030
3. In order to capture the potential opportunity in 2030, batteries must remain a key focal point as they will continue to be the key cost driver of EVs.
4. Vehicles **eligible under FAME II scheme can cumulatively save 5.4 million tonnes of oil equivalent over their lifetime worth Rs 17.2 thousand crores.**
5. EVs sold through 2030 could cumulatively save 474 million tonnes of oil equivalent (Mtoe) worth INR 15 lakh crore and generate net CO2 savings of 846 million tonnes over their operational lifetime.
6. The centre will invest in **setting up charging stations**, with the active participation of public sector units and private players.

Under FAME-I, incentive was provided to **all battery-powered vehicles, including those that run on lead acid batteries**. FAME II eliminates the prospects of electric vehicles **powered by lead acid batteries which form a major chunk of electric two-wheelers in India.**

#### **Way Ahead**

India needs auto industry's active participation to ease electric mobility transition. The auto and battery industries could collaborate to enhance customer awareness, promote domestic manufacturing, promote new business models, conduct R&D for EVs and components, and consider new business models to promote EVs.

Government should focus on a phased manufacturing plan to promote EVs, provide fiscal and non-fiscal incentives for phased manufacturing of EVs and batteries. Different government departments can consider a bouquet of potential policies, such as congestion pricing, ZEV credits, low emission/exclusion zones, parking policies, etc. to drive adoption of EVs.

#### **PEPPER IT WITH**

Industrial Revolution 4.0,  
Sugamya Bharat ,  
Abhiyan, BHIM, SWAYATT

### **Pradhan Mantri Ujjwala Yojana**

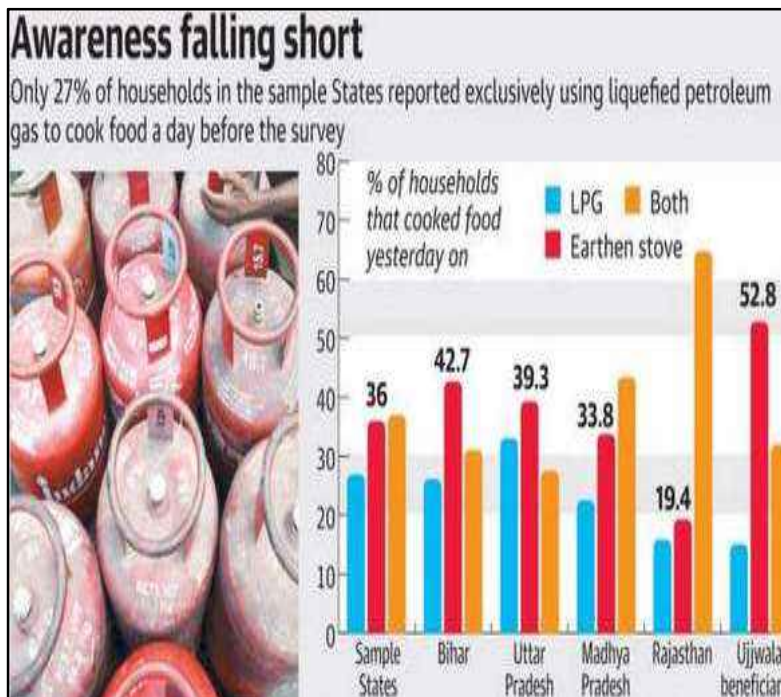
#### **About PMUY**

- PMUY aims to safeguard the health of women & children by providing them with a clean cooking fuel – LPG, so that they don't have to compromise their health in smoky kitchens or wander in unsafe areas collecting firewood.

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- The flagship scheme was launched in 2016 and aims to subsidise LPG connections for rural households by providing a free gas cylinder, regulator and pipe. The scheme is being implemented by the Ministry of Petroleum and Natural Gas.
- LPG connection is released in the name of an adult woman of the poor family, subject to the condition that no LPG connection exists in the name of any family member of the family, including the applicant. The woman is identified through the Socio-Economic Caste Census is given a deposit-free LPG connection with financial assistance of Rs 1,600 per connection by the Centre.
- The beneficiary bears the cost of Hot Plate and purchase of first refill. The beneficiary has an option to take the Hot Plate or the first refill or both on loan basis, from Public Sector Oil Marketing Companies (OMCs) at zero interest rate.



### Key Highlights of RICE study

1. A new study from the Research Institute for Compassionate Economics (RICE) shows that **85%** of Ujjwala beneficiaries in rural **Bihar, Madhya Pradesh, Uttar Pradesh and Rajasthan** still use solid fuels for cooking, due to financial reasons as well as gender inequalities.
2. The trend is more acute among those who received an LPG connection from the government; almost **53%** exclusively used the chulha, while **32%** used both.
3. Almost **70%** of households do not spend anything on solid fuels, meaning that the relative cost of an LPG cylinder refill, even if subsidised, is far higher.
4. Until women's time and availability is seen as a productive economic contribution and while **73% continue** to be out of the workforce, a "low opportunity cost" will be attached to switching to LPG usage full-time, said a 2019 RICE study.
5. **98% of households** with LPG also had chulha, already indicating continued solid fuel use among LPG owners. They found that only 27% of households exclusively used the gas stove. Another 37% reported using both the chulha and the gas stove, while 36% made everything on the chulha.
6. The resultant indoor air pollution can lead to infant deaths and harm child development, as well as contribute to heart and lung disease among adults, especially the women, cooking on these chulhas.

**PEPPER IT WITH**  
PM-SYM, Rozgar Yukt  
Gaon, UJALA Scheme

### Benefits

1. Empowerment of women and protecting their health.
2. Reduction of the serious health hazards associated with cooking based on fossil fuel.
3. Reduction of the number of deaths in India due to unclean cooking fuel.
4. Prevention of young children from significant number of acute respiratory illnesses caused due to indoor air pollution by burning the fossil fuel.



## Veer Parivar App

### About

1. The Veer Parivar App will act as an interface between the CRPF authorities and the next of kin of the slain personnel.
2. The Veer Parivar App will be installed securely on the phones of the slain personnel families and will not be available in the app stores.
3. The app will aid the families of the martyred **CRPF personnel regarding issuance of ex gratia, pension benefits etc.**
4. The Android-based Veer Parivar App **will aid the families on a real-time basis and the CRPF authorities will respond to the issues raised by the members of the families of the slain personnel.**
5. Bharat Ke Veer app for helping families of martyred central paramilitary forces that was initiated by Union Home Ministry.

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### RailWire Wi-Fi

- RailWire is a **retail Broadband initiative of the RailTel**. It envisages extending broadband and application services to the public. RailTel is working to establish bringing fast and free Wi-Fi at all stations (except the halt stations) within a year.
- RailTel Corporation a **“Mini Ratna(Category-I)” PSU of Ministry of Railways**.
- RailWire Wi-Fi by RailTel is now live at 1600 railway stations across the country, with Santacruz railway station in Mumbai becoming the 1600th station

## CheckPoint Tipline

### In News

Facebook-owned WhatsApp has launched a new platform to address the issue of fake news during upcoming Lok Sabha elections called ‘CheckPoint Tipline’.

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### About

- This initiative is launched by **PROTO**, an India-based media skilling start up. The tipline is basically aimed at creating a database of rumours.
- Checkpoint is a research project at PROTO, commissioned and technically assisted by WhatsApp. It uses a tipline on WhatsApp (+91- 9643-000-888) only as a means to collect information that is otherwise inaccessible given the nature of private messaging.
- The goal of this project is **to study the misinformation phenomenon** at scale — natively in WhatsApp — during the Indian elections. As more data flows in, we will be able to identify the most susceptible or affected issues, locations, languages, regions, and more.
- Users can send a rumour — **including a text, image, or video link** — to the tipline. They will receive a reply that the verification centre will be reviewing the rumour for accuracy. If it is a known rumour the user will get a quick response. If it is a new rumour, it will take some time for the verification centre to determine if it can be verified.
- It will cover four regional languages – Hindi, Telugu, Bengali and Malayalam, apart from English.
- To counter this, the app has limited the number of people you can forward a message to five.
- When a user sends a rumour to the tipline the content will go into a database maintained by Meedan.

### How will user privacy be protected when messaging the tipline?

This project is using the WhatsApp Business API, which enables organizations to receive user messages at scale. This project have been structured in such a fashion that both **PROTO and Meedan** do not automatically receive the phone numbers of users submitting information. These teams will receive rumours and may share the misinformation database

with other organizations contributing to the project. Meedan works with a solutions provider called **Smooch** to provide its access to the WhatsApp Business API.

## PPV& FR Act 2001

### Why in News?

PepsiCo had decided to sue nine farmers of Gujarat for the alleged infringement of its intellectual property rights (IPR) over a proprietary potato variety **known as FL 2027**.

It is a potato variety **with high dry matter and low sugar content** which makes it better suited for making chips. The company registered the variety under the Protection of Plant Varieties and Farmers' Rights Act, 2001 (PPV&FRA).

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### About PPV & FR Act

- The Govt. of India enacted "**The Protection of Plant Varieties and Farmers' Rights (PPV&FR) Act, 2001**" adopting sui generis system.
- It is in conformity with International Union for the Protection of New Varieties of Plants (**UPOV**) 1978.
- It recognizes the contributions of both commercial plant breeders and farmers in plant breeding activity.
- It also provides to implement **TRIPs in a way that supports the specific socio-economic interests of all the stakeholders** including private, public sectors and research institutions, as well as resource-constrained farmers.

#### UPOV

The UPOV system of plant variety protection came into being with the **adoption of the International Convention for the Protection of New Varieties of Plants by a Diplomatic Conference in Paris in 1961**. This was the point at which there was recognition of the rights of plant breeders on an international basis.

### Objectives of the Act

- **To establish** an effective system for the protection of plant varieties, the rights of farmers and plant breeders and to encourage the development of new varieties of plants.
- **To recognize** and protect the rights of farmers in respect of their contributions made at any time in conserving, improving and making available plant genetic resources for the development of new plant varieties.
- **To accelerate** agricultural development in the country, protect plant breeders' rights; stimulate investment for research and development both in public & private sector for the development of new plant varieties.
- **Facilitate the growth of seed industry** in the country which will ensure the availability of high-quality seeds and planting material to the farmers.

#### Protection of Plant Varieties and Farmers' Rights Authority (PPV&FRA)

It provides for an effective legal system as prescribed by the PPV&FR Act, 2001 for protecting plant varieties and the rights of farmers, plant breeders and researchers to encourage the seed industry for developing new varieties of plants of economic importance and to recognize the farmers for their contribution towards conserving and improving traditional plant genetic resources. **India is among the first few countries of the world to enact the PPV&FR Act, 2001 on the sui generis system** as per our national requirements. The Act fulfils India's international obligations and commitments to the spirit of **International Treaty on Plant Genetic Resources for Food & Agriculture (ITPGRFA)**.

### Rights under the Act

**Breeders' Rights:** They will have exclusive rights to produce, sell, market, distribute, import or export the protected variety. Breeder can appoint agent/ licensee and may exercise for civil remedy in case of infringement of rights.

**Researchers' Rights:** They can use any of the registered variety under the act for conducting experiment or research. This includes the use of a variety as an initial source of variety for the purpose of developing another variety, but repeated use needs prior permission of the registered breeder.

### **Farmers' Rights**

- ✓ A farmer who has evolved or developed a new variety is **entitled for registration and protection** in like manner as a breeder of a variety.
- ✓ Farmer's variety can also be registered as an extant variety.
- ✓ A farmer can save, use, sow, re-sow, exchange, share or sell his farm produce including seed of a variety protected under the PPV&FR Act, 2001 in the same manner as he was entitled before the coming into force of this Act provided farmer shall not be entitled to sell **branded seed of a variety protected under the PPV&FR Act, 2001.**
- ✓ Farmers are eligible for recognition and rewards for the conservation of Plant Genetic Resources of land races and wild relatives of economic plants.
- ✓ There is also a provision for compensation to the farmers for non-performance of variety under Section 39 (2) of the Act, 2001.
- ✓ Farmer shall not be liable to pay any fee in any proceeding before the Authority or Registrar or the Tribunal or the High Court under the Act.

**PEPPER IT WITH**  
GI Tag, TRIPS, IPR, Patent Act,  
Copyright Act, ITPGRFA

## **Face of disaster report 2019**

### **Why in News?**

The **'Face of Disasters 2019'** report released by SEEDS (Sustainable Environment and Ecological Development Society) as part of its 25th anniversary, analyses past trends, looking at disasters from a broader perspective to capture their varied facets.

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### **Key Findings of Report**

- Eight key areas have emerged that will be critical to consider as we look ahead.
  - **Water and the changing nature of disaster risk:** A 'new normal' of rainfall variability is bringing challenges of too much and too little water, often in parallel.
  - **No disaster is 'natural':** Risks lurking under the radar slip through the cracks because they don't meet the idea of a 'natural disaster'.
  - **The silent events:** The disasters that go unseen leave those affected at even greater risk.
  - **Land becomes water (and water becomes land):** Changes to the coastline are already affecting livelihood sources and will be hotspots for vulnerability in the future.
  - **The complexity of disaster impact:** Beyond official 'damages', the long-term and uncaptured disaster impacts have life-changing consequences for affected communities.
  - **The urban imperative:** Risk is rapidly urbanising and will affect everyone.

**SEEDS**

SEEDS is a non-profit voluntary organisation that works towards building resilience in vulnerable communities. Its workforce comprises young professionals drawn from various development related fields. **It is involved in research activities in Community Development, Disaster Management, Environmental Planning, Transport Planning, and Urban and Regional Planning.** Activities are carried out on behalf of government, semi-government and international development agencies.

- **Transformations in the third pole:** Himalayan glaciers are melting, with serious implications for the whole region.
- **Planning for what you can't see:** Earthquake risk is looming large under the radar.
- Analysis of past trends shows us that 2019 will see unusual flooding, as well as heatwaves and drought that are already ongoing.
- A single **mega-disaster can wipe out hard-won development gains** and recurrent small-scale stresses keep vulnerable families in a cycle of poverty.
- While this multiple event pattern is repeated every year, only a few really capture the public attention. Other risks continue to intensify under the radar.

**PEPPER IT WITH**

NDMA, DERA, Red Cross,  
UNDRR, Doctors Without  
Borders

**Way-Forward**

- ✓ The complexity of disasters today requires a proactive and multi-pronged approach.
- ✓ The key to helping those most vulnerable in 2019 and beyond will be to recognise these often-invisible risks.
- ✓ There is a clear need for comprehensive understanding of risks, and hyper-localised plans and allocation of resources to reduce them.
- ✓ Investing in identifying and scaling local innovative strategies will be a core part of this process.
- ✓ Disasters cannot be seen in isolation. All in all, to look at building a sustainable future, beyond response.

**Demand for Prime Minister and Sadr-e-Riyasat**

**Why in News?**

Recently, many political parties are demanding the restoration of J&K's autonomy to its original status as **agreed during the 1947 negotiations**. In 2000, the Legislative Assembly passed a State Autonomy Report, seeking restoration of the state's autonomy to the 1953 position, which would have meant restoration of the Prime Minister and Sadr-e-Riyasat positions but was out rightly rejected by Vajpayee government.

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**Historical Background**

- The J&K Constituent Assembly was constituted in September 1951 and dispersed on January 25, 1957. The J&K Constitution was adopted on November 17, 1956 but came **into effect only on January 26, 1957**.
- The Constituent Assembly resolved that the **head of state, named Sadr-e-Riyasat**, would be elected by the Legislative Assembly for a term of five years and **recognised by the President of India**.
- After Initial reluctance, Government of India agreed to allow J&K to recognise an elected Sadr-e-Riyasat instead of an appointed Governor.
- On the recommendation of the J&K Constituent Assembly, **the President issued a Constitution Order on November 17, 1952 under Article 370 saying that the state government means the elected Sadr-e-Riyasat, acting on the aid and advice of council of ministers**.
- J&K had its own Prime Minister and Sadr-e-Riyasat until 1965, **when the J&K Constitution was amended (Sixth Constitution of J&K Amendment Act, 1965)** by the then Congress government, which **replaced the two positions with Chief Minister and Governor respectively**.

**The amendment**

- The Sixth Amendment to the J&K Constitution, carried out in 1965, made a fundamental change to its basic structure.

- **Under Section 147**, an amendment is to be assented by the Sadr-e-Riyasat after a Bill is **passed by a two-thirds majority of the House**, while Section 147 itself cannot be amended by the state legislature, and neither can an amendment that changes the provisions of Constitution of India as applicable in relation to J&K.
- **Sadr-e-Riyasat was replaced with Governor across the J&K Constitution**, except in Section 147 which could not be amended.
- This has led to the existence of **two kinds of heads of state in the Constitution a Sadr-e-Riyasat as well as Governor. In 1975, a Presidential Order issued under Article 370 barred the J&K Legislature from making any change to the J&K Constitution regarding appointment and powers of the Governor.**
- In December 2015, the J&K High Court ruled that the conversion of the post of Sadr-e-Riyasat into Governor **was unconstitutional**. "The 'elective' status of Head of the State was an important attribute of Constitutional autonomy enjoyed by the State, **a part of 'Basic Framework' of the State Constitution and therefore not within the amending power of the State legislature**". Further it added: "**In terms of aforesaid amendment Governor is appointed by the President and is to be Head of the State. The office of Head of the State in wake of amendment ceases to be 'elective'**".
- The Sixth Amendment therefore did not merely change the nomenclature, but the eligibility, mode and method of appointment of Head of the State.

#### Facts

- ❖ The state of Jammu & Kashmir had nine more Prime Ministers before Independence.
- ❖ The first Prime Minister of J&K, appointed by Dogra ruler Maharaja Hari Singh, was **Sir Albion Banerjee (1927-29)**.
- ❖ The first after Independence was Mehr Chand Mahajan (October 1947-March 1948).
- ❖ Ghulam Mohammad Sadiq was the last Prime Minister of J&K
- ❖ Karan Singh has been the only Sadr-e-Riyasat, until the post was abolished.

#### PEPPER IT WITH

Article 370, Article 35 A, AFSPA, UNSC Resolution 47

## LoC Trade

### In News

MHA has issued orders to suspend the LoC trade in Jammu & Kashmir recently.

### Trade across LoC

1. LoC trade is meant to facilitate exchange of goods of common use between local populations across the LoC in Jammu & Kashmir.
2. Trade across LoC **began in 2008**, as a part of Kashmir specific **Confidence building measures (CBMs)**. It had been initiated by the former Prime Ministers Shri Vajpayee, Dr Singh and their counterpart President of Pakistan General Musharraf.
3. This step along with Bus Service between Srinagar and Muzaffarabad was meant to soften the boundaries.
4. Since its inception it had generated **significant days of employment** for the local population and **total trade crossed an estimated 6000 Crore**.
5. The trade is allowed through two Trade Facilitation Centres located at **Salamabad, Uri, District Baramulla and Chakkan-da-Bagh, District Poonch**. The trade takes place **four days a week**. Government of India to suspend the LoC trade at Salamabad and Chakkan-da-Bagh in Jammu and Kashmir with immediate effect.
6. The **Trade is based on Barter system and zero duty basis**. Records of the trade done is audited regularly.
7. The trade is done **on agreed list of 21 items on both sides**. There is a decline in the cross-border trade along the LoC since 2015.

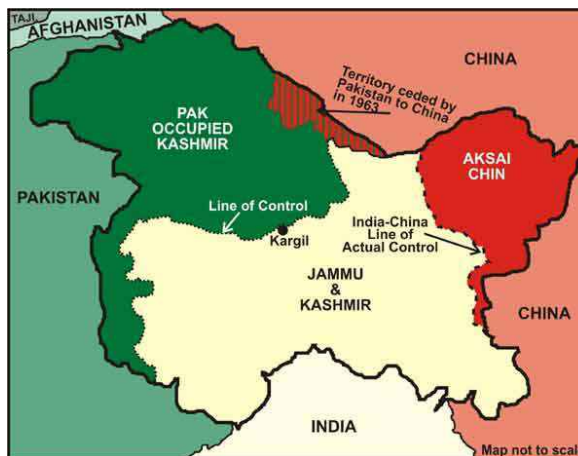
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8. Due to non-acceptance of LoC as international border between the two nations, **export and import are called Traded-Out and Traded-In goods.**

### Concerns

- It has been revealed that the trade has changed **its character to mostly third-party trade and products from other regions**, including foreign countries, are finding their way through this route for e.g. the use of channel for trading of **American products like Californian almonds.**
- Unscrupulous and anti-national elements** are using the route as a **conduit for Hawala money, drugs and weapons, under the garb of this trade.**
- The investigations by NIA has brought out that a significant number of trading concerns engaged in LoC trade are being **operated by persons closely associated with banned terrorist organizations involved in fuelling terrorism/separatism.**
- Government of India has been receiving reports that the cross-LoC trade routes are being **misused by the Pakistan based elements for funnelling illegal weapons, narcotics and fake currency etc.**
- Use of the route by Paksitan to evade the consequent higher duty after the **removal of Most Favoured Nation status granted by India.**



### Border Haat

Presently, there are two border haats in Meghalaya and two in Tripura both along the Bangladesh border. It functions one day a week and is a reunion spot for each families across the border (residing within the 5 KM of the border area). The business is done on the barter basis and data is managed by Haat Management Committee. There is no operational border haat along Bhutan and Myanmar border, but recently MoU has been signed for border haats along Myanmar.

### Line of Control (LOC)

- LOC runs 742km (460 miles) dividing Indian- and Pakistan-controlled Kashmir, and acts as part of the de facto border between the two countries.
- Originally known as the Cease-fire Line, it was re-designated as the “Line of Control” following the Shimla Agreement, which was signed on 3 July 1972.

### Line of Actual Control (LAC)

- LAC a 4,057-km porous border running through glaciers, snow deserts, mountains and rivers separate India and China.
- In 1993, India and China signed an accord **called Agreement on the ‘Maintenance of Peace and Tranquillity’ to reduce tensions along their border and respect the LAC.**
- The LAC traverses three areas — Western (Ladakh, Kashmir), middle (Uttarakhand, Himachal) and eastern (Sikkim, Arunachal).
- China **illegally occupies 38,000sqkm of land in Jammu & Kashmir. It also holds 5,180km of Indian Territory in PoK under the Sino-Pak agreement of 1963.**
- Another ceasefire line separates the Indian-controlled state of Jammu and Kashmir from the Chinese-controlled area known as Aksai Chin.

### PEPPER IT WITH

AFSPA, Article 35A, Article 370, Article 368, Delhi Agreement, Shimla Agreement (1972), NJ9842, ICRIER, Wagah-Attari Border, Indus Water Treaty, William Johnson Line, MFN Status



### What can be done?

- **Joint investigation team of India and Pakistan.**
- Use of technology such as **Truck Scanners**
- Monitoring Cell of officials from central and state government agencies needs to be constituted.
- **Institutionalised and formalised trading communities like Joint Chamber of Commerce.**
- **Training to traders with support from excise and security agencies.**

### Way Forward

- There is need to develop a full proof mechanism, rather than suspending the trade.
- Since it is a trade based on Barter System, regular accounting and other international trade practices are not applicable. Hence, system should be reformed.
- There is **urgent need to implement the recommendations of the Bureau of Research on Industry & Economic Fundamentals (BRIEF) which had suggested number of measures that will strengthen the trade along the LoC.**
- Both countries with the help of an independent third agency can also design another Indus Water Treaty (IWT) for trade on LoC.
- Cross border trade mechanism not only help in development of an economy but also paves way for better ties between two nations.

## **Asia Pacific Broadcasting Union (ABU) Media Summit**

### Why in News?

The **5th Asia Pacific Broadcasting Union (ABU) Media Summit on Climate Action and Disaster Preparedness** was held recently in **Kathmandu**.

### Details

The theme of the two-day summit was “**Media Solutions for Sustainable Future: Saving Lives, Building Resilient Communities**”.

The summit was aimed to **address the issue of fully utilizing media’s potential of accelerating climate action and disaster preparedness** and connect stakeholders to media professionals for collaboration and joint practical projects.

### Highlights

The 5<sup>th</sup> ABU Media Summit on Climate Action and Disaster Preparedness adopted the **Kathmandu Media Action Plan** which lists concrete steps for fully involving media in saving lives and livelihoods.

The Plan suggests a comprehensive investment in broadcasters’ networks to make them resilient to hazards, and also recommends capacity building for journalists to be able to prepare their audiences for future disasters. The Kathmandu Media Action Plan will be included in the Global Platform for DRR to be held in May 2019 (6<sup>th</sup> edition).

### Asia Pacific Broadcasting Union

- The **Asia-Pacific Broadcasting Union (ABU)** is the biggest broadcasting union in the world.
- It was established in 1964 as a non-profit, non-governmental, non- political, professional association with mandate to assist the development of broadcasting in the region.
- ABU promotes the collective interests of television and radio broadcasters as well as key industry players and facilitate regional and international media co-operation.
- In the last decade, the Union has become a global player in using media for social development and nation-building.
- ABU is a member of the World Broadcasters’ Union and works closely with the other regional broadcasting unions on matters of common concern.

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#### **PEPPER IT WITH**

Hyogo Framework, Bosai culture, Gala Award Ceremony - 4<sup>th</sup> ABU Awards on Climate Change and DRR

## GLOBAL PLATFORM FOR DISASTER RISK REDUCTION

Global Platform for Disaster Reduction is the **world's foremost gathering on reducing disaster risk and building the resilience** of communities and nations.

It was first held in 2007 and takes place every two years, with the 2015 edition rolled into the Third UN World Conference on Disaster Risk Reduction **were Sendai Framework was adopted.**

## Exclusion of BCIM from BRI Initiative

### Why in News?

After India decided to skip the Second Belt and Road Forum, **China excluded Bangladesh-China-India-Myanmar (BCIM) Economic corridor** from the list of projects covered by the China-led Belt and Road Initiative (BRI) umbrella.

### What is the Issue?

- India again snubbed the Belt and Road Initiative for the second time citing **sovereignty issues** as CPEC which is a flagship of the BRI is passing through Pakistan occupied Kashmir (PoK).
- In response, Chinese foreign ministry website has not listed the BCIM as a project covered by the BRI.
- Instead, South Asia is covered by three major undertakings—the **China-Myanmar Economic Corridor (CMEC)**, the **Nepal-China Trans-Himalayan Multi-dimensional Connectivity Network**, including Nepal-China cross-border railway, as well as the **China Pakistan Economic Corridor (CPEC)**.

### About BCIM

- It is the proposed 2,800-km long Economic Corridor that will connect Kolkata with Kunming (Yunnan Province).
- It is the result of decades old discussion **under Track-II process known as the 'Kunming Initiative'.**

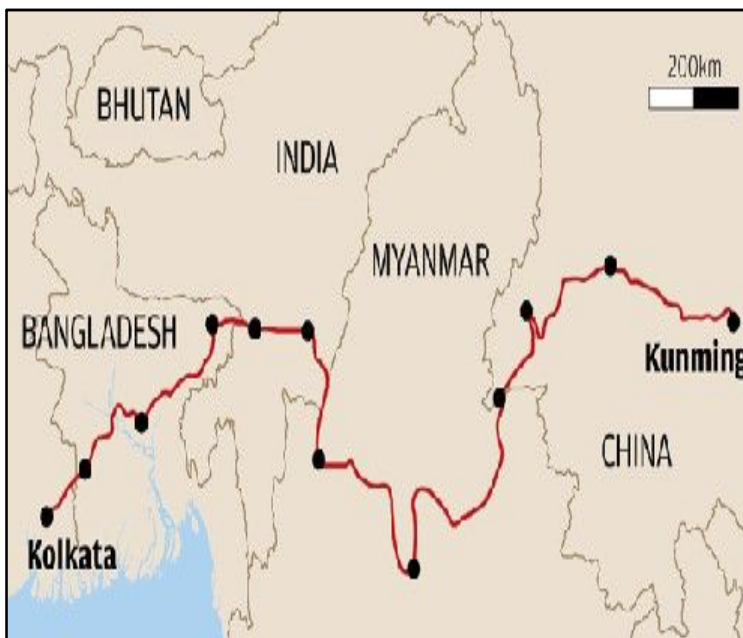
### Importance of BCIM

- ✓ The corridor goes beyond physical connectivity through to providing digital connectivity, trade facilitation and lowering barriers for smooth and seamless movement of goods, services, investment and people.
- ✓ It has the potential to generate huge economic benefits in trade, investment, energy, transport and communication linkages.
- ✓ It will open-up markets for India in the east, which will also be pivotal for **India's 'Act East' policy.**
- ✓ It will help India in opening-up of the economic potential of the northeastern states.

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### China-Myanmar Economic Corridor (CMEC)

CMEC will run from Yunnan Province of China to Mandalay in Central Myanmar. From there it will head towards Yangon, before terminating at the Kyaukpyu Special Economic Zone (SEZ) on the Bay of Bengal. It will reduce Beijing's trade and energy reliance on the Malacca straits



### Concerns for India

- There is **lack of trust and confidence** between India and China. China has been aggressively hostile to India's rightful role in regional and international affairs.
- It is likely that the economic corridor **will bring India's north-eastern states under the increasing influence of China**, further weakening their physical, economic, social and emotional chord with mainland India.
- The whole region comprising India's Northeast and areas across its boundaries with neighbouring countries is embroiled in insurgencies, ethnic disturbances, drug and human trafficking and gun-running.
- In **strategic terms**, the corridor will bring China within sniffing distance of Arunachal Pradesh, region claimed by it as Southern Tibet.
- It will also provide China direct and unfettered access to Bay of Bengal, enabling it to lessen its dependence on the narrow and **risk-prone Malacca Straits** for global trade and energy imports.
- It will further worsen the trade-deficit, India has with China as cheap and low-quality Chinese goods are likely to flood markets which is detriment for domestic industries.

### What should be India's Response?

- Focus on building and upgrading infrastructure in the North-Eastern states and enhance its connectivity with rest of India as these states are strategically important and are richly endowed with natural resources such as uranium, coal, hydrocarbons, forests, oil and gas.
- Need to work on other important connectivity project such as
  - The **India-Myanmar-Thailand Trilateral Highway** joining India's Northeast with Thailand and other ASEAN members through Myanmar needs to be expedited. This network will provide connectivity between the isolated Northeast and the expanding economies of South East Asia.
  - The **Kaladan Multimodal Transit Transport Project** will help connect the Northeast with Myanmar as well as with West Bengal. This will be valuable in connecting the region with mainland India and providing quick, easy and seamless access to South East Asia.
  - The **Bangladesh, Bhutan, India, Nepal (BBIN)** sub-regional initiative needs to be accorded the highest priority as it has great potential to deliver rich dividends quickly.

Close monitoring and supervision of these projects need to be undertaken so that there are no slippages in completion schedules and cost overruns.

### Way Forward

- ✓ In BCIM, **a step-by-step approach is desirable**. Rather than embarking on building large and heavy infrastructure of big cities and malls, small steps in the form of people-centric projects in education, healthcare, skill development, tourism and cottage industries should be undertaken.
- ✓ The benefits of these projects should go to the people so that they become active stakeholders in support of this initiative. Local talent, material and products should be utilized in this endeavor.

#### **The Nepal-China Trans-Himalayan connectivity network**

The Nepal-China Trans-Himalayan connectivity network starts from Chengdu, from where it is linked to Tibet by the Sichuan-Tibet Highway, or the Sichuan-Tibet Railway. It is proposed that the railway from Tibet will be further extended to Kathmandu, via Ya'an, Qamdo, Lhasa and Shigatse. Chinese planners visualize that this railway will be eventually connected with the Indian railway network, linking China and India across the Himalayas.

#### **PEPPER IT WITH**

CPEC, BBIN, BIMSTEC, Mekong-Ganga Cooperation, East-West Corridor, Act East Policy

- ✓ The most crucial component for success of any connectivity project is mutual trust. **China and India need to work together to bring about a fundamental change in their bilateral relations.**

## Asian Tea Alliance

### Why in News?

The Asian Tea Alliance (ATA) **which is a union of five tea-growing and consuming countries was launched in Guizhou in China.**

### About ATA

- The members of the alliance are the Indian Tea Association, China Tea Marketing Association, Indonesian Tea Marketing Association, Sri Lanka Tea Board and Japan Tea Association.
- **ATA plans to work towards** enhancing tea trade, cultural exchanges, technology exchanges as well as globally promoting tea.
- It will also work towards enhancing global consumption of tea, while creating a sustainability agenda for the future of Asian tea.
- The formation of the alliance has come in the backdrop of signing of a memorandum of understanding between the Indian Tea Association and China Tea Marketing Association in 2018.
- The associations had signed the pact to promote green and black tea consumption in major tea markets of Europe, the U.S., Russia and West Asia, besides India and China.

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### Indian Tea Association

- ❖ **Founded in 1881**, the Indian Tea Association (ITA) is the premier and oldest Association of tea producers in India.
- ❖ ITA, since its inception has remained the principal advisory and supervisory body in the tea industry. It was initially set up to promote orderly growth and collective thinking in Tea.
- ❖ ITA serves as the Secretariat of the **Consultative Committee of Plantation Associations (CCPA)** which is the apex body of tea producer Associations in India.
- ❖ It represents to Governments (Central & State), Tea Board, local authorities, public bodies, etc. regarding the collective interests of members and the tea industry in general.

### PEPPER IT WITH

Tea board of India, Tea Act, 1953, Tea Map of India, Spices Board of India

## Global Talent Competitiveness Index

### Why in News?

**INSEAD business school** in partnership with **Tata Communications** and **Adecco Group** released Global Talent Competitive Index (GTCI) 2019.

### What is GTCI?

- It was launched for the first time in **2013** and since then it has become an annual benchmarking report that measures the ability of countries to compete for talent.
- The report measures levels of Global Talent Competitiveness by looking at 68 variables.
- Some of the parameters are Lifelong Learning, growing talent, Access to Growth Opportunities, Business and Labour Landscape, Employability, Attract and retain talent.

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### INSEAD

Institut Européen d'Administration des Affaires (European Institute of Business Administration) is a graduate business school with campuses in Europe (Fontainebleau, France), Asia (Singapore), and the Middle East (Abu Dhabi).



### Key Findings

- ✓ The theme of the report is "**Entrepreneurial Talent and Global Competitiveness**". GTCI aims to answer the questions such as how entrepreneurial talent is being encouraged, nurtured and developed throughout the world and how this affects the relative competitiveness of different economies.
- ✓ **India ranked 80<sup>th</sup> in the report** which is one position up from the last year.
- ✓ India performed better than its lower-income peers when it comes to growing talent (only pillar where the country is positioned above the median) and access to growth opportunities.
- ✓ India's biggest challenge is to improve its ability to attract and retain talent. There is a need to address its poor level of Internal Openness, especially with respect to weak gender equality and low tolerances towards minorities and immigrants.
- ✓ China emerged as the best performer among the BRICS countries, with an overall position of 45th.
- ✓ Switzerland continues to lead the 2019 Global Talent Competitiveness index, while Singapore and the United States come in second and third respectively. Yemen has finished at the bottom of this year's index at 125th.

#### PEPPER IT WITH

NIRF, Global Entrepreneurship Index, Human Capital Index, Global Innovation index, Start-up Industry Index

### World Press Freedom Index

#### Why in News?

The Reporters without borders (RSF) recently published the report on World Press Freedom Index for the year 2019.

#### What is World Press Freedom Index?

- The degree of freedom available to journalists is determined by pooling the responses of experts to a questionnaire devised by RSF.
- The questionnaire measures pluralism, media independence and respect for the safety and freedom of journalists.
- It also includes indicators of the level of media freedom violations in each region.

#### Key Findings

- It shows how hatred of journalists has degenerated into violence, contributing to an increase in fear.
- The number of countries regarded as safe, where journalists can work in complete security, **continues to decline**, while authoritarian regimes continue to tighten their grip on the media.
- The hostility towards journalists expressed by political leaders in many countries has incited **increasingly serious and frequent acts of violence** that have fuelled an unprecedented level of fear and danger for journalists.
- Only 24 percent of the 180 countries and territories were classified as "good" or "fairly good", as opposed to 26 percent last year.
- Of all the world's regions, it is the Americas (North and South) that has suffered the greatest deterioration (3.6 percent) in its regional score measuring the level of press freedom constraints and violations.

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#### Reporters Without Borders

Reporters Without Borders or Reporters sans Frontières (RSF) is an international organization founded in France in 1985 to advocate for press freedom worldwide. It is Named in reference to the international medical charity Doctors Without Borders, Reporters Without Borders.

- ❖ RSF defends imprisoned or persecuted journalists and media personnel
- ❖ Exposes mistreatment and torture of journalists
- ❖ Provides financial aid for struggling media personnel or companies (as well as for the families of imprisoned journalists)
- ❖ Promotes journalists' safety, particularly in war zones.

- The Middle East and North Africa region continues to be the most difficult and dangerous for journalists.
- The Asia-Pacific region continues to rank third last. The number of murdered journalists was extremely high in Afghanistan, India and Pakistan. Disinformation is becoming a big problem in the region.

### **India-Specific Findings**

- ✓ India ranks dropped from 138<sup>th</sup> in 2018 to 140<sup>th</sup> in 2019.
- ✓ Violence against journalists which includes police violence, attacks by Maoist fighters, and reprisals by criminal groups or corrupt politicians are the most striking characteristics of the current state of press freedom in India.
- ✓ Coverage of regions that the authorities regard as sensitive, such as Kashmir, continues to be very difficult. There are restrictions on entry to into such zones and often internet is disconnected.

### **PEPPER IT WITH**

Democracy Index, Amnesty International, c-vigil, World Dynamic Cities 2019, Corruption Perceptions Index,

## **British Anti-Slavery Fund**

### **Why in News?**

British had created a dedicated fund to support global anti-slavery projects.

### **What will fund do?**

- Six organization including charity such as Anti-Slavery International and the United Nations University will share the aid money from The Modern Slavery Innovation Fund.
- The funding will also be used to run workshops on modern slavery in South Africa, improve support for survivors in India, and develop an online data hub to boost anti-slavery policies.
- The British government has committed a total of 200 million pounds in aid funding to combat modern-day slavery overseas.

### **What is Modern slavery?**

- ✓ Modern slavery is **less about people literally owning other people but more about being exploited and completely controlled by someone else, without being able to leave.**
- ✓ There are estimated 40.3 million people in modern slavery around the world which includes 10 million children.
- ✓ Various forms of Modern Slavery are:
  - **Forced labour** – any work or services which people are forced to do against their will under the threat of some form of punishment.
  - **Debt bondage or bonded labour** – the world's most widespread form of slavery, when people borrow money they cannot repay and are required to work to pay

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### **Anti-Slavery International**

- ❖ Anti-Slavery International is the **world's oldest international human rights organisation**, founded in 1839 by British abolitionists such as **Thomas Clarkson**.
- ❖ Anti-Slavery International is the only British charity exclusively working to eliminate all forms of slavery and slavery like practices throughout the world.
- ❖ It deals with the **root causes of slavery** and its consequences to achieve sustainable change. It raises awareness, organize campaigns and directly engage with governments and International organizations.
- ❖ It works in partnership with local organization to understand the local context and the specific approaches necessary to achieve sustainable change for the victims of slavery.
- ❖ It supports individuals and communities affected by slavery and we facilitate access to education, justice and compensation for people freed from slavery.



off the debt, then losing control over the conditions of both their employment and the debt.

- **Human trafficking**– involves transporting, recruiting or harbouring people for the purpose of exploitation, using violence, threats or coercion.
- **Descent-based slavery** – where people are born into slavery because their ancestors were captured and enslaved; they remain in slavery by descent.
- **Child slavery** – many people often confuse child slavery with child labour, but it is much worse. Whilst child labour is harmful for children and hinders their education and development, child slavery occurs when a child is exploited for someone else's gain. It can include child trafficking, child soldiers, child marriage and child domestic slavery.
- **Forced and early marriage** – when someone is married against their will and cannot leave the marriage. Most child marriages can be considered slavery.

### **India and Modern Slavery**

- As per the Global Slavery Index 2016, India had the world's largest number of modern slaves, at 18.3 million, with 1.4% of the population living in slavery-like conditions. India ranked 53 among 167 countries in the index.
- The most affected people of debt bondage are the members of marginalised castes, tribes, religious minorities, refugees and migrant workers.
- There are also instances of **Nepali and Bangladeshi migrants being subjected to forced labour in India** through debt bondage and recruitment fraud. Domestic workers are particularly vulnerable as they work in private homes and depend on their employers for basic needs such as food and shelter.
- There is an emerging trend in northeast India where organised trafficking syndicates operate undetected along the open and unmanned international borders, duping or coercing young, educated girls seeking employment outside their local area into forced sexual exploitation.
- There is a growing trend for brides to move from the poorer eastern or southern parts of the country to the more prosperous areas in the north where there is a higher male to female sex ratio. Women are reportedly sold off into marriage by their families, sometimes at a young age, and end up enduring severe abuse, rape, and exploitation by their husbands.
- Indian women and girls from impoverished backgrounds are reportedly also lured by promises of marriage by younger men from urban areas, but then forced into sex work once married to their husbands.
- **Human trafficking for organ removal** continues throughout India where growing rates of kidney and liver disease have added to the increasing gap between the demand and supply of organs.
- There is widespread use of children in armed conflicts. There are reported cases of abductions and coercion of children to join **Bal Dasta units** which train children in front-line operations, and as couriers and informants against national security forces.

#### **PEPPER IT WITH**

Global Slavery Index, Walk Free Foundation, International Labor Organization, Kidney Belt of India, Ethical Trading Initiative, UK Modern Slavery Act

### **Iran, Pakistan Joint Border 'Reaction Force'**

#### **Why in News?**

Iran and Pakistan have agreed to set up a joint border "**reaction force**" following a spate of deadly attacks by militant groups on their frontier.

#### **Iran-Pakistan Border**

- Iran-Pakistan border skirts the volatile south-eastern Iranian province of Sistan-Baluchistan which has been the scene of frequent attacks on Iran's security forces.
- Balochs live on both sides of the Pakistan-Iran border, and maintain cultural, political, and economic ties with each other.

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- There are group of Pakistani Baloch who attack Iranian forces and often abduct Iranian Soldiers. **Jaish ul-Adl is one such group**. It is a **Sunni Baloch militant group fighting against Iran**.
- In the February 2019, Jaish ul-Adl attacked a bus carrying Iranian Revolutionary Guards. The attack left 23 IR Guards dead.
- Further, a new umbrella group representing various insurgent groups has been operating in Baluchistan and claimed responsibility of various recent terror attacks in Tehran.
- Saudi Arabia also plays a crucial role as Iran has accused Pakistan of giving refuge to Saudi-sponsored jihadi Baloch militants, who allegedly carry out attacks on both Iranian security forces in the border region and state installations inside Iran. Pakistan has vehemently denied these charges time and again.



- Competition over Cooperation:
  - Pakistan-Iran cooperation is being replaced by competition. One of the most conspicuous points of competition is over their twin ports in the two Baloch territories: **Gwadar in Pakistan and Chabahar in Iran**. Although officially Pakistan and Iran call these ports “sisters” that can together change the fate of the whole region, in reality, there is a cut-throat competition between these two ports.

#### Iranian Revolutionary Guards

The Islamic Revolutionary Guard Corps (IRGC) is an elite wing of the Iranian military that was established in the **aftermath of the country's revolution in 1979**. They form the part of ground forces, naval and air forces, as well as intelligence and special forces.

Their primary role is internal security, The Revolutionary Guard chief reports directly to Supreme Leader of Iran. **The IRGC is not only Iran's most powerful military institution, it holds deep influence over domestic politics and the economy**, with interests extending to and beyond the construction, telecommunications, auto and energy industries

#### Concerns for India

- ✓ India has invested heavily in **Chabahar port** and building a relationship with Iran. As Chabahar serves not only the economic interest but also the strategic interest of India as it serves the connecting dot for India and Afghanistan and Central Asia.
- ✓ Any form of terror activity in the region creates security issues for India's operation in Chabahar port.

**PEPPER IT WITH**  
Chabahar Port, Balochistan  
Liberation Army, CPEC.

- ✓ Therefore, it requires cooperation between India-Iran to tackle the challenges and India needs to play a proactive role in the region.

## Arab League pledges \$100m per month to Palestinian Authority

### Why in News?

The Arab League has **pledged \$100 million per month to the Palestinian Authority (PA) to make up for funds withheld by Israel** because of payments made to the families of Palestinian attackers and prisoners.

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### What is the issue?

- ✓ **Israel collects taxes on behalf of the PA.** It recently withheld \$138m in transfers in February over Palestinian payments to political prisoners jailed for attacks against Israelis.

### Arab League

The Arab League is a union of Arab-speaking African and Asian countries. It was formed in **Cairo in 1945** to promote the independence, sovereignty, affairs and interests of its 22 member countries and four observers. The 22 members of the Arab League as of 2018 were **Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, the United Arab Emirates and Yemen. The four observers are Brazil, Eritrea, India and Venezuela.**

- ✓ The PA sees the payments as a kind of welfare system for families who have lost a breadwinner.
- ✓ The freeze came as the Palestinians face major budget cuts, after the United States slashed funding for the UN's Palestinian refugee programme, UNRWA, and for development programmes in the Palestinian territories.

### PEPPER IT WITH

GCC, Two-State theory, UNRWA

## Kafala

### Why in News?

International Labour Organization (ILO) recently informed that Qatar was set to abolish its **controversial exit visa system** for all foreign workers by the end of 2019.

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### What is Kafala?

- “Kafala” or sponsorship system is an exit visa system under which all foreign workers working in Qatar require a local sponsor, in the form of an individual or company, and need their permission to switch jobs or leave the country.
- The **system was compared to modern-day slavery** and left vulnerable workers with little protection and open to abuse.

### Qatar's Labour reform

- ❖ Qatar has introduced a series of labour reforms since its selection as the **2022 World Cup host**, with the event setting in motion a huge construction programme employing foreign workers.
- ❖ As part of its pledge to reform the labour section, Qatar has also introduced a monthly minimum wage of 750 riyals (\$206) and agreed to work closely with the ILO, which now has an office in the capital.

### Background

- In September 2018, Qatar approved legislation to scrap the “kafala” which came into force later for all but 5% of a company's workforce except those in the most senior positions.
- Following the recent Amnesty International report highlighting that the 2022 World Cup host was failing to stop widespread labour abuse, Doha committed itself on the course to deliver “lasting” change.

### PEPPER IT WITH

ILO, Amnesty International, Shrameva Jayate, H1B VISA issue

- The human rights group accused the energy-rich state of “running out of time” to implement reforms before the World Cup.

## US rejects the UN's 2013 Arms Trade Treaty

### Why in News?

The US President recently announced the withdrawal of US support for a United Nations Arms Trade Treaty signed in 2013 regulating the multibillion-dollar global arms trade.

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### Arms Trade Treaty

- The Arms Trade Treaty (ATT) establishes common standards for the international trade of conventional weapons and **seeks to reduce the illicit arms trade.**
- The treaty aims to reduce human suffering caused by illegal and irresponsible arms transfers, improve regional security and stability, as well as to promote accountability and transparency by state parties concerned.
- **ATT was adopted by the UN General Assembly in 2013.** It covers all types of weapons and seeks to stop them from **reaching regimes abusing human rights or parties in civil wars, armed and terrorist groups.**
- The ATT **does not place restrictions on the types or quantities of arms that may be bought, sold, or possessed by states.** It also **does not impact a state's domestic gun control laws** or other firearm ownership policies.

### USA's drift from multilateralism

Advancing his America First policy, the US President has already withdrawn the US from historic Paris Climate Agreement, UNESCO, **Intermediate-range Nuclear Forces Treaty (INF)**, which bans nuclear-tipped missiles with ranges of 500 to 5,500 km, and the **Iran nuclear deal** that was made by the five permanent members of the UN Security Council, Germany and Tehran.

### Reason for withdrawal

- The argument given by the US official was that while the US already had rules in place to govern its arms transactions, countries like Russia and China did not have any. Despite being major arms exporters, these countries have not signed ATT.
- Also, US had anticipated that it could face legal challenges similar to UK if it continued to be a part of the ATT. British government is being sued by an NGO, **Campaign Against Arms Trade** citing the treaty to stop arms sales to Saudi Arabia, a Washington ally.

### Campaign Against Arms Trade (CAAT)

Campaign Against Arms Trade (CAAT) is a UK-based organization working to end the international arms trade.

CAAT considers that security needs to be seen in much broader terms that are not dominated by military and arms company interests. A wider security policy would have the opportunity to reallocate resources according to actual threats and benefits, **including addressing major causes of insecurity such as inequality and climate change.**

### ATT and India

India has not signed the treaty. One of the arguments made by India in 2013 against the treaty was that New Delhi **had “strong and effective national export controls”** on military hardware to ensure they didn't fall into the wrong hands. By pulling out of the ATT, the US has joined India.

### PEPPER IT WITH

SIPRI Arms Trade Database, UNGA, America First Policy

## Various India-US Foundational Military Agreements

These are basic defence cooperation agreements that the U.S. enters into with its defence partners/ close allies to facilitate interoperability between militaries and sale of high-end technology.

### General Security of Military Information Agreement (GSOMIA)

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- It allows the sharing of classified information from the U.S. government and American companies with the Government of India and Defence Public Sector Undertakings (DPSU) but not with Indian private companies.
- India signed **GSOMIA in 2002**.

### **Logistics Exchange Memorandum of Agreement (LEMOA)**

- It allows the militaries of both countries access to each other's facilities for supplies and repairs for the purpose of refuelling and replenishment in primarily four areas — port calls, joint exercises, training and humanitarian assistance and disaster relief.
- India concluded **LEMOA in 2016**.

### **Communications Compatibility and Security Agreement (COMCASA)**

- ✓ It allows India to procure transfer specialised equipment for encrypted communications for US origin military platforms like the C-17, C-130 and P-8Is. **COMCASA is an India-specific version of the Communication and Information on Security Memorandum of Agreement (CISMOA).**
- ✓ India **concluded COMCASA in 2018 on the sidelines of inaugural 2+2 dialogue. It is valid for a period of 10 years.**

### **Basic Exchange and Cooperation Agreement for Geo-spatial Cooperation (BECA)**

- It would set a framework through which the United States would share sensitive data to aid targeting and navigation with India.
- **BECA draft is still under negotiation.**

### **Industrial Security Annex (ISA)**

- It allows sharing of classified information from the U.S. government and American companies with the Indian private sector, which is so far limited to the Indian government and the defence public sector undertakings (as per GSOMIA).
- The ISA is particularly essential as the Indian industry looks for a greater role in defence manufacturing.
- **ISA is under negotiation stage.**

### **H R 2123 Bill**

A bipartisan group of half a dozen influential American lawmakers has reintroduced an important legislation (**H R 2123 Bill**) in the House of Representatives which seeks to advance the US-India strategic relationship. If enacted, the legislation would ensure that the US State Department treat India as a NATO ally for the purposes of the Arms Export Control Act.

The National Defence Authorization Act (NDAA) for fiscal 2017 included special language recognising the unique US-India defence relationship that designated India as a **"Major Defence Partner" of the United States.**

## **Arab Spring 2.0**

### **Why in News?**

The ouster of **Abdelaziz Bouteflika** as the president of Algeria and removal of Omar al-Bashir, as the president of Sudan, some scholars are suggesting world is witnessing a new phase of change under **Arab Spring 2.0**.

### **Why Arab Spring 2.0.**

- The fall of longstanding regimes in Algeria and Sudan has generated anxiety among the other authoritarian regimes in the region **who fear the power of protests**. This sudden regime change in two important member countries of **"Arab League"** would have **impact on the wider Arab-world or the Middle East region**.
- Analysts have referred it as Arab Spring due the pattern followed by the protesters such as strike by large number of public sector workers, **use of social media**, both men and

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women have effectively used social media in spreading the message and motivating people to come out for participating in the protests.

- The key role of women protestors in the ouster of Bouteflika and al-Bashir is a massively exciting and stimulating moment which could open a window of opportunity for women to play more **active role in the domestic politics of Arab countries**.
- Another important correlation was **the economic downturn creating a wave of anger and resentment**. In Algeria, GDP growth slowed from 4% in 2014 to 1.6% in 2017, youth unemployment soared to 29%.
- This was happening at a time when Mr. Bouteflika was paralyzed after a stroke. **His demand for another term infuriated public**.
- Similarly, Sudan is also battling a serious economic crisis after the division of South Sudan. Its inflation is at 73% and it is also grappling with fuel and cash shortages. Mr. Bashir tried everything he could to calm the streets but finally army moved in to remove him.
- Movement is also like Arab Spring due to **its transnational nature** as they spread from Amman to Khartoum and Algiers in a matter of months. The pan-Arabist anger against national governments remains the main driving force behind the protests, which should set alarm bells ringing across Arab capitals.

### **Drawbacks of Arab Spring**

- ✓ The protest and change brought by Arab Spring changed the regime, but it didn't change the system setup by those regimes (**only exception is Tunisia**), such system survive sometimes in a morally brutal fashion. This happens due to two counter-revolutionary force, monarch and army for e.g. In Egypt, the army made a comeback and further tightened its grip on the state and society through violence and repression. In Jordan, the monarch always acts as a bulwark against revolutionary tendencies.
- ✓ Global geopolitics for e.g. In Libya, the foreign intervention removed **Muammar Qaddafi, but the war destroyed the Libyan state** and institutions, leaving the country in the hands of competing militias. Libya is yet to recover from the anarchy triggered by the intervention.
- ✓ Similarly, In Yemen, **protests turned into a sectarian civil conflict**, with foreign powers taking different sides. In Bahrain, Saudi Arabia made a direct military intervention, on behalf of its rulers, to violently end the protests in **Manama's Pearl Square**.
- ✓ This is the challenge before the Arab protesters. They are angry. They want the system to be changed. **But they are the multitudes**. There's no vanguard of the revolution. While they keep revolting against the system, they are constantly being pushed back by the counterrevolutionaries.

**PEPPER IT WITH**  
Arab Spring, Turkey Coup, ISIS.

## **India gains access to Bolivian lithium reserves**

### **Why in News?**

India has leveraged its way into the **Bolivian lithium reserves** after signing a Memorandum of Understanding (MoU) in Bolivia for development and industrial use of **lithium, a prime component used to power electric vehicles and cell phones**.

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### **Details**

- Both the countries agreed to forge mutually beneficial partnership to facilitate Bolivian supplies of lithium Carbonate to India and foster joint ventures for lithium battery / cell production plants in India.
- The two countries have also agreed to facilitate mechanisms for **the commercialization of Lithium Carbonate and Potassium Chloride** produced in Bolivia by Yacimientos de Litio Bolivianos Corporación (YLB - Corporación).

## Significance

- This move will make Bolivia, which is known to have **one-fourth of the world's lithium reserves, one of the major provider of metal for India's e-mobility and e-storage needs.**
- As per the US Geological Survey, salt flats in the highlands of the Salar de Uyuni alone contain nine million tonnes of lithium, or about 25 per cent of the world's known deposits.
- This agreement is supposed to form the backbone for the recently launched FAME India policy (Faster Adoption and Manufacture of (Hybrid and) Electric Vehicles) and will also give a substantial push to India's ambition to have at least 30 per cent of its vehicles run on electric batteries by 2030.

### PEPPER IT WITH

Khanij Bidesh India Limited, Chabahar port, Gulf of oman, Gwadar port, INSTC, Asia-Africa growth corridor

## Iran's Revolutionary Guards

### Why in News?

US announced that it would name Iran's elite Islamic Revolutionary Guard Corps a terrorist organization, in an unprecedented step that drew Iranian condemnation and raised concerns about retaliatory attacks on U.S. forces. **It marks the first time the United States has formally labelled another nation's military a terrorist group.**

### Possible Impacts

It could cause a potential backlash against U.S. forces in the Middle East and could create problems for U.S. partners who have a relationship with Iran.

Their involvement in Iran's banking and shipping industries could complicate matters with U.S. allies including the European Union. The new designation makes it easier to prosecute EU or other companies or individuals that do business with Iran.

### IRGC

The IRGC is the **Iranian government's primary means of directing and implementing its global terrorist campaign.** The IRGC is in charge of Iran's ballistic missile and nuclear programs.

Set up after Iran's 1979 Islamic Revolution to protect the Shi'ite clerical ruling system, the Guards have great sway in Iran's political system, controlling swathes of the economy and armed forces.

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### Mueller report

Robert Mueller was appointed to investigate and report on Russian interference in the 2016 US elections—and President Donald Trump's apparent attempts to obstruct justice along the way.

The report states that the Russian government-tries to illegally interfere with the 2016 presidential election, but did not find that any American colluded with it.

### PEPPER IT WITH

International Atomic Energy Agency, Yemen war, Golan Heights, JCPOA

## International Maritime Organisation

### Why in News?

A new global rule mandated by the International Maritime Organisation (IMO) **for national governments to introduce electronic information exchange between ships and ports** took effect.

The rule seeks to make cross-border trade simpler and the logistics chain more efficient, for the more than 10 billion tonnes of goods which are traded by sea annually across the globe.

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### The rule

- The requirement, mandatory under IMO's Convention on Facilitation of International Maritime Traffic (**FAL Convention**), is part of a package of amendments under the revised Annex to the FAL Convention, adopted in 2016.
- The Facilitation Convention encourages use of a "**single window**" for data, to enable all the information required by public authorities in connection with the arrival, stay and departure of ships, persons and cargo, to be submitted via a single portal, without duplication.
- The FAL Convention, which has 121 contracting governments, contains standards and recommended practices and rules for simplifying formalities, documentary requirements and procedures on ships' arrival, stay and departure.

### PCS1x

- India launched a Port Community System — 'PCS1x'— at ports in late 2018. 'PCS 1x' is a cloud-based technology developed by Mumbai-based logistics conglomerate JM Baxi Group.
- PCS1x offers value-added services such as notification engine, workflow, mobile application, track and trace, better user interface, better security features, improved inclusion by offering dashboard for those with no IT capability.
- A unique feature of 'PCS1x' is that **it can latch on to third party software** which provides services to the maritime industry thereby enabling the stakeholders to access wide network of services.
- The system enables single sign on facility to provide one stop interface to all the functionalities across all stakeholders. It also deploys a **payment aggregator solution** which removes dependency on bank specific payment eco system.
- The system will enable trade to have an improved communication with the customs as they have also embarked on an Application Programming Interface (API) based architecture, thereby enabling real time interaction.
- PCS1x offers a database that acts as a single data point to all transactions. It captures and stores data on its first occurrence thereby reducing manual intervention, the need to enter transaction data at various points and thereby reducing errors in the process.
- It is estimated that this feature alone will **reduce transaction time** by as much as two days. The application will have a cascading effect in reducing dwell time and overall cost of transaction.
- The platform has the potential to revolutionise maritime trade in India and bring it on par with global best practices and pave the way to improve the **Ease of Doing Business world ranking and Logistics Performance Index (LPI) rank**.

#### **PEPPER IT WITH**

World customs organisation, UNEP, UNDP, BASIC countries, ITO, IORA

### IMO

IMO – the International Maritime Organization – is the United Nations specialized agency with responsibility for the safety and security of shipping and the prevention of marine and atmospheric pollution by ships. IMO's work supports the UN SDGs.

## Belt and Road Initiative

### In News

Malaysia will resume work on the multi-billion dollar East Coast Rail Link



(ECRL) after months of negotiations

with the China Communications Construction Company (CCCC) and the Chinese government brought the cost down by a third.

### Details

The electrified railway is designed to connect Malaysia's capital with the towns on the peninsula's east and northeast and, **backed by loans from China, was touted as an economic "game changer"**.

It benefited China more than Malaysia. China is building a deep-sea port on Malaysia's east coast and the railway is a key link in its Belt and Road Initiative.

**PEPPER IT WITH**  
Silk road diplomacy,  
Hambantota port

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## BBIN initiative

### Why in News?

The Bhutan government will place the bill for ratification of Bangladesh-Bhutan-India-Nepal (BBIN) initiative for road and rail connectivity at its upper senate.

The Motor Vehicle Agreement of BBIN countries was signed by the respective transport ministers in 2015 in Thimpu, Bhutan by the four member countries. Bangladesh, India and Nepal have implemented the agreement but Bhutan is yet to accord its ratification of the agreement.

### MVA

- Trial runs for cargo vehicles under the MVA were conducted along the Kolkata-Dhaka-Agartala and Delhi-Kolkata-Dhaka routes in the past.

### Matara-Beliatta railway extension

China has financed and constructed Sri Lanka's first new railway line after the island nation became independent in 1948. The 26.75-km long Matara-Beliatta railway extension was declared open for the public.

China has invested heavily and pledged financial loans to Sri Lanka, a strategically located country in the Indian Ocean. Beijing already has a 99-year lease of Sri Lanka's Hambantota port, a result of Colombo's failure to repay Chinese debts.

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- Bangladesh, India, and Nepal have already ratified the MVA and have agreed to start implementation of the MVA among the three signatory countries, with Bhutan joining after it ratifies the Agreement.
- The **Asian Development Bank (ADB) has been providing technical, advisory, and financial support to the BBIN MVA initiative** as part of its assistance to the **South Asia Sub regional Economic Cooperation (SASEC) program**, a projects-based economic cooperation initiative that brings together the BBIN countries, Maldives, Sri Lanka and more recently, Myanmar. **ADB is the secretariat of SASEC.**

#### PEPPER IT WITH

India Infrastructure Finance Company Limited, Masala bonds, AIIB, ADB, Zojila tunnel

## Indo-Pacific division

### Why in News?

India has set up a **new Indo-Pacific division in the foreign office**, to specifically deal with the region's policies. The division will be headed by joint secretary, along with Bangladesh and Myanmar.

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### Details

The **division will integrate the Indian Ocean Rim Association (IORA), ASEAN region and the Quad to the Indo-Pacific table.** The Quad, a group of like-minded democracies comprises the US, Japan, India and Australia across the Indo-Pacific region.

The US military in May 2018, **renamed its Pacific Command the US Indo-Pacific Command**, in a largely symbolic move underscoring the growing importance of India to the Pentagon.

### Namami Gange

The National Mission for Clean Ganga (NMCG) was awarded the distinction of **"Public Water Agency of the Year"** by Global Water Intelligence at the Global Water Summit in London. The Global Water Awards are presented at the Global Water Summit, the major business conference for the water industry worldwide.

### Namami Gange Programme

It is an Integrated Conservation Mission, approved as **'Flagship Programme'** by the Union Government in June 2014 with budget outlay of Rs.20,000 Crore to accomplish the twin objectives of effective abatement of pollution, conservation and rejuvenation of National River Ganga.

### Significance

- Indo-Pacific is a multipolar region that is contributing more than half of world GDP and population. Countries falling in the direct catchment of the vast Indian and Pacific oceans can be termed as Indo-Pacific countries.
- In Indo-Pacific, maritime cooperation between India and Southeast Asian countries is one of the important aspects of the India-ASEAN strategic partnership. At the ASEAN-India Commemorate Summit held in Delhi, Leaders underlined the need to provide lower logistics costs for increasing trade.
- Ocean is the common thread that connects this vast Indo-Pacific region. The prime focus of Indo-Pacific is, therefore, centered around ocean, where India occupies an important strategic position in the Indian Ocean.

#### PEPPER IT WITH

LIMA 2019, LAWASIA Human Rights Conference, APCERT, AMCDRR



4. India is primarily a maritime nation, having a rich and glorious history of maritime trade. Greater maritime connectivity between India and her trade partners is an imperative for Indo-Pacific connectivity.
5. Given the economic potential of Indo-Pacific region, a number of countries are investing enormous financial, technological and human capital to develop maritime economies and are striving to leverage their unique strengths. Many countries have announced initiatives and action plans to promote the **“Blue Economy” or “Ocean Economy”**.

## **Egypt referendum**

### **In News**

Egyptians voted on constitutional amendments that would allow President **Abdel-Fattah el-Sisi to stay in power until 2030 and broaden the military's role** - changes blasted by critics as another major step toward authoritarian rule.

The referendum comes amid an unprecedented crackdown on dissent in recent years. El-Sisi's government has arrested thousands of people, most of them Islamists but also prominent secular activists. He has also rolled back freedoms won in a 2011 pro-democracy uprising.

### **Amendments sought**

- The amendments extend a president's term in office from four to six years and allow for a maximum of two terms. But they also include an article specific to el-Sisi that extends his current second four-year term to six years and allows him to run for another six-year term in 2024 - potentially extending his rule until 2030.
- The amendments also allow the president **to appoint top judges and bypass judiciary oversight** in vetting draft legislation, while also granting military courts wider jurisdiction in trying civilians.
- The amendments also introduce one or more vice presidents, revive the senate and enshrine a 25 percent quota for women in parliament's lower, legislative chamber. All three had been dropped from Egypt's constitution after the 2011 revolution.

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### **UN Mission in South Sudan (UNMISS)**

- Around 150 Indian peacekeepers serving with the UN Mission in South Sudan (UNMISS) have received medals of honour for their dedicated service and sacrifice.
- India is one of the top troop contributing countries to UN peacekeeping missions.
- UN peacekeepers provide security and the political and peacebuilding support to help countries make the difficult, early transition from conflict to peace.
- UN Peacekeeping is guided by three basic principles:
  - ✓ **Consent of the parties;**
  - ✓ **Impartiality;**
  - ✓ **Non-use of force except** in self-defence and defence of the mandate.

### **PEPPER IT WITH**

African union, AFINDEX-19, Arctic council, Arab league, TIR shipments

## **International Solar Alliance**

### **In News**

Bolivia has joined the International Solar Alliance.

### **About ISA**

The ISA is an initiative **jointly launched by India and France in 2015, by heads of India and France, on the sidelines of COP-21**, the UN Climate Conference. This is a coalition of solar resource-rich countries to collaborate on addressing the identified gaps in their energy requirements through a common approach.

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Towards this, the ISA has set a target of 1 TW of solar energy by 2030, which would require \$1 trillion to achieve.

The basic aim of the ISA is to address obstacles to deployment at scale of solar energy through better harmonization and aggregation of demand from solar rich countries **lying fully or partially between the Tropic of Cancer and Tropic of Capricorn.**

The ISA headquartered in India, has its Secretariat located in the campus of National Institute of Solar Energy, Gwalpahari, Gurgaon, Haryana and so far 46 countries have signed and 19 have ratified the Framework Agreement of ISA.

The **ISA is open to 121 prospective member countries**, most of them located between the Tropics of Cancer and Capricorn, with a surplus of bright sunlight for most of the year. India, with a target to produce 100 GW of solar energy by 2022, would account for a tenth of ISA's goal.

**PEPPER IT WITH**

Nandhaur Wildlife Sanctuary, BS Norms, Toluene, Environment Pollution (Prevention and Control) Authority (EPCA)

**Access Barrier to Antibiotics Report**

**In News**

US -based Center for Disease Dynamics, Economics & Policy (CDDEP) has released a report "Access Barrier to Antibiotics" on the state of health services.

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The report makes several recommendations proposing action on antibiotic and diagnostics research and development, strengthening regulatory capacities, encouraging the development and diversification of quality local manufacturing, exploring innovative funding to reduce out-of-pockets payments, raising awareness, and improving clinical treatment guidelines.

**Global Scenario in report**

- **Health facilities** in many low- and middle-income countries **are substandard and lack staff who are properly trained in administering antibiotics.**
- Lack of oversight and regulation in the drug manufacturing and supply chain leads to poor drug quality and falsified medicines; **17 percent of the substandard or falsified medicines reported to the WHO are antibiotics, and each year, more than 169,000 childhood pneumonia deaths are caused by falsified antibiotics.**
- The majority of the world's annual 5.7 million antibiotic-treatable deaths occur in low- and middle-income countries where the mortality burden from treatable bacterial infections far exceeds the **estimated annual 700,000 deaths from antibiotic-resistant infections.**
- Even after the discovery of new antibiotic, regulatory hurdles and substandard **health facilities delay or altogether prevent widespread market entry and drug availability.**
- Worldwide, the irrational use of antibiotics and poor antimicrobial stewardship lead to treatment failure and propagate the spread of drug resistance which, in turn, further narrows the available array of effective antibiotics.
- In **Low-Middle income countries** alarming percent of health staff posts are unfilled because of poor pay, high stress, lack of resources, and poor management. Staffing on wards is inadequate to administer medicines, patients miss antibiotic doses, and public nurses sometimes request compensation for administering medicines.

**Stats on India**

- In India, there is one government doctor for every 10,189 people (WHO recommends a ratio of 1:1,000). **India has a deficit of 600,000 doctors, and the nurse: patient ratio is 1:483, implying a shortage of 2 million nurses.**
- Government spending on healthcare in India **is 1.4% of gross domestic product** and **insurance coverage is poor.** In India, 65 percent of **health expenditure** is out-of-pocket

and such expenditures **push some 57 million people into poverty each year** in India alone.

- In India, where **80% of urban healthcare provision is private**.
- In India, the use of cephalosporin has increased because respiratory tract infections, skin and soft-tissue infections, gonococcal infections, and **enteric fever are becoming less treatable with penicillin**.

#### **The main barriers in Indian health industry:**

1. **Weak drug discovery**, difficulties in market entry, and poor stewardship leading to irrational selection and use of antibiotics;
2. **Affordability** of antibiotics and inadequate government funding for health resulting in high out-of-pocket spending by patients;
3. **Weak health systems**, unreliable supply chains, and poor-quality control prevent delivery of antibiotics to patients in need.
4. Infrastructure
5. **Insurance coverage**
6. Rural-Urban health facility disparities.
7. Large **unregulated private health sector**.

**PEPPER IT WITH**  
CARA, JJ Act, RMNCH+A,  
WASH, Intensified Mission  
Indradhanush, UHC

### **Textile Materials**

#### **In News**

Technical Seminar was organized by Ministry of Water Resources, River Development and Ganga Rejuvenation on “Use of Technical Textiles in Water Resources Works”.

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#### **About**

- Technical Textiles is a high technology sunrise sector which is steadily gaining ground in India. Technical textiles are functional fabrics that have applications across various industries including automobiles, civil engineering and construction, agriculture, healthcare, industrial safety, personal protection etc.
- Based on usage, there are 12 technical textile segments; **Agrotech, Meditech, Buildtech, Mobiltech, Clothtech, Oekotech, Geotech, Packtech, Hometech, Protech, Indutech and Sportech**.
- These materials have provided innovative engineering solutions for several applications in civil and geotechnical engineering, for infrastructure water resources projects.
- Technical Textiles have been extensively used in developed as well as many developing countries, **India has yet to capitalise the technical, economic and environmental benefits on large scale**.

### **Use of Technical Textiles in Water Resources Works**

#### **Why in News?**

Recently a seminar was organized by Ministry of Water Resources, River Development and Ganga Rejuvenation on “Use of Technical Textiles in Water Resources Works” in New Delhi.

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#### **Technical Textiles**

Technical textiles are defined as textile materials and products manufactured **primarily for their technical performance and functional properties** rather than aesthetic and decorative characteristics.

These functional fabrics have **applications** across various industries including automobiles, civil engineering and construction, agriculture, healthcare, industrial safety, personal protection etc. Based on usage, there are 12 technical textile segments.

#### **Potential application in Water Resource works in India**

- India has yet to capitalise the technical, economic and environmental benefits on large scale. Various parts of India are subjected to floods and environmental degradation.
- Technical-textiles have potential application in Water Resources Conservation / Protection field as in Canal Lining, Embankment Dam, Filtration / Planar Drainage, Hydraulic Barrier, Surface Reinforcement, Filtration Function, Flood Protection and Bank Erosion, Coastal Erosion, River Bed Application.
- Technical Textiles have been found to perform better than concrete as water protection component because of permeability, flexibility and ease of underwater placement.

**Government measures for promotion of Technical textiles**

1. Government of India has allowed up to 100% FDI under automatic route for the technical textiles segment.
2. Amended Technology Upgradation Fund Scheme (ATUFS)
3. Scheme for Integrated Textile Parks (SITP)
4. Technology Mission on Technical Textiles (TMTT)
5. Scheme for promoting usage of Agro-textiles in India (including NE Region)
6. Scheme for promoting usage of Geotechnical textiles in North East Region

**PEPPER IT WITH**  
TUFS, ATUFS TMTT, SITP, Watershed management

**Melamine-Contamination**

**Why in News?**

The Food Safety and Standards of Authority of India (FSSAI) had extended the ban **on the import of Chinese milk and milk products including confectionery**, till labs at Indian ports are equipped for melamine testing.

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**What is the Issue?**

- The Indian government had first imposed a ban on import of Chinese milk and milk products in 2008, when milk and infant formula products along with other food materials were found contaminated with melamine in China.
- The **Ban includes** chocolates and chocolate products and candies/ confectionery/ food preparations from milk and milk solids as ingredients from China.
- Although India does not import milk, milk products from China, it has imposed the ban **as a preventive measure**.
- Addition of melamine into food is not approved by the FAO/WHO Codex Alimentarius (food standard commission), or by any national authorities.

**About Melamine**

- Melamine is an organic base chemical most commonly found in the form of white crystals rich in nitrogen
- Melamine is widely used in plastics, adhesives, countertops, dishware, and whiteboards.
- In 2007, melamine was found in wheat gluten and rice protein concentrate exported from China and used in the manufacture of pet food in the United States. This caused the death of a large number of dogs and cats due to kidney failure.
- **Melamine's small crystals** can block the small tubes in the kidney potentially stopping the production of urine, causing kidney failure and, in some cases, death.
- Melamine has also been shown to have carcinogenic effects in animals in certain circumstances, but there is insufficient evidence to make a judgment on carcinogenic risk in humans.

**PEPPER IT WITH**  
Formaldehyde Contamination, DGFT, FAO, Oxytocin

## Mosquirix: World's First Malaria Vaccine

### Why in News?

World Health Organisation had begun the tests of the injectable malaria vaccine RTS, S (or **Mosquirix**) on children aged 5-17 months in Malawi. It has been recommended by WHO for pilot introduction in selected areas of 3 African countries- **Ghana, Kenya and Malawi**.

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### About RTS, S

- ✓ RTS,S/AS01 (RTS,S) is the world's first malaria vaccine that has been shown to provide partial protection against malaria in young children.
- ✓ **The vaccine acts against Plasmodium falciparum** (uses antibodies to target proteins presented by sporozoites such as falciparum), the deadliest malaria parasite globally and the most prevalent in Africa.
- ✓ The **malaria vaccine implementation programme** (MVIP), coordinated by WHO has been designed to address several outstanding questions related to the public health use of the vaccine.
- ✓ Known side effects include pain and swelling at the injection site, and fever. **These side effects are like reactions** observed with other vaccines given to children.
- ✓ It is also engineered using a hepatitis B viral protein and a chemical adjuvant to further boost the immune response for enhanced effectiveness.

### About Malaria

- ❖ It is a **vector-borne disease** caused by the infectious Plasmodium.
- ❖ In 2017, there were an estimated 219 million cases of malaria in 87 countries.
- ❖ The estimated number of malaria deaths stood at 435 000 in 2017.
- ❖ The WHO African Region carries a disproportionately high share of the global malaria burden. In 2017, the region was home to 92% of malaria cases and 93% of malaria deaths.

### DAMAN INITIATIVE

- ♣ Durgama Anchalare Malaria Nirakaran (DAMaN) initiative is launched by the **Odisha government to eliminate malaria**.
- ♣ The initiative aims to deliver services to the most inaccessible and hardest hit people of the State. The initiative has in-built innovative strategies to combat asymptomatic malaria.
- ♣ As a result of its sustained efforts, Odisha recorded a 80% decline in malaria cases and deaths in 2017.
- ♣ The programme is jointly implemented by Indian Council of Medical Research-National Institute of Malaria Research (ICMR-NIMR), National Vector Borne Disease Control Programme (NVBDCP), Odisha and Medicines for Malaria Venture (MMV).

### Malaria in India:

- According to WHO **World Malaria Report 2018**, India is the only country among the 11 highest-burden countries that saw substantial progress in reducing disease burden: it saw a **24% decrease in 2017 compared to 2016**.
- India had pledged to eliminate **Malaria by 2030 during the East Asia Summit 2015**.
- India had launched the five-year National Strategic Plan for Malaria Elimination. This marked a shift in focus from malaria "control" to "elimination". The plan provides a roadmap to achieve the target of ending malaria in 571 districts out of India's 678 districts by 2022.
- The Indian Council of Medical Research has launched the '**Malaria Elimination Research Alliance (MERA) India**' - a conglomeration of partners working on malaria

### PEPPER IT WITH

National Vector Borne Diseases Control Program, ASHA, West Nile Virus, Zika Virus, Yellow Fever



control - in order to prioritise, plan and scale up research to eliminate the disease from India by 2030.

## **Cell-based Meat**

### **Why in News?**

The Department of Biotechnology **has recently decided to fund the Hyderabad-based Centre for Cellular and Molecular Biology (CCMB)** and National Research Centre on Meat for research on cell-based meat.

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### **What is Cell-based meat?**

- **Cell-based meat**, also called **clean meat** or **cultured meat**, is produced through cellular agriculture rather than raising and slaughtering animals for meat.
- Cells are sourced from an animal and cultivated into meat.
- Cell-based meat **is nutritionally equivalent to conventional animal meat**, and tastes, smells, looks and feels the same.

### **Benefits**

- This new method of producing meat shows strong promise of revolutionising the food system in terms of tackling pressing global issues such as **food/nutritional security, environmental sustainability and animal welfare**.
- The performance of cell-based meat in order of magnitude is better than traditional meat when it comes to **land use, water use and energy efficiency**.

### **Efforts in India**

- ❖ In 2018, the **Atal Incubation Centre at CCMB** partnered with **Humane Society International/India** (HSI/India), one of the largest animal protection organisations in the country, to promote and develop the clean meat sector.
- ❖ It has been working closely with **Good Food Institute** (GFI) India, a global expert organisation that advances research and commercialisation of the plant-based and clean meat sector, and provides input and support to entrepreneurs, regulators, scientists and others.
- ❖ In 2018, the three institutions co-hosted the **first event to discuss clean meat in India, the Future of Protein Summit**.

## **Global Scenario**

- ✓ The clean meat sector has huge potential to provide future generations with sustainable nutrition.
- ✓ The governments of Netherlands, Japan and Israel among others are providing significant government support through investment in clean meat companies. Additionally, the regulatory authorities of countries like the US are deliberating on the path to market these products.

## **Challenges in India**

- The foremost issue is to find a **suitable serum and a cell culture medium which is stable, standardized and not dependent on live animal products**.
- There needs to be a **regulatory framework** in place to test, regulate and label such foods.
- There is also an issue regarding the public opinion i.e. acceptance of clean and plant-based meat by common consumers in India.

### **PEPPER IT WITH**

HSI/India, GFI, Cellular agriculture, Future of Protein Summit

## Scissors Enzyme

### Why in News?

The Centre for Cellular & Molecular Biology (CCMB) have discovered a new enzyme which helps in **breaking cell walls of bacteria**. This offers a potential for a new drug delivery route to arrest the anti-bacterial resistance through existing antibiotic drugs.

### Research

- Cell wall is fundamental for bacterial growth and division.
- Researchers have developed to block this function by blocking the enzyme responsible for it also **known as scissors enzyme**.
- This will help in finding **new ways to target microbes**, leading to a new wave of antibiotic drugs.
- In contrast, the classical antibiotic drugs target the last stage of cell synthesis to prevent cell growth like penicillin that hits the machinery that creates the cell wall which resembles like a mesh structure of cross-linked sugars and peptides.

### Antimicrobial resistance (AMR)

It is the ability of a microorganism (like bacteria, viruses, and some parasites) to stop an antimicrobial (such as antibiotics, antivirals and antimalarials) from working against it. As a result, standard treatments become ineffective, infections persist and may spread to others.

### About CCBM

- ✓ The Centre for Cellular & Molecular Biology (CCMB) is a premier research organization in frontier areas of modern biology. **The objectives of the Centre are to conduct high quality basic research** and training in frontier areas of modern biology and promote centralized national facilities for new and modern techniques in the inter-disciplinary areas of biology.
- ✓ It was set up initially as a semi-autonomous Centre in 1977 with the Biochemistry Division of the then Regional Research Laboratory (presently, Indian Institute of Chemical Technology, IICT) Hyderabad.
- ✓ It has been chosen as a Centre of Excellence, by UNESCO's Global Network of Molecular and Cell Biology.

### PEPPER IT WITH

WHO-AMR, Plastic eating enzyme, CSIR

## Bubble Boy Disorder

### Why in News?

In USA children having bubble boy disease are treated by a gene therapy made from one of the immune system's worst enemies HIV, the virus that causes AIDS.

### What is Bubble Boy Disorder?

- Severe Combined Immune Deficiency (SCID) or Bubble Boy Disorder is a potentially fatal primary immunodeficiency in which there is combined absence of **T-lymphocyte and B-lymphocyte function**.
- It is caused by mutations in a gene called IL2RG on the X chromosome. This

### Human Immunodeficiency Virus

- ❖ HIV is a virus that attacks the immune system, our body's natural defence against illness.
- ❖ If HIV is left untreated, a person's immune system will get weaker and weaker until it can no longer fight off life-threatening infections and diseases.
- ❖ Testing regularly for HIV means you can get antiretroviral treatment if you need it and stay healthy.
- ❖ AIDS describes a set of symptoms and illnesses that happen at the final stage of HIV infection, if left untreated.

keeps **the bone marrow from making effective versions of blood cells** that comprise the immune system.

- It affects 1 in 2,00,000 new-borns, **almost exclusively males**. Without treatment, it often kills in the first year or two of life.

### PEPPER IT WITH

Leukaemia, Bone Marrow Transplant, Thalassaemia, Gene Editing, Gene therapy

## SPACE

### EMISAT

- The Indian Research Space Organisation (ISRO) recently launched the EMISAT satellite onboard the PSLV-C45 from the Satish Dhawan Space Centre in Sriharikota.
- **EMISAT is an advanced electronic intelligence (ELINT) satellite jointly developed by ISRO-DRDO**. It is meant for electromagnetic spectrum measurements. Space-based electronic intelligence or ELINT will add teeth to situational awareness of the Armed Forces as it will provide location and information of hostile radars placed at the borders. It is modelled after a famous Israeli spy satellite called SARAL (**Satellite with ARGos and ALtika**).
- Mission was very special for ISRO as there were many firsts in it. "First time a PSLV was flown in a new configuration of four strap on motors, first time a PSLV is carrying out three orbital missions in a single flight, the first time PS4 (fourth stage) is powered for carrying out experimental platforms.

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### Significance

- ✓ EMISAT detects electronic signals on ground, especially hidden enemy radars. This capacity will help India in surgical warfare which is supposed to have become a permanent option for India to check Pakistan-sponsored terrorism after Balakot surgical strike.
- ✓ EMISAT has been developed under **DRDO's Project Kautilya which aims to boost India's space surveillance capacity**. The project is named after the ancient Indian economist who emphasised the importance of spying for a king to protect his kingdom.
- ✓ The main capability of EMISAT is in signal intelligence — intercepting signals broadcast by communication systems, radars, and other electronic systems on the ground from hundreds of kilometers away in space.
- ✓ The **Ka-band frequency that EMISAT** is sensitive to allows it to scan through ice, rain, coastal zones, land masses, forests and wave heights relatively easily.

### Hayabusa 2

- Japan's Hayabusa 2 spacecraft has begun the asteroid mining era with a bang. It dropped an explosive on the ryugu asteroid to make a crater. The blast aimed to probe beneath the surface and toss up particles that haven't been altered by millions or even billions of years of exposure to cosmic radiation.
- Hayabusa 2 is a Japanese spacecraft on a six-year mission to rendezvous and land on a C-class asteroid, asteroid Ryugu (162173), dispatch a series of landers and a penetrator, collect multiple samples from the asteroid and then return to Earth. Hayabusa 2 arrived at asteroid Ryugu in June 2018.
- The probe is a follow-up to Japan's original **Hayabusa mission, which was the first spacecraft to take samples from an asteroid and also the first mission to successfully land and take off from an asteroid**. It returned the samples from asteroid 25143 to Earth in 2010.
- **Ryugu is small** – less than a kilometre across – and a relic from the formation of our solar system. Studying the material that makes it, in as pure a form as possible, could help us learn about the make-up of early planets and sort out how water and other materials crucial for life came to Earth.

### NASA's Cassini

- Using data obtained by NASA's Cassini spacecraft before the mission ended in 2017 with a deliberate plunge into Saturn, scientists found that some of frigid **Titan's lakes of liquid hydrocarbons** in this region are surprisingly deep while others may be shallow and seasonal.
- Titan and Earth are two places in the solar system with standing bodies of liquid on the surface. Titan boasts of lakes, rivers and seas of hydrocarbons: compounds of hydrogen and carbon like those that are the main components of petroleum and natural gas.
- The scientists also described "**phantom lakes**" that appeared during wintertime, to be wide but shallow ponds – perhaps only a few inches deep – but evaporated or drained into the surface by springtime, a process that takes seven years on Titan.

### Titan

Titan, with a diameter of 3,200 miles, is the solar system's second largest moon, behind only Jupiter's Ganymede. It is bigger than the planet Mercury.

Titan is the most Earth-like body in the solar system. It has lakes, canyons, rivers, dune fields of organic sand particles about the same size as silica sand grains on Earth.

### Cassini-Huygens

- **Launched:** 1997
- **End of Mission:** 2017
- Cassini orbited Saturn, studying the ringed planet and its moons in detail. The Huygens probe landed on Saturn's largest moon, Titan, in January 2005.

### Raavana-1

Sri Lanka's first satellite '**Raavana-1**' **was launched into space from NASA's Flight Facility on Virginia.** 'Raavana 1' weighs around 1.05 kg and the lifespan of the satellite is around one and a half years.

The launch marks Sri Lanka's entry into the global space age. The satellite was designed and built at the Kyushu Institute of Technology in Japan by two Sri Lankan research engineers. Its camera mission is to capture images of Sri Lanka and its neighbouring countries.

### NepaliSat-1

- Nepal successfully launched its first satellite into space from the US **to gather detailed geographical information of the Himalayan nation**, evoking unbridled excitement among the people and scientists.
- Two Nepali scientists, Aabhas Maskey and Hariram Shrestha who are currently studying at Japanese Kyushu Institute of Technology, developed the satellite under the BIRDS project of their institute.
- NepaliSat-1 is a low orbit satellite which will be in the 400-km distance from the Earth's surface. It will be stationed at the International Space Station for a month and then it will be sent to orbit the earth. The satellite will take photographs on a regular basis to gather geographical information of the country.

### INSIGHT MARS lander

NASA'S INSIGHT MARS lander has recorded its **first "marsquake," making waves among Earthling seismologists** tens of millions of miles away.

**India's space programme** — totally civilian in nature — was conceived back in the 1960s. ISRO was set up in 1969, and the Space Commission came into existence in the early 1970s. **Vikram Sarabhai is credited with creating India's vision for exploration of space** and, following his untimely demise in 1971, the mantle fell on Satish Dhawan. First Indian satellite, Aryabhata was launched in 1975.

**In 1982**, ISRO launched the first Indian National Satellite System (INSAT-1A). The first Geosynchronous Satellite Launch Vehicle (GSLV) took off from Sriharikota in 2001. In 2008, ISRO launched Chandrayaan-1, the first Indian planetary science and exploration mission to the moon. In 2013, ISRO launched the Mars Orbiter Mission (Mangalyaan) spacecraft. Since then there have been many more launches.

The faint signal, is the first tremble that scientists believe comes from the Martian interior, rather than from surface forces, such as wind. But researchers are still studying the data to pin down the quake's precise source.

### **Marsquake**

Unlike Earth, however, Mars doesn't seem to have tectonic plates. Instead, **its trembles are thought to come from the slow cooling of the planet over time**, which causes the orb to contract and develop fractures on its surface. These quakes can also come from the impact of meteors and possibly the movement of magma deep underground.

Researchers hope to use Mars' shakes and shivers to study the planet's innards. The process is a bit like using an ultrasound to peer inside a body: By looking at how seismic waves bounce around inside the planet, researchers can infer its internal structures.

### **InSight**

Short for **Interior Exploration using Seismic Investigations, Geodesy and Heat Transport**, is a Mars lander designed to give the Red Planet its first thorough checkup since it formed 4.5 billion years ago. **It is the first outer space robotic explorer to study in-depth the "inner space" of Mars: its crust, mantle, and core.**

Studying Mars' interior structure answers key questions about the early formation of rocky planets in our inner solar system - Mercury, Venus, Earth, and Mars - more than 4 billion years ago, as well as rocky exoplanets. InSight also measures tectonic activity and meteorite impacts on Mars.

### **BepiColombo**

- BepiColombo mission has successfully completed its near-Earth commissioning phase and is now ready for its **scientific investigations at Mercury**.
- BepiColombo is Europe's first mission to Mercury. It set off in 2018 on a journey to the smallest and least explored terrestrial planet in our Solar System.
- When it arrives at Mercury in late 2025, it will endure temperatures in excess of 350 °C and gather data during its 1 year nominal mission, with a possible 1-year extension.
- The mission comprises two spacecraft: the Mercury Planetary Orbiter (MPO) and the Mercury Magnetospheric Orbiter (MMO).
- BepiColombo is a joint mission **between ESA and the Japan Aerospace Exploration Agency (JAXA), executed under ESA leadership.**

#### **PEPPER IT WITH**

Transiting Exoplanet Survey Satellite, TESS, Double Asteroid Redirection Test (DART), IRNSS, GSLV MKIII, Ganganyaan

## **Stephen Hawking's theory on Black Holes**

### **Why in News?**

One of Stephen Hawking's most famous theories about dark matter — **that this mysterious and invisible substance is made up of primordial black holes** — recently suffered a huge blow. That conclusion comes from a massive telescope that captured an image of an entire galaxy in one shot.

### **Details**

For these primordial black holes to produce dark matter, the scientists predicted that there would have to be enough black holes less massive than the moon to result in about 1,000 gravitational lensing events. The team was only able to spot one potential event out of 190 consecutive images over seven hours.

The findings don't completely rule out Stephen Hawking's famous notion. But they suggest that primordial black holes would have to be truly tiny to explain dark matter.

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#### **PEPPER IT WITH**

FAME II Scheme, Uighurs, Bubble Boy Disease, CRISPR-Cas9 gene editing tool, Centre for Cellular and Molecular Biology



### Dark matter mystery

- **Dark matter is the name given by physicists** to explain a particularly mysterious phenomenon: Everything in the universe moves, orbits and rotates as if there were more mass than we can detect. **Explanations for dark matter range from ghostly particles called neutrinos to unknown particles, to new laws of physics.**
- In the 1970s, Stephen Hawking and his colleagues theorized that the Big Bang may have created a large number of relatively small black holes — each about the size of a proton. These tiny, ancient black holes would be difficult to see, yet would exert a large gravitational pull on other objects — the two known properties of dark matter.
- Black holes emit no light, though, supermassive black holes, like the one at the heart of galaxy Messier 87, are fringed by bright disks of hot matter. Primordial black holes, however, are billions of times smaller and have no visible, glowing matter surrounding them. Instead, searching for small black holes means looking for places where their powerful gravitational fields bend light — a phenomenon called **microlensing**.

### First ever image of a black hole-Powehi

#### Why in News?

Scientists unveiled an image of the object, a supermassive black hole containing the same mass as 6.5 billion suns. Resembling a circular void surrounded by a lopsided ring of light, this landmark image is the **world's first glimpse of a black hole's silhouette**.

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#### Details

- The supermassive black hole now immortalised by a far-flung network of radio telescopes is 50 million light years away in a galaxy known as M87.
- The new image is the stunning achievement of the **Event Horizon Telescope project**, a global collaboration of more than 200 scientists using an array of observatories scattered around the world, from Hawaii to the South Pole.
- The first image of a black hole was named **Powehi, a Hawaiian phrase that refers to an "embellished dark source of unending creation."**

#### Black holes

Black holes are unimaginably dense regions of space-time from where even light is unable to escape, are formed mainly by massive collapsing stars after they start extinguishing. The space-time around them gets so incredibly bent that nothing is able to escape from its gravity.

The black hole, whose image was captured, is located at the centre of the Messier 87 (M87) galaxy in the **Virgo galaxy cluster**. The black hole is at a distance of 55 million light-years from earth. Scientists have also captured the image of another black hole, Sagittarius A\*, which is very much in our own galaxy, the Milky Way, but that image is not as sharp.

#### Important terms

1. **The Singularity:** According to Einstein's equations, at the center of a black hole a star's entire mass has collapsed into an infinitely dense, dimensionless point called a singularity. Singularities likely don't really exist but point to a mathematical hole in our understanding of gravity.
2. **Event Horizon:** Extending at least seven billion miles around the supermassive black hole in M87, this is the boundary beyond which not even light cannot escape.
3. **Static Limit:** A black hole's spin can twist space, speeding or slowing matter orbiting nearby. The static limit is the orbit where objects traveling at light speed against the black hole's spin seem to stand still.
4. **Accretion Disk:** A whirling disk of superheated gas and dust likely spins at near light-speed around the M87 black hole. The disk emits heat, radio noise, and huge x-ray flares—some of which stretch more than a hundred thousand light-years long.

#### PEPPER IT WITH

CSIR, Atmospheric water generator, Parmanu tech 2019, Lithium ion cell technology, Ultima thule

5. **X-Ray Jets:** For more than a century, astronomers have spotted a “**straight ray**” jutting from M87. The towering jet forms as superheated gas swirling around the central black hole gets shot out along intense magnetic field lines. As electrons spiral along these lines, they generate radiation across many wavelengths, from radio to x-rays.

## Phase 4 of Geosynchronous Satellite Launch Vehicle

### Why in News?

The Union Cabinet has approved ongoing GSLV continuation programme Phase-4 consisting of five GSLV flights during the period 2021-2024. The GSLV Programme - Phase 4 will enable the launch of 2 tonne class of satellites for Geo-imaging, Navigation, Data Relay Communication and Space Sciences.

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### Significance

- The GSLV Continuation Programme - Phase 4 will meet the launch requirement of satellites for providing critical Satellite Navigation Services, Data Relay Communication for supporting the Indian Human spaceflight programme and the **next interplanetary mission to Mars**. This will also ensure the continuity of production in Indian industry.
- The operationalization of GSLV has made the country self-reliant in the launching capability of 2 tonne class of satellites for communication & meteorological satellites.
- The GSLV Continuation Programme will sustain & strengthen the capability and self-reliance in the launching of similar satellites for national requirements including next generation navigation satellites, data relay communication satellites and interplanetary missions.

### PEPPER IT WITH

Institute of ethics in Artificial Intelligence, Indian science congress, National electronics policy

### GSLV

Geosynchronous Satellite Launch Vehicle Mark II (**GSLV Mk II**) is the largest launch vehicle developed by India, which is currently in operation. **This fourth generation launch vehicle is a three stage vehicle with four liquid strap-ons**. The indigenously developed cryogenic Upper Stage (CUS), which is flight proven, forms the third stage of GSLV Mk II.

GSLV Mk III is designed to carry 4 ton class of satellites into Geosynchronous Transfer Orbit (GTO) or about 10 tons to Low Earth Orbit (LEO), which is about **twice the capability of GSLV Mk II**.

## Genome sequencing

### Why in News?

In an indigenous genetic mapping effort, nearly 1,000 rural youth from the length and breadth of India will have their genomes sequenced by the Council of Scientific and Industrial Research (CSIR). The project aims at educating a generation of students on the “**usefulness**” of genomics.

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### Background

Globally, many countries have undertaken genome sequencing of a sample of their citizens to determine unique genetic traits, susceptibility (and resilience) to disease. This is the first time that such a large sample of Indians will be recruited for a detailed study.

The project would involve the Hyderabad-based **Centre for Cellular and Molecular Biology (CCMB)**, with the sequencing to be done at the IGIB and the CCMB.

### PEPPER IT WITH

Higg's Boson, Neutrino, Solar flares, Dark Energy and Dark Matter, Graphene, Big bang theory

### Significance

Ever since the human genome was **first sequenced in 2003**, it opened a fresh perspective on the link between disease and the unique genetic make-up of each individual. Nearly 10,000 diseases — including cystic fibrosis, thalassemia — are known to be the result of a

single gene malfunctioning. While genes may render some insensitive to certain drugs, genome sequencing has shown that cancer too can be understood from the viewpoint of genetics, rather than being seen as a disease of certain organs.

### **CSIR**

Council of Scientific & Industrial Research (CSIR) is an autonomous body under the Ministry of Science and Technology and the largest research and development (R&D) organization in India.

## **Candida auris**

### **In News**

The killer germ, a fungus called *Candida auris*, has showed up in countries as far apart as Australia and Canada, Venezuela and Japan, over the past few years. It has set alarm bells ringing because it is often resistant to multiple anti-fungal drugs.

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### **Candida auris**

- The US Centers for Disease Control and Prevention (CDC) describes *Candida auris* as “**an emerging fungus that presents a serious global health threat**”.
- Patients can remain colonised with *C. auris* for a long time and *C. auris* can persist on surfaces in healthcare environments. This can result in spread of *C. auris* between patients in healthcare facilities.
- *C. auris* is difficult to identify with standard lab methods may have had a role to play in the development of its resistance. Healthcare personnel oblivious to it for long continue to prescribe antibiotics — giving the organism time to acclimatise to the medication. *C. auris* is known to cause outbreaks in hospitals, where it finds vulnerable individuals.
- It was identified in 2009 from yeast isolates from the ear of a Japanese patient, and described as a new species after RNA sequencing.

### **PEPPER IT WITH**

West Nile Virus, Measles campaign, Stem cells, AYUSH, BIRAC, DTAB, NLEM

## **Central Drugs Standard Control Organisation**

### **In News**

Alerted by the Union Health Ministry’s pharmaceutical watchdog, the National Co-ordination Centre of the Pharmacovigilance Programme of India (PvPI), on adverse reactions that were being reported from some commonly-used antibiotics, the Central Drugs Standard Control Organisation (CDSCO) has now asked manufacturers to ensure that this information be made available to the general public.

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### **Details**

CDSCO has written to drug manufacturers, to mention in leaflets inserted into drug packets or on promotional literature, information about the adverse reactions of these medicines. **All of the seven formulations** — antibiotics Cefotaxime, Ofloxacin and Cefixime; Tranexamic Acid, used to control bleeding; antipsychotic drug Quetiapine; anti-rheumatoid drug Sulfasalazine and the anti-epileptic medicine Sodium Valproate — have been instructed to warn patients of the “new” side effects.

### **PEPPER IT WITH**

Human Genome Project-Write, GM Crops, Recombinant DNA, Genetically engineered Insulin

### **CDSCO**

- The Central Drugs Standard Control Organisation (CDSCO) under Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India is the National Regulatory Authority (NRA) of India.
- Under the Drugs and Cosmetics Act, CDSCO is responsible for approval of Drugs, Conduct of Clinical Trials, laying down the standards for Drugs, control over the quality

of imported Drugs in the country and coordination of the activities of State Drug Control Organizations by providing expert advice with a view of bring about the uniformity in the enforcement of the Drugs and Cosmetics Act.

- Further CDSCO along with state regulators, is jointly responsible for grant of licenses of certain specialized categories of critical Drugs such as blood and blood products, I. V. Fluids, Vaccine and Sera.

## **'Three-person' baby boy born in Greece**

### **In News**

Fertility doctors in Greece and Spain say they have produced a baby from three people in order to overcome a woman's infertility.

The **experimental form of IVF uses** an egg from the mother, sperm from the father, and another egg from a donor woman. It was developed to help families affected by deadly mitochondrial diseases which are passed down from mother to baby.

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### **The structure of a cell**

- **Nucleus:** Where the majority of our DNA is held - this determines how we look and our personality
- **Mitochondria:** Often described as the cell's factories, these create the energy to make the cell function
- **Cytoplasm:** The jelly like substance that contains the nucleus and mitochondria

### **Three-parent baby**

- It is human offspring produced from the genetic material of one man and two women through the use of assisted reproductive technologies, specifically mitochondrial manipulation (or replacement) technologies and three-person in vitro fertilization (IVF).
- In general, the reproductive technologies **used to produce three-parent babies focus on replacing or otherwise reducing the effects of mutations that occur in the DNA** of cellular organelles known as mitochondria, which reside in the cell cytoplasm. The various approaches could help women to overcome infertility and could prevent the transmission to their offspring of potentially debilitating mitochondrial diseases.
- The first three-parent babies were born in the 1990s and early 2000s, the products of a then-novel IVF-based technique **known as ooplasmic transfer** (cytoplasmic transfer).
- The success of the technique was seen as miraculous, but its use was controversial. It prompted scientists to develop improved techniques and caused regulatory agencies to restrict the use of three-parent IVF. Much was unknown about the safety of various three-parent IVF techniques, and their use to generate human babies raised ethical and social concerns, among them the possible impacts on health and heredity.

#### **PEPPER IT WITH**

Biotech KISAN, BHARAT  
Biotech, Zika virus, Monkey fever, FarmerZone

## **Committee to implement the National Clean Air Programme**

### **Why in News?**

The Union Environment Ministry has recently constituted a committee to implement the National Clean Air Programme (NCAP), which aims to reduce particulate matter (PM) pollution in time bound manner.

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### **About the Committee**

- The committee, headquartered in Delhi, will be chaired by the **Secretary, Union Environment Ministry and will have its members from Ministry of Power, The Energy Resources Institute (TERI) and Indian Institute of Technology-Kanpur (IIT-K).**

- The committee will provide overall guidance and directions for effective implementation of the NCAAP for each financial year and will also review the progress of the programme.
- The committee will approve the budget for NCAAP and the annual action plan for NCAAP submitted by the state governments

### **Nation Clean Air Programme**

- ✓ NCAAP was launched by the MOEFCC in January 2019, as a comprehensive management plan for **prevention, control and abatement of air pollution** besides augmenting the air quality monitoring network across the country.
- ✓ The tentative national level target by NCAAP is 20%-30% reduction of PM2.5 and PM10 concentration by 2024 taking 2017 as the base year for the comparison.

### **NCAAP Objectives**

- To augment and evolve effective and proficient ambient air quality monitoring network across the country for ensuring comprehensive and reliable database
- To have efficient data dissemination and public **outreach mechanism for timely measures for prevention and mitigation of air pollution** and for inclusive public participation in both planning and implementation of the programmes and policies of government on air pollution
- To have **feasible management plan for prevention, control and abatement of air pollution**.

### **National Air Quality Index (AQI)**

- ❖ AQI was launched in 2014 by MOEFCC to act as '**One Number- One Colour-One Description**' for the common man to judge the ambient air quality.
- ❖ There are six AQI categories, namely Good, Satisfactory, Moderately polluted, Poor, Very Poor, and Severe.
- ❖ AQ sub-index and health breakpoints are evolved for eight pollutants (PM10, PM2.5, NO2, SO2, CO, O3, NH3, and Pb) for which short-term (upto 24-hours) National Ambient Air Quality Standards are prescribed.

### **National Air Quality Monitoring Programme (NAMP)**

- ❖ Central Pollution Control Board (CPCB) executes this **nation-wide programme with an objective to determine status and trends of ambient air quality**.
- ❖ Under **NAMP four air pollutants** viz. Sulphur Dioxide (SO2), Oxides of Nitrogen as NO2, Respirable Suspended Particulate Matter (RSPM / PM10) and Fine Particulate Matter (PM2.5) have been identified for regular monitoring at all the locations.

### **PEPPER IT WITH**

RSPM/PM10, PM2.5 Primary and Secondary Pollutants, SBM

## **Forest fires**

### **Why in News?**

Odisha had registered a sudden jump in forest fires across the State resulting in massive damage to flora and fauna.

### **Forest fire**

- In 2015, there were 15,937 forest fires in India. In 2017, that number rose to 35,888, a 125% spike over two years. In 2017, the maximum number of forest fires were reported in Madhya Pradesh (4,781), followed by Odisha (4,416) and Chhattisgarh (4,373). In fact, 23 out of 33 states and Union Territories reported an increase in forest fires.

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- A National Institute of Disaster Management report on forest fires says **50% of the country's forests are prone to fire**. Such uncontrolled fires not only burn down the vegetation but also the surface organic matter, increasing the frequency of flooding and soil erosion. In addition, wildlife patterns and habitat are also disrupted.
- The Forest Survey of India Report, 2011, says the country has forest cover of 692,027 km<sup>2</sup>, comprising 21.05% of the total geographic area of the country.

Unfortunately, our firefighting potential is not as good as it should be.

- **First**, the country lacks fire protection planning knowledge and incentive.
- **Second**, the statistics on forest fire damage are poor, and so it is difficult to arrive at accurate losses from the forest fires.
- **Third**, as the number of incidents showed a rising trend, all that was done was the replacement of the Intensification of **Forest Management Scheme with the Forest Fire Prevention & Management Scheme in 2017**.
- **Fourth**, foresters still fight forest fires using outdated methods, when systematic modern fire management techniques and methods have been adopted in the rest of the world.
- Last, as the National Green Tribunal said in 2017, **India doesn't have a strong and clear national policy on how to tackle forest fires**.

### Comprehensive policy needed

- The India State of Forest Report, 2017 highlighted the reasons about why people set fire to forests. They include clearing areas for shifting cultivation, clearing forest floor for Non-Timber Forest Produce collection, and for hunting/poaching purposes.
- The NGT has repeatedly asked the MoEF&CC to come out with a national policy on forest fires. In fact, the **Draft Forest Policy, 2018**, does mention forest fires as a threat and has proposed the mapping of vulnerable areas along with developing and strengthening early warning systems. **It has also proposed participation of communities**.
- Uncontrolled fires are a complex problem that require a comprehensive and long term policy. This requires more effective coordination with local communities — the primary forest users in India. It demands **proper co-ordination mechanisms between the state governments, the forest departments, and the MoEF&CC**.
- **These fires should be treated as disasters so that disaster management authorities can play a major role in preventing them**. The **National Forest Commission of 2006** too suggested that all fires that burn an area larger than 20 sq km, should be declared a state disaster.
- The state forest departments have undoubtedly an important role in dealing with this disaster and must refer to the most comprehensive report on **"Forest Fires and its Effect"** presented to Parliament in 2016 for the action plan and strategies to curtail forest fires as advised by the parliamentary standing committee on science and technology, environment and forests recently.

### MODIS and VIIRS

- ✓ The Moderate Resolution Imaging Spectroradiometer (MODIS) sensor onboard NASA's Terra and Aqua satellites has been **used to scan the Earth's surface for fires on a daily basis for almost 15 years**. Since 2012, the Visible Infrared Imaging Radiometer Suite (VIIRS) onboard the Suomi NPP satellite has contributed to this effort by producing higher resolution images of the Earth's surface.
- ✓ This higher resolution enables VIIRS to detect fires that MODIS overlooks. **Though VIIRS is a more sensitive instrument when it comes to detecting fires, MODIS provides crisper background images**.

#### **PEPPER IT WITH**

Real Time Forest Alert System, Bandipore tiger reserve, Nauradehi sanctuary, Cheetah reintroduction program, Vermin

- ✓ Other applications of VIIRS include the estimation of greenhouse gas volume released into the atmosphere as a result of a fire, and the identification of and the initial location of prohibited fires.

## State of Global Air Report 2019

### Why in News?

The State of Global Air 2019 **annual report is designed and implemented by the Health Effects Institute in cooperation** with the Institute of Health Metrics and Evaluation (IHME) at the University of Washington, the University of British Columbia, and the University of Texas - Austin.

IHME is **an independent population health research center** that coordinates the annual Global Burden of Disease study.

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### Highlights

- Exposure to outdoor and indoor air pollution could, on average shorten the life of a child born today by 20 months.
- Overall, **air pollution is responsible for more deaths than many better-known risk factors** such as malnutrition, alcohol use, and physical inactivity. Air pollution is the 5th highest cause of death among all health risks, ranking just below smoking.
- Long-term exposure to outdoor and indoor air pollution contributed to nearly 5 million deaths from stroke, heart attack, diabetes, lung cancer, and chronic lung disease worldwide in 2017.
- Importantly, aggressive actions on fighting air pollution by China have showed the first signs of progress in reducing exposure, even as South Asian countries – Bangladesh, India, Nepal and Pakistan - led the world as the most polluted region, with over 1.5 million air-pollution related deaths.
- The analysis found that **China and India together were responsible for over half of the total global attributable deaths**, with both countries facing over 1.2 million early deaths from all air pollution in 2017. China has made initial progress, beginning to achieve air pollution declines; in contrast, **Pakistan, Bangladesh, and India have experienced the steepest increases in air pollution levels since 2010**.
- The report also highlighted that nearly half of the world's population—a total of 3.6 billion people—were exposed to household air pollution in 2017. Globally, there has been progress: the proportion of people cooking with solid fuels has declined as economies develop. But less developed countries continue to suffer the highest exposure to household air pollution.
- Air pollution is now **the third-highest cause of death** among all health risks, ranking just above smoking, in India.

### PEPPER IT WITH

NAFCC, World sustainable development summit, TERI, NAPCC, INDC

## First-ever global coalition for clean cooling launched

### In News

The first-ever global coalition on clean and efficient cooling comprising 23 members was launched at the **First Global Conference on Synergies between the 2030 Agenda and Paris Agreement, in Copenhagen, Denmark**. It is expected to inspire ambition, identify solutions and mobilise action to accelerate progress towards clean and efficient cooling.

### Details

Besides the UN, it is supported by the **Climate and Clean Air Coalition, the Kigali Cooling Efficiency Program and Sustainable Energy for All (SEforALL)**. It includes government officials from Chile, Rwanda, Denmark as well as leaders from civil society, research and academia.

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As incidence of heat waves emerges with regular and alarming frequency affecting the health and wellbeing of people, this new global effort aims to provide all with sustainable cooling at a scale that would ensure safe food, safe vaccine and comfort at work.

### **Significance**

- As the world gets warmer, the demand for air conditioners is projected to grow and the greenhouse gas it emits will endanger the planet.
- Clean, efficient cooling appliances and equipment can save up to \$2.9 trillion in energy use by 2050, and help avoid 0.4° Celsius warming of the planet.
- Throughout the world, **2018 was the fourth hottest year, preceded by 2017, 2015 and 2016.** The India Meteorological Department (IMD), too, warned that the season average maximum temperatures from April to June are likely to be warmer than normal by 0.5 degree Celsius.
- With increasing incomes and urbanisation, number of air conditioning units across the globe is set to increase from 1.2 billion to 4.5 billion by 2050, and India alone may account for one billion units.
- In the next 20 years, India's cooling requirement will increase by eight times, with air conditioners alone consuming more than half of the total energy required for cooling in the country by 2037-38.
- According to an **International Energy Agency (IEA)** report, the global stock of air conditioners in buildings will grow to 5.6 billion by 2050, up from 1.6 billion today — which amounts to 10 new ACs sold every second for the next 30 years.

#### **4th Resilient Cities Asia-Pacific (RCAP) Congress 2019**

4th Resilient Cities Asia-Pacific (RCAP) Congress 2019 **was organized by the International Council for Local Environmental Initiatives (ICLEI) in association with South Delhi Municipal Corporation.**

It asked the municipal administrators to accord priority to tree plantation, solid waste management, protection and rejuvenation of water bodies.

#### **PEPPER IT WITH**

Global tiger recovery program, Animal welfare board of India, Methanol blending, Stubble burning

## **Discolouration of Periyar**

### **Why in News?**

The water in Periyar River, the lifeline of Ernakulam district, which caters to the potable water needs of Kochi city, turned black again, leading to mass death of fish at the regulator cum bridge in the Eloor industrial area.

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### **Details**

- The river has been flowing in black, green and red hues for the past some time, **indicating release of chemical effluents from the industries functioning on either side of the river** at Eloor. Stagnation of water and growth of algae has led to depletion of oxygen levels in the water, leading to mass fish death.
- The colour of the **river turned black indicating anaerobic action in the river.** The dissolved oxygen level at a time in the morning stood at 1 mg per litre which was very much less than what is required for the aquatic life.

#### **PEPPER IT WITH**

PARIVESH, Convention on Biological Diversity, COP 24, Aichi targets, Minmata convention

### **Eutrophication**

- It is characterized by **excessive plant and algal growth due to the increased availability of one or more limiting growth factors needed for photosynthesis**, such

as sunlight, carbon dioxide, and nutrient fertilizers. **Eutrophication occurs naturally over centuries as lakes age and are filled in with sediments.**

- However, human activities have accelerated the rate and extent of eutrophication through both point-source discharges and non-point loadings of limiting nutrients, such as nitrogen and phosphorus, into aquatic ecosystems (i.e., **cultural eutrophication**), with dramatic consequences for drinking water sources, fisheries, and recreational water bodies.
- Cultural eutrophication has had dramatic consequences on freshwater resources, fisheries, and recreational bodies of water and is one of the leading causes of aquatic ecosystem degradation.
- Commonly, culturally eutrophic aquatic systems may exhibit extremely low oxygen concentrations in bottom waters, **a condition known as hypoxia**. This is particularly true of stratified systems such as, for instance, lakes during summer when concentrations of molecular oxygen may reach levels of less than about one milligram per litre—a threshold for various biological and chemical processes.
- Low oxygen levels can be further exacerbated by water blooms that often accompany nutrient loading of waters and may poison wildlife. In the Black Sea and elsewhere, hypoxic waters from cultural eutrophication have resulted in massive fish kills, with rippling effects throughout the food chain and local economies.

### Central Monitoring Committee to prepare national plan for polluted rivers

#### In News

The NGT has formed a Central Monitoring Committee to prepare and enforce a national plan to make **over 350 river stretches across the country pollution free** as it has caused serious threat to safety of water and environment.

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#### Dtails

- The committee would comprise a representative of NITI Aayog; secretaries of Ministry of Water Resources, Ministry of Urban Development and Ministry of Environment; the director general of National Mission for Clean Ganga and the Central Pollution Control Board chairman.
- The Central Monitoring Committee will also co-ordinate with the **River Rejuvenation Committees** of the states and oversee the execution of the action plans, taking into account the timelines, budgetary mechanism and other factors. Chief Secretaries of states will be the nodal agency at state level.

#### PEPPER IT WITH

IPCC, ACROSS Scheme, STAPCOR 2018, WWF, IUCN, CITES, Coral reefs, Coral bleaching

#### Significance

Due to use of polluted water in irrigation, there is threat to the health of human beings apart from the aquatic flora and fauna. It is therefore necessary to have regular hygienic survey of the rivers particularly with reference to pathogenic organisms having impact on human health directly or indirectly. It is also important to note that biological health of the rivers is an important aspect. Much of the important biodiversity is lost on account of severe pollution in the rivers.

There has to be a regular study of the Indian rivers with regard to biological health and its diversity. There are 351 polluted river stretches that have been noted by the CPCB and 117 such stretches are in the states of Assam, Gujarat, and Maharashtra.

## Renewable energy certificates

### Why in News?

Renewable power companies have moved the Delhi High Court, seeking to exempt the renewable energy certificates (RECs) from the goods and services tax (GST).

- The case will also have implications on priority sector lending certificates, used widely in the banking sector. These certificates currently attract a GST rate of 12 per cent. RECs are widely used in the renewable purchase obligations by companies and states.
- They argue that, **RECs fall under the definition of securities**. These scrips are traded on IEX (**Indian Energy Exchange**) and PXIL (**Power Exchange India Limited**) and are electricity derivatives.

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### Background

Launched in 2010, Renewable Purchase Obligations make it obligatory for distribution companies, open-access consumers and captive power producers to **meet part of their energy needs through green energy**. Pre-defined RPO target for all states, currently ranges from 3 per cent to 10 per cent of the total energy requirement of the states. RPO is divided in two parts- solar RPO and non-solar RPO.

**The states or utilities that are unable to fulfil their RPO can buy RECs**, which represents 1mw-hour of power produced from a renewable energy source.

### REC

- REC is a market-based instrument that certifies the bearer owns one megawatt-hour (MWh) of electricity generated from a renewable energy resource. Once the power provider has fed the energy into the grid, the **REC they receive can then sell on the open market as a commodity**. RECs are also known as **Green Tags and Tradable Renewable Certificates (TRCs)**.
- Together with Renewable Purchase Obligations (RPO), RECs act as market-pull incentives that create demand for renewable energy installations.
- In India, these are traded on two power exchanges — Indian Energy Exchange (IEX) and Power Exchange of India (PXIL).
- The price of RECs is determined by market demand, and contained between the **‘floor price’ and ‘forbearance price’** specified by the Central Electricity Regulatory Commission (CERC). These tariffs are reviewed periodically to reflect the average tariffs quoted in the latest RE Power Purchase Agreement (PPA).

### National Seminar on “Greenery and Landscaping”

Green Urban Areas play an important role in the social and natural sustainability and improve quality of life. This was the focus of a National Seminar on **“Greenery and Landscaping”** organized by the Central Public Works Department (CPWD), as a part of its continued effort for green and clean sustainable development.

### PEPPER IT WITH

Prakriti program, Green climate fund, Kyoto protocol, Rio+20, Agenda 21, National environment survey

## Biodiversity

### Olive Ridley Turtles

The idyllic Kalam Island off the Odisha coast has become lively with lakhs of baby Olive Ridley turtles crawling towards the Bay of Bengal after emerging from eggshells.

The unmanned island, located close to the Wheeler’s Island defence test range centre, a prohibited territory, is **one of the largest rookeries in the world**.

### About Olive Ridley Turtles

- The Olive ridley turtles are the smallest and most abundant of all sea turtles found in the world, **inhabiting warm waters of the Pacific, Atlantic and Indian oceans**.

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- These turtles, along with their cousin the **Kemps ridley turtle**, are best known for **their unique mass nesting called Arribada**, where thousands of females come together on the same beach to lay eggs.
- Though found in abundance, their numbers have been declining over the past few years, and the species is recognized as Vulnerable by the IUCN Red list.
- Though international trade in these turtles and their products is banned under CITES Appendix I, they are still extensively poached for their meat, shell and leather, and their eggs, though illegal to harvest, have a significantly large market around the coastal regions.
- However, the most severe threat they face is the accidental killing of adult turtles through entanglement in trawl nets and gill nets due to uncontrolled fishing during their mating season around nesting beaches.
- The mass nesting of Olive Ridley sea turtles is at Odisha's **Gahirmatha Marine Sanctuary in Kendrapara district**. The sanctuary is considered to be the world's largest rookery of sea turtles.

### **Great Indian Bustards**

- There are 150 Great Indian Bustards (GIB) in Rajasthan's Desert National Park (DNP), according to a survey. It is Listed in Schedule I of the Indian Wildlife (Protection) Act, 1972, in the CMS Convention and in Appendix I of CITES, as Critically Endangered on the IUCN Red List and the National Wildlife Action Plan (2002-2016).
- It has also been identified as one of the species for the recovery programme under the **Integrated Development of Wildlife Habitats** of the Ministry of Environment and Forests, Government of India.
- Today, its population is confined mostly to Rajasthan and Gujarat. Small population occur in Maharashtra, Karnataka and Andhra Pradesh. Bustards generally favour flat open landscapes with minimal visual obstruction and disturbance, therefore adapt well in grasslands.
- The biggest threat to this species is hunting, which is still prevalent in Pakistan. This is followed by occasional poaching outside Protected Areas, collisions with high tension electric wires, fast moving vehicles and free-ranging dogs in villages.
- Other threats include habitat loss and alteration as a result of widespread agricultural expansion and mechanized farming, infrastructural development such as irrigation, roads, electric poles, as well as mining and industrialization.

### **Bejjur vultures**

- Three critically-endangered Indian vultures or Long billed vultures (*Gyps indicus*) from the famous Palarapu cliff habitat in Penchikalpet forest range of Kumram Bheem Asifabad district died of unknown reasons about two months ago. It is the smallest of the vultures.
- The present population of the critically-endangered birds on Palarapu has now come down to 27 from the earlier 30.
- As a measure to provide enhanced protection to Bejjur vultures and towards better conservation, the Kagaznagar Forest Division had proposed to establish a sanctuary in the area called **Jatayu Wildlife Sanctuary**.

### **Yangtze giant softshell turtle**

- The only known female member of one of the world's rarest turtle species has died at a zoo in southern China. The animal was one of four Yangtze giant softshell turtles known to be remaining in the world.
- The Suzhou zoo, where the female turtle lived, also houses a male Yangtze giant softshell turtle. The other two live in Vietnam, but their genders are unknown.
- Yangtze giant softshell turtles originated in China, making their homes in the Yangtze River and Taihu Lake.
- Listed as **critically endangered** by the International Union for Conservation of Nature, the Yangtze giant softshell turtle is the most critically endangered turtle in the world. Its

status in the wild has long been recognized as grim, but extinction risk now is believed higher than ever.

- Much of its demise has been attributed to over-harvesting and the degradation of its freshwater habitat in China.

### Indian bullfrogs

Indian bullfrogs introduced in the Andaman Islands are invasive, and eat native wildlife including fish and lizards. Now, experiments reveal that the frogs take to this invasive behaviour early in their lives. Even in the developmental stages, the large bullfrog tadpoles eat other native frog tadpoles, finds a study.

The Indian Bullfrog is solitary and is usually nocturnal. The Indian Bullfrog is found in the wetlands of South and South East Asia. It inhabits holes and bushes near permanent bodies of water.

### IUCN Status - Least Concern

### Migratory Birds and Flyways - Asia

- The routes followed by migratory birds on their journeys between their breeding and wintering places are **known as flyways**.
- **Three migratory flyways cross Asia:** the West Pacific Flyway, East-Asian Australasian Flyway, and the Central Asian Flyway.
- The East-Asian Australasian Flyway extends from within the Arctic Circle, through East and South-east Asia, to Australia and New Zealand, stretching across 22 countries.
- Hundreds of thousands of birds of at least 178 water bird species use this migration path every year. In fact, the flyway is used by more water bird species in total, and more globally threatened or Near Threatened species (34 species, 19% of the total), than any other of the world's flyways.
- In addition, 21 species of migratory birds have more than 95% of their entire global population within the EAAF, including the Spoon-billed Sandpiper *Eurynorhynchus pygmeus* and Chinese Crested Tern *Sterna bernsteini* (both Critically Endangered).

### Neelakurinji

- Neelakurinji is a tropical plant species, native to **Shola forests in Western Ghats**. The flowers of Neelakurinji are purple-blue in colour and blooms once in 12 years.
- It is classified as Endangered.
- Paliyan tribal people of Tamil Nadu use this flower bloom as reference to calculate their age.

### Eurasian lynx

- Eurasian Lynx or Ee in Ladakhi is one of the medium-sized wildlife cats **found in the temperate and boreal forests** up to an altitude of 5,500 m.
- The cat is agile and strong and is adapted to the thin air atmosphere present in **high and cold mountaineous regions of Ladakh**.
- Its present range in the subcontinent is Ladakh and some parts of Pakistan administered Kashmir. Because of its wide distribution, it has been listed as **Least Concern on the IUCN Red List since 2008**.
- Its recent sighting in J&K amounts to the third smaller cat species reported from the valley. The other two more familiar ones are the Jungle Cat and the Leopard Cat.

#### **PEPPER IT WITH**

Nandhaur Wildlife Sanctuary, BS Norms, Toluene, Environment Pollution (Prevention and Control) Authority (EPCA)

### Echinda

### Why in News?

Recently scientists at the Council of Scientific & Industrial Research - Centre for Cellular and Molecular Biology (CSIR-CCMB) have isolated **anti-microbial protein (AMP) found in the milk of Echinda** and highlighted that it can be produced in large quantities using *E. coli*.

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## About Echinda

- Echidnas, also known as spiny anteaters, are unique **egg-laying mammals** found only in Australia and New Guinea. Their young hatch from eggs at a very early stage of development and depend completely on mother's milk.
- But the mammary glands of the echidnas are devoid of nipples, forcing the young ones to lick milk from the mother's body surface and potentially making them vulnerable to micro-organisms.
- The milk of the **echidna has AMP** that can puncture the cell membranes of multiple bacterial species, thus destroying the source of infection.
- This protein can be used to fight infections and promises to serve as an alternative to widespread and indiscriminate use of antibiotics in animal husbandry to maintain a healthy livestock as well as to push growth leading to the problem of multiple antibiotics-resistant bacterial strains.
- Mastitis**, an infection of the mammary gland of lactating dairy animals is one such challenge where the number of effective antibiotics is on the decline. In some cases, mastitis causes permanent damage to the mammary tissue of dairy animals.

## Western disturbance

### In News

The western disturbance has brought heavy rainfall across various parts of the country.

### WD

- Western disturbance (WD) is an **extra-tropical storm which originates in the Mediterranean region**. The disturbance travels from the "western" to the eastern direction. **Disturbance means an area of "disturbed" or reduced air pressure**.
- In the term "**extra-tropical storm**", storm refers to low pressure. "Extra-tropical" means outside the tropics. As the WD originates outside the tropical region, the word "extra-tropical" has been associated with them.
- A WD is associated with rainfall, snowfall and fog in northern India. Upon its arrival in Pakistan and northern India, clouds along with rain and snow also arrive. The moisture which WDs carry with them comes from the Mediterranean Sea and/or from the Atlantic Ocean.
- The approach of WD is characterised by rise in minimum temperature and occurrence of rainfall. But once the WD crosses a place then minimum temperature starts dropping. The formation of fog starts and slowly the cold wave occurs spreading to southwards in the country.

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### PEPPER IT WITH

Cold deserts, Ocean acidification, Thermohaline circulation, Tsunami, Earthquake early warning system

## IMD confirms weak El Nino conditions

### Why inn News?

The India Meteorological Department (IMD) has finally declared that weak El Nino conditions are prevalent in the equatorial Pacific Ocean.

El Nino, **which is the unusual warming of the equatorial Pacific Ocean**, disrupts global wind patterns affecting climatic conditions in tropical areas like Africa, sub-tropical areas like India as well as the extra-tropical areas like North America.

### Significance

- In India, there is a relationship between El Nino events and hotter than usual summers along with a decrease in rainfall during the monsoon. Most of the time, these events

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have also led to drought conditions.

- The weak El Nino might have an effect on the onset and intensity of monsoon this year, an update on which is expected soon from the government of India.
- In the 135 years between 1880 and 2014, around 90 per cent of all evolving El Nino years have seen below normal rainfall, and 65 per cent of them experienced droughts. In fact, six of the worst droughts in the country since 1871 have been triggered by El Nino — the most recent being in 2009.
- The last El Nino event that ended in 2016 had lasted for two years and caused heat waves all around the world, including India. The heat waves in 2015 and 2016 killed more than 2,500 people in India, and have been attributed to climate change — suggesting that El Nino was intensified by global warming.
- The severe El Nino had also caused massive coral bleaching in the Great Barrier Reef and droughts in parts of Africa, South East Asia and South America.

### **About El Nino**

- El Niño means **The Little Boy, or Christ Child** in Spanish. El Niño was originally recognized by fishermen off the coast of South America in the 1600s, with the appearance of unusually warm water in the Pacific Ocean. The name was chosen based on the time of year (around December) during which these warm waters events tended to occur.
- The term El Niño refers to the large-scale ocean-atmosphere climate interaction **linked to a periodic warming in sea surface temperatures** across the central and east-central Equatorial Pacific.
- The presence of El Niño can significantly influence weather patterns, ocean conditions, and marine fisheries across large portions of the globe for an extended period of time.

### **ENSO**

El Niño and La Niña are opposite phases of what is known as the El Niño-Southern Oscillation (**ENSO**) cycle. **The ENSO cycle is a scientific term that describes the fluctuations in temperature** between the ocean and atmosphere in the east-central Equatorial Pacific (approximately between the **International Date Line and 120 degrees West**).

La Niña is sometimes referred to as the cold phase of ENSO and El Niño as the warm phase of ENSO. These deviations from normal surface temperatures can have large-scale impacts not only on ocean processes, but also on global weather and climate.

### **Long Period Average (LPA)**

- ❖ India Meteorological Department (IMD) expresses the projected rainfall in terms of Long Period Average (LPA).
- ❖ The LPA of the monsoon season over the country is 89 cm, calculated for the period 1951-2000. This is the average rainfall recorded during the months from June to September, calculated during the 50-year period, and is kept as a benchmark while forecasting the quantitative rainfall for the monsoon season every year.
- ❖ IMD maintains **an independent LPA for every homogeneous region** of the country, which ranges from 71.6 cm to 143.83 cm.
- ❖ So, when IMD forecasts the category of rainfall, be it for country, region or month, the forecast is based on these standardised figures calculated for a period of 50 years. As per the outputs obtained from the weather models, the rainfall is categorised as normal, below normal, or above normal.

## La Niña

- ✓ La Niña means *The Little Girl* in Spanish. La Niña is also sometimes called *El Viejo*, *anti-El Niño*, or simply "*a cold event*."
- ✓ La Niña episodes **represent periods of below-average sea surface temperatures across the east-central Equatorial Pacific**. Global climate La Niña impacts tend to be opposite those of El Niño impacts. In the tropics, ocean temperature variations in La Niña also tend to be opposite those of El Niño.
- ✓ During a La Niña year, winter temperatures are warmer than normal in the Southeast and cooler than normal in the Northwest.

### PEPPER IT WITH

Ring of fire, Plate tectonics, Ocean currents, Monsoon, Mediterranean type climate, China type climate, Horse latitude

## StartupBlink's Start-up Ecosystem Ranking

### In News

StartupBlink has released Start-up Ecosystem Ranking recently.

### About

- StartupBlink has launched the 2019 ecosystem ranking report that now ranks 1,000 cities and 100 countries worldwide and is based on the results of the improved algorithm.
- It now tracks both momentum and trends within the start-up ecosystem.
- **The main goal of the rankings is to feature and rank hundreds of ecosystems** rather than highlighting a few highly successful ecosystems that are already well known.
- It used data from start-ups, accelerators and co-working spaces registered on its platforms as well as data received from global partners such as Crunchbase and SimilarWeb.
- The used method also reveals trends at both the country and city level, identifies up and coming start-up ecosystems, and flags underperforming ecosystems that are losing momentum.

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3800 new start-ups were launched in India during the last year. Overall, Indian start-ups received \$11 Bn of funding through 743 deals in 2018.

### Ranking

- India ranked 17
- Top three countries United States, United Kingdom and Canada respectively.
- City ranking Bangalore (11), New Delhi (18) and Mumbai (29)

### Why is it important to rank and have a good start-up ecosystem?

1. They create jobs, boost the economy, increase tax revenue, improve quality of life and urban innovation, and attract and retain talent. As an entrepreneur, location will greatly influence the chances your start-up will succeed.
2. Knowing how well your ecosystem performs is also important. **Corporations use these rankings to make decisions about future expansion, universities and consulting agencies use them for research, and governments and local development organization use them to gauge how well their programs are paying off.**

India has the **second largest** start-up ecosystem in the world and the median age of founders of these enterprises is only 31 years.

It was declared at '**Looking to the Future: A dialogue on the High-level Political Forum (SDG) Summit**' during the ECOSOC Youth

### PEPPER IT WITH

Digital Sky, NAVIC, RPAS, NETRA



- The efforts of governments, municipalities, and development organizations make a real difference. Knowing this information and measuring it mathematically without sugar-coating results helps track real progress and creates an urgency to encourage improvement.

## **IAIARD**

### **In News**

India has signed a MoU with the National Bank for Agriculture and Rural Development Consultancy Service (NABCONS) for setting up the India-Africa Institute of Agriculture and Rural Development (IAIARD) in Malawi.

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### **About Initiative**

- IAIARD will be a Pan-African Institute wherein trainees not only from Malawi but also from other African countries, will receive training to develop their human resources and build their capacity.
- IAIARD will develop training programmes in the areas of micro-financing and agro-financing, among others. The entire expenditure on faculty from India, the travel, logistics and training course expenses for students from other African countries will be borne by the Government of India for an initial period of three years.
- IAIARD will develop training programmes in the areas of micro-financing and agro-financing, among others.
- This institute will be the first of its kind developed in an African country by India. This will further strengthen the bilateral relations with Malawi and India's relations with African Union.
- The agreement is a part of India's efforts to enhance capacity in the areas of agro-financing and entrepreneurship development for African countries.

### **NABCONS**

- Nabcons is a wholly owned subsidiary promoted by NABARD and is engaged in providing consultancy in all spheres of agriculture, rural development and allied areas.
- Nabcons leverages on the core competence of the NABARD in the areas of agricultural and rural development, especially multidisciplinary projects, banking, institutional development, infrastructure, training, etc., internalized for more than two decades.

## **Core Industries**

### **Why in News?**

The full year (April-March) performance review of the core industries shows that it maintained growth rate of 4.3% in 2018-19, the same as in the previous year.

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### **About Core Industries**

- The Eight Core Industries **comprise 40.27%** of the weight of items included in the Index of Industrial Production (IIP).
- The **eight core industries are** Coal, Crude Oil, Refinery Products, Natural Gas, Fertilizers, Steel, Cement and Electricity.
- For industrialisation to take place, **the presence of certain industries is essential**. These are known by various names like core industries or core sector or basic industries. These industries require high level of capital, technology, skilled manpower and articulation in entrepreneurship.
- Initially the core sector had 6 industries but in **2013, 2 more industries (Natural gas and fertilisers) were added**.
- Among the core industries, **refinery products have maximum weightage while fertilisers have minimum weightage**.

- The core industries classification was created through **industrial policy statement 1973**. The industries which were of fundamental importance for the development of industries were put in this category.

### **Index of Industrial Production (IIP)**

- The all India index of Industrial Production (IIP) is a composite indicator that measures the **short-term changes in the volume of production** of a basket of industrial products during a given period with respect to that in a chosen base period.
- It is compiled and published monthly by the **Central Statistical Organization**, Ministry of Statistics and Programme Implementation six weeks after the reference month ends with base year of 2011-12.
- IIP represents the mining, manufacturing and electricity sectors with maximum weightage to the manufacturing sector (77.63%) and minimum weightage to the electricity sector (7.994%).

#### **PEPPER IT WITH**

Core investment companies, National Industrial Classification-2008, Index of eight core industries

## **Currency Chest**

### **Why in News?**

The Reserve Bank of India recently issued **guidelines for banks to set up new currency chests**.

The responsibility to **manage currency in circulation is vested with the RBI**.

### **Details**

- Area of the strong room/vault of at least 1500 square feet & for those situated in hilly/inaccessible places, the strong room/ vault area of at least 600 sq ft.
- The new chests should have a processing capacity of 6.6 lakh pieces of banknotes per day. For those situated in the hilly/inaccessible places, capacity of 2.1 lakh pieces of banknotes per day.
- The currency chests should have **Chest Balance Limit (CBL)** of Rs 1,000 crore, subject to ground realities and reasonable restrictions, at the discretion of the RBI.

### **Background**

The **D.K. Mohanty Committee on Currency Movement (CCM)**, a RBI appointed committee had recommended that the apex bank should encourage banks to open large currency chests with modern facilities and Chest Balance Limit (CBL) of at least Rs 1,000 crore.

As per the RBI's annual report of 2017-18, the currency management infrastructure consists of a network of 19 issue offices of the Reserve Bank, 3,975 currency chest (majority being managed by SBI) and 3,654 small coin depots of commercial, co-operative and regional rural banks spread across the country.

### **What is Currency Chest?**

Currency chests are some sort of **currency store houses and acts as networks of currency distributions**. Main function of currency chests is to store currency notes and coins.

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#### **Minting Money**

- ❖ A mint is an industrial facility responsible for manufacturing coins, currency or otherwise.
- ❖ In India, **coins are minted through the Security Printing and Minting Corporation of India (SPMCIL) mints located in Mumbai, Hyderabad, Kolkata and Noida**.
- ❖ The Kolkata mint was the first mint established in **India in 1757**.
- ❖ Every rupee coin has a symbol at the bottom of the coins. Every symbol is specific to a mint where the coin has been manufactured. Therefore, every symbol shows where the coin was made.

#### **PEPPER IT WITH**

Current Account Saving Account Deposits, Currency Swap Agreement

Currency chests facilitate note supply. They help the RBI to undertake smooth supply of currency notes across the country. The **cash reserve ratios of the commercial banks are also kept at currency chests.**

## **Asian Development Outlook 2019**

### **Why in News?**

Asian Development Bank (ADB) recently published its flagship publication, Asian Development Outlook 2019.

### **Key Highlights**

- It lowered India's growth by 40 basis points to 7.2% in fiscal year 2019-20 because of a **slower-than-expected pickup in investment demand.**
- Still, India will be the fastest growing economy in the world given **strong household spending and corporate fundamentals.** The growth rate in FY 2020-21 is likely to be 7.3%. China is projected to grow at 6.3% in 2019.
- The report mentioned that recent policy measures by the Government **to improve the investment climate and boost private consumption and investment** will help India to lift economic growth in the next two fiscal years.
- ADB projection is slightly higher than projections by other agencies which estimated growth rate between 7 to 7.1%.
- For the entire Asia, the multilateral agency forecasted that growth will soften to 5.7% in 2019 and 5.6% in 2020. Developing Asia's growth in 2018 was 5.9%.

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Recently, International Monetary Fund (IMF) **also cut India's GDP growth** forecast for 2019-20, following similar action by the **ADB** and **RBI**. India's **statistics office** had also revised its earlier growth forecast.

### **Way Forward**

- India has a golden opportunity to cement recent economic gains by becoming more integrated in global value chains. The **country's young workforce**, an improving business climate, and a renewed focus on export expansion all support this.
- Income support to farmers, hikes in procurement prices for food grains, and tax relief to tax payers earning less than Rs 5 lakh **will boost household income.**
- Declining fuel and food prices are also expected to provide an impetus for consumption.
- An increase in utilization of production capacity by firms, along with falling levels of stressed assets held by banks and easing of credit restrictions on certain banks, is expected to help investment grow at a healthy rate.

### **Concerns**

- ✓ According to the report, downside risks to growth include a higher-than-expected moderation in global demand and **a potential escalation of trade tensions.**
- ✓ **Lower-than-targeted tax revenues** or a delay in strengthening bank and corporate balance sheets could also undermine economic expansion.
- ✓ Consumer price inflation is expected to rise to 4.3% in FY 2019 and 4.6% in FY2020 as food costs increase slightly and domestic demand strengthens.
- ✓ Imports are expected to rise mainly due to stronger domestic demand while a growth slowdown in India's key export destinations **would dent export growth.**
- ✓ The current account deficit is expected to widen to 2.4% of GDP in FY2019 and 2.5% of GDP in FY2019. The deficit is expected to be financed comfortably by capital flows, given that **India has emerged as an attractive destination for foreign investment.**
- ✓ Rising risks to global economic growth as well as weakening domestic investment activity is a major concern.

### **About ADB**

- ♣ A resolution passed at the **first Ministerial Conference on Asian Economic Cooperation held by the United Nations Economic Commission** for Asia and the Far East in 1963 set that vision of ADB on the way to becoming reality.

- ♣ It was established in **1966 with headquarter at Manila**, Philippines with 31 members. Now, ADB is composed of 68 members, 49 of which are from the Asia and Pacific region.
- ♣ It is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining **its efforts to eradicate extreme poverty**.
- ♣ It assists its members and partners by providing loans, technical assistance, grants, and equity investments to promote social and economic development.
- ♣ India has a 6.3% of shareholding in ADB (4<sup>th</sup> on the ranking). Japan>USA>People Republic of China are the top three.

**PEPPER IT WITH**  
International Monetary Fund (IMF),  
Central Statistics Office, Asian  
Bond Market, US Trade Conflict

### **Conclusion**

With the Indian economy projected to slow down further in the coming years, India's focus should shift from inflationary concerns to sustaining the growth momentum.

## **World Economic Outlook 2019**

### **Why in News?**

International Monetary Fund (IMF) recently published World Economic Outlook - 2019.

It is a survey by the IMF staff usually published **twice a year and presents IMF staff economists' analyses of global economic developments during the near and medium term**.

### **Highlights**

- The International Monetary Fund (IMF) has projected that global growth will be 3.3% in 2019, down from 3.6% in 2018 and 4% in 2017 in its World Economic Outlook 2019 April report.
- This is mainly due to **lower global expansion in the second half of 2018** caused by **U.S.-China trade tensions, macroeconomic stress in Turkey and Argentina, tighter credit policies in China and financial tightening plus a normalisation of monetary policy in advanced economies**.
- Advanced economies are expected to slow down to 1.6% growth by 2022 and remain at that rate thereafter.
- India's growth is projected to pick up (from 7.1% in 2018) to 7.3% in 2019 and 7.5% in 2020, supported by the continued recovery of investment and robust consumption amid a more expansionary stance of monetary policy and some expected impetus from fiscal policy.
- These forecasts are nevertheless less by 10 and 20 basis points from the January and October forecasts. **One basis point is one-hundredth of a percentage point.**
- The IMF also calls for laws around land reform to change, to expedite infrastructure development as well as changes to hiring and firing laws in order create jobs and "absorb the country's large demographic dividend".

**PEPPER IT WITH**  
Non-Performing Assets,  
World Development Report

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## **Shadow Banking**

### **Why in News?**

In the aftermath of IL&FS crises, shadow banks are struggling to raise funds. They are facing high borrowing costs and a shortage of liquidity in India's money markets.

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These banks are now pitching bonds with high coupon rates to the public, **paving way for another financial crises which will have a deeper negative impact on the economy.**

### What is Shadow Banking System?

- The term Shadow Banking was coined by Economist **Paul McCulley in 2007.**
- These are financial intermediaries who performs banking functions **but are not subject to regulatory oversight** as they **don't take deposits like traditional banks.**
- These includes hedge funds, special purpose entities, structured investment vehicles etc.
- These systems earn by acting as an intermediary between large borrowers and large lenders. They earn their revenue from interest rate spreads and fees they charge.
- According to Financial Stability Board, Shadow banking **accounts for a 25-30% of global financial system.**

### Advantages of Shadow Banking System

- It helps in catering to the **capital needs of small-scale sector and rural areas.**
- Such banking system makes **access to fund quick and easy.** They loan money to higher risk businesses, such as startup companies.
- Such banking system adds value by creating money-like liquid securities from risky illiquid assets. In absence of such system the liquidity provision in the real economy declines.
- It might help financial stability by absorbing uninsured and uninsurable deposits from the commercial banking sector.

### Disadvantage of Shadow Banking System

- ✓ They provide lack of disclosure and information about the value of the assets they hold.
- ✓ There is **opaque governance and ownership** structures between banks and shadow banks.

### Case Study: China's Shadow Banking

In China, traditional banks are a big driver of shadow banking, as they help in circumventing regulatory control. China holds majority of world riskiest shadow banking assets. Its wealth management products (WMP) account for more than quarter of its GDP. In order to avoid sub-prime crises of US, **China added WMPs to its required health checks for banks** and, as part of a broader crackdown on financial risk, announced a sweeping plan to rein in shadow banking. This has though resulted in decline in the WMPs share in its GDP, but it helped China in averting a major financial crisis.

### Islamic Banking

- ❖ It is based on the **Shariat Law**, where money has no intrinsic value and therefore cannot be sold at profit.
- ❖ But it is permitted to follow a system of reasonable profit and return from investment where the investor takes a risk that is well calculated.
- ❖ Thus, Islamic banks make available accounts **which provide profit or loss instead of interest rates.**
- ❖ The banks use this money collected by them and invest in something that is shariat compliant that is not haraam and does not involve high risks.

### Financial Stability Board

It is an **international body that monitors and makes recommendations** about the global financial system. It does it by coordinating with national financial authorities and international standard-setting bodies in developing strong regulatory, supervisory and other financial sector policies. **It was established after the G20 London summit in 2009** as a successor to the Financial Stability Forum.



- ✓ There is **little regulatory or supervisory oversight** of the type associated with traditional banks. This increase their risk-taking capacity. **Hence though it makes good times better, but it also makes bad times worse.** They have virtually no loss-absorbing capital or cash for redemptions.
- ✓ A lack of access to formal liquidity support to help prevent fire sales.
- ✓ Concentration risk where these entities have too much exposure to some sectors.

**PEPPER IT WITH**  
Repurchase Agreement, Credit-Default Swaps, Sub-prime Crises

## International Finance Corporation

### Why in News?

Insolvency and Bankruptcy Board of India signs a **Cooperation Agreement with the International Finance Corporation** to further build the capacity of the Insolvency Professionals, and Insolvency Professional Agencies for the purposes of the effective implementation of the Insolvency and Bankruptcy Code, 2016.

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### About IFC

- It is an international financial institution that **offers investment, advisory, and asset management services** in order to develop private sector ecosystem in the country.
- It is a **sister organization of the World Bank** with headquarters situated in Washington D.C. United States.
- Although **part of the World Bank Group**, IFC is a separate legal entity with separate Articles of Agreement, share capital, financial structure, management, and staff.
- It is **owned by the member nations** and membership in IFC is open only to member countries of the World Bank.
- Its shareholders are member governments that provide paid-in capital and which have the right to vote on its matters.

### THE WORLD BANK GROUP

The World Bank Group is a vital source of financial and technical assistance to developing countries. **Established in 1944**, its mission is to fight poverty with passion and professionalism, for lasting results.

The World Bank Group consists of five distinct yet complementary organizations:

1. International Bank for Reconstruction and Development (IBRD)
2. International Development Association (IDA)
3. International Finance Corporation (IFC)
4. Multilateral Investment Guarantee Agency (MIGA) {Became member in 1994}
5. International Centre for Settlement of Investment Disputes (ICSID) **{India is not its member}**.

### Functions performed by IFC

- It makes investments in productive private enterprises in association with private investors. It concentrates on areas where enough private capital is not forthcoming on reasonable terms and conditions.
- It acts as a clearing house for bringing together investment opportunities, private capital and the experienced management.
- It **stimulates the International flow of capital and assists** the development of capital markets in less developed countries.

- It **advises governments on building infrastructure and partnerships** to further support private sector development.
- It encourages private sector activity in developing countries through three types of activities.
  - Private sector project financing
  - Helping companies in the developing world to mobilize financing in the international financial markets and
  - Providing guidance and technical assistance to business and governments.

**PEPPER IT WITH**

IBRD, Insolvency and Bankruptcy code, OCED. SWIFT

**World Bank Report on Remittances**

**Why in News?**

World Bank has released its **Migration and Development Brief**. India has retained its position as the world's top recipient of remittances i.e. amount of money sent back home by its nationals working abroad for the year 2018.

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**Important Facts**

- The Indian diaspora has sent \$79 billion (approximately Rs 5.5 lakh crore) home.
- The amount had **grown by 14%** since last year, this has been attributed to the Kerala Flood disaster.
- India has retained its top spot on remittances, over the last three years and has registered a significant flow of remittances from \$62.7 billion in 2016 to \$65.3 billion 2017.
- Remittances to low-and middle-income countries stood at \$529 billion in 2018, **an increase of 9.6% over the previous record high of \$483 billion in 2017.**
- Remittances to South Asia grew 12% to \$131 billion in 2018, outpacing the 6% growth in 2017.
- Rising oil prices add a positive impact on outward remittances from GCC countries.
- **Reducing remittance costs to 3% by 2030** is a global target under Sustainable Development Goal (SDG). In the year 2018 it stood at 7%.

**Gulf Cooperation Council and India**

The Gulf Cooperation Council (GCC) is a regional inter-governmental political and economic bloc of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE. Some important facts about Gulf countries and India relationship are:

- ❖ India's historical connection with the Gulf dates back more than five thousand years, to trading between the ancient civilisations of the Indus Valley and the Dilmun (linked with present-day Bahrain).
- ❖ The Indian rupee was legal tender in Kuwait, Bahrain, Qatar, Oman and the **Trucial states** (United Arab Emirates) until the 1960s.
- ❖ India is dependent on the six Gulf Cooperation Council (GCC) states for **42per cent of its overall oil imports.**
- ❖ Indian nationals make up the Gulf states' largest expatriate community, with an **estimated 7.6 million** Indian nationals living and working in the region.
- ❖ Indians number more than the local population in the UAE and Qatar.
- ❖ The GCC is India's largest regional-bloc trading partner, which accounted for \$104 billion of trade in 2017-18.

**PEPPER IT WITH**

Sustainable Development Goals, Inward Remittance, Foreign Exchange, Migration

## WTO E-commerce Talks

### Why in News?

A group of 75 nations agreed to commence informal talks on fixing **global e-commerce rules on the sidelines of the World Economic Forum**. India along with several developing countries such as, South Africa and Argentina, have decided not to be part of the talks. India has also decided to not to be an observer either.

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### About E-Commerce Talks

#### Talks are focused on:

- Data flow on computer servers freely without any constraint on data localization requirements.
- Conversion of existing temporary moratorium on custom duties to a permanent moratorium.
- No requirement of disclosure of source code.
- Introduction of a Prohibition on forced technology transfer.

### Why India Objected?

- India didn't want to participate in any new negotiations while the **Doha Development Agenda** is not concluded.
- India fears that new rules could provide the pretext for unfair mandatory market access to foreign companies.
- India wants 1998 agenda as a basis on any future conversation on e-commerce.
- India believes that plurilateral initiatives will strike at the root of multilateral system.
- India's policy of **data localization** through local servers will face challenge in these negotiations.
- India strongly believes developing countries needed policy space in areas such as ownership and use and flow of data in **sunrise sectors** like cloud computing and data storage.

### 1998 Agenda

At the Second Ministerial Conference in 1998, ministers, recognizing that global electronic commerce was growing and creating new opportunities for trade, **adopted the Declaration on Global Electronic Commerce**. This called for the establishment of a work programme on e-commerce, which was adopted later that year.

The Declaration instructed the General Council to establish a comprehensive work programme to examine all trade-related issues relating to global electronic commerce, including issues identified by Members.

Ministers also declared that Members will continue their practice of not imposing customs duties on electronic transmissions ("moratorium" on customs duties). **This is temporary in nature which gets extended at every Ministerial meeting**, which is held once in two years.

### Why India should participate?

- ✓ By participating in the talks India can push the interests of its small businesses at the multilateral level. It will enhance their opportunities to do cross-border trade.
- ✓ It would have helped India to be in a better position to obstruct unwanted provisions of the deal.

### WTO Tariff Rate Quotas

TRQs are two-level tariffs, with a limited volume of imports allowed at the lower 'in-quota' tariff and subsequent imports charged an "out-of-quota" tariff, which is usually much higher.

### PEPPER IT WITH

MSME, Inventory based model, RECP, Data localization. Doha Development Agenda

### Way Forward

Participation of developing country is important in any negotiation which impacts future business prospects in such countries hence WTO should wait before beginning of any negotiations.

India should take a similar stand on e-commerce issues discussed in any trade negotiations such as in RECP.

## **The Investor Education and Protection Fund (IEPF) Authority**

### **Why in News?**

The Investor Education and Protection Fund (IEPF) Authority has been able to force The Peerless General Finance and Investment Company Ltd to transfer deposits worth about Rs 1,514 crore to the IEPF.

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### **Background**

- Depositor's money was pending with the company for the last 15 years.
- This amount was taken by the company by issuing about 1.49 crore Deposit Certificates to more than 1 crore individual investors.
- Most of these investors are common citizens belonging to the lower and middle-income group, including daily wage earners.

### **About IEPF Authority**

- It was established under the provisions of **section 125 of the Companies Act, 2013**.
- The Authority is entrusted with the responsibility of administration of the Investor Education Protection Fund (IEPF), make refunds of shares, unclaimed dividends, matured deposits/debentures etc. to investors and to promote awareness among investors.
- It does the promotion of investors' education, awareness and protection.
- **Secretary of the Ministry of Corporate Affairs is the chairperson of the authority.**
- IEPF is in the process of commissioning an **online facility to collect primary information directly from retail investors** about deposits that have matured and are still pending with various entities for repayment or payment of interest.
- The online report will capture only essential fields, with various drop-down options. The Authority may take various steps to make all such companies and other entities comply with provisions of the Companies Act or other allied related legal provisions.

**PEPPER IT WITH**  
Companies Act 2013, Deposit Certificates, MCA 21.

## **Advance Pricing Agreement of Government of India**

### **Why in News?**

The Central Board of Direct Taxes (CBDT) recently entered into various Advance Pricing Agreements (APAs) which involved both unilateral and bilateral agreements.

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### **What is APA?**

An APA is an agreement between the taxpayer and the tax authority **on the pricing of future intercompany transactions**. In case of a roll-back, it would also include past years. The taxpayer and tax authority mutually agree on the transfer pricing methodology (TPM) to be applied and its application for a certain period of time for covered transactions (subject to fulfilment of critical assumptions).

### **Types of APAs**

An APA may be unilateral, bilateral or multilateral, as explained below:

**Unilateral:** APA entered into between a taxpayer and the tax administration of the country where it is subject to taxation

**Bilateral:** APA entered into between the taxpayers, the tax administration of the host country and the foreign tax administration

**Multilateral:** APA entered into between the taxpayers, the tax administration of the host country and more than one foreign tax administrations

### **Advantages of APAs**

APA is an effective tool used in several countries with established transfer pricing regimes **to avoid potential disputes in a cooperative manner**. An APA provides certainty on the pricing and the TPM to be adopted for covered intercompany transactions. Further, a bilateral or multilateral APA also eliminates the risk of potential double taxation arising from controlled transactions.

### **APAs in India:**

The APA provisions were introduced in the **Income-tax Act in 2012** with an objective to improve the investment climate in India while preserving the national tax base. The rollback provisions in APA were introduced in 2014. **The Indian APA rules allow for all the three types of APAs.** The Indian APA rules also allow the taxpayer to convert a unilateral into bilateral and vice versa in case of need. **The APA scheme provides certainty in transfer pricing upto a period of nine years** (five future years and four roll-back years).

The progress of the APA scheme in India strengthens the Government's resolve of fostering a **non-adversarial tax regime**. The Indian APA programme has been appreciated nationally and internationally for being able to address complex transfer pricing issues in a fair and transparent manner.

### **Transfer Pricing**

- ❖ Transfer pricing refers to the setting of prices of goods and services that are exchanged between **commonly controlled legal entities within an enterprise**.
- ❖ For instance, if a subsidiary company sells goods or renders services to the holding company, the price charged for these services is referred to as transfer price and the setting is called transfer pricing.
- ❖ Multinational corporations use transfer pricing as a method of allocating profits (earnings before interest and taxes) among its various subsidiaries within the organization.
- ❖ They usually take advantage of different tax regimes in different countries by booking more profits for goods and services produced in countries or economies with lower tax rates, thus minimizing their tax liabilities. **Thus it also amounts to tax avoidance.**

### **PEPPER IT WITH**

Tax havens, Tax evasion, Tax avoidance, BEPS, OECD

## **Purchasing Manager's Index**

### **Why in News?**

Manufacturing activity slowed to a six-month low in March due to lower levels of new orders and production, as reflected in Nikkei India Manufacturing Purchasing Managers' Index (Manufacturing PMI).

### **What is PMI?**

PMI or a Purchasing Managers' Index (PMI) **is an indicator of business activity -- both in the manufacturing and services sectors**. It is based on a **monthly survey** of supply chain managers that asks the respondents about changes in their perception of some key business variables from the month before. It is calculated separately for the manufacturing and services sectors and then a composite index is constructed.

A figure above 50 denotes expansion in business activity. **Anything below 50 denotes contraction**. Higher is the difference from this mid-point greater is the expansion or contraction.

### **Implications of PMI**

PMI is considered a good leading indicator of the attractiveness of an economy based on key indicators such as output, new orders, business expectations and employment. The purpose of the PMI is to provide information about current and future business conditions to company decision makers, analysts, and

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### **PEPPER IT WITH**

GDP, GNP, IIP, WHI



investors. Central banks of many countries also use the index to help make decisions on interest rates. The PMI also gives an indication of corporate earnings and is closely watched by investors as well as the bond markets.

## **NIIF collaboration with Roadis**

### **Why in News?**

Recently National Investment and Infrastructure Fund (NIIF) of India and global private infrastructure investor Roadis announced the creation of a platform that will **invest up to USD 2 billion in highways projects in India.**

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### **Details**

- The jointly-held platform will invest via equity route focusing on Toll-Operate-Transfer (TOT) models, acquisitions of existing road concessions and investment opportunities in the road sector.
- With benefits of the strong investment, operational expertise and value creation capabilities of both the entities, the platform intends to operate the roads portfolio with the highest global standards, while creating maximum value for the shareholders.
- The Indian government introduced the TOT model in 2016 for monetisation of publicly-funded highways. Under the model, investors make a one-time lump sum payment in return for long-term toll collection rights backed by a sound tolling system.

### **About ROADIS and NIIF**

Roadis, one of the leading private investor and operator of transport infrastructure worldwide, is the largest European highway concession manager in India with 710 km of highways under its ownership and management. It is a wholly-owned subsidiary of the Public Sector Pension Investment Board (PSP Investments), one of Canada's largest pension funds.

**NIIF is a fund manager that invests in infrastructure and related sectors** in the country. Despite being associated with the Government it is independent in its investment decisions being owned majorly by institutional investors and managed professionally by a team with experience in investments and infrastructure.

### **Way Forward**

The Indian road sector has attracted significant global capital over the last two decades and will continue to offer large investment opportunities. The road network is a key enabler for the Indian economy to grow and sustain its position as the fastest growing major economy and preferred investment destination in the world.

### **PEPPER IT WITH**

PPP models, Bharatmala project, Setu Bharatam project

## **Global Food Policy Report-2019**

### **Why in News?**

**International Food Policy Research Institute (IFPRI)** has recently released Global Food Policy Report-2019. It reviews the major food policy issues, developments, and decisions of 2018, and challenges and opportunities for 2019.

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### **Key highlights**

- Report highlights the urgency of rural revitalization to address a growing crisis in rural areas.
- Rural population account for 45.3 per cent of the world's total population and at least 70 per cent of the world's population remain extremely poor.
- Rural population suffer from rapid population growth rates, inadequate job and enterprise creation, poor infrastructure, scarce financial services.

- Nearly 50 per cent of rural youth all over the world do not have any formal job, they are either unemployed or under-employed.
- **Deepening cycle of hunger and malnutrition**, poverty, limited economic opportunities, and environmental degradation is threatening to slow the progress toward the Sustainable Development Goals.
- An estimated three quarters of the world's poor live in rural areas, and most are among the 2.5 billion people who work in small-scale agriculture in developing countries.
- Almost one billion people, most living in rural areas of Africa and South Asia, still lack access to electricity.
- South Asia remained the fastest growing region in the world in 2018, as economic growth continued to strengthen. However, growth rates varied greatly across the region.
- Changing consumption patterns which were driven largely by urbanisation, demographic transitions, increasing income, and growing integration of food supply chains and food systems in India offer new opportunities for entrepreneurship and employment in rural areas.

#### **IFPRI**

- ❖ The International Food Policy Research Institute (IFPRI) provides research-based policy solutions to sustainably reduce poverty and end hunger and malnutrition in developing countries.
- ❖ It is a research centre of CGIAR, a worldwide partnership engaged in agricultural research for development.
- ❖ IFPRI's vision **is a world free of hunger and malnutrition**. Its mission is to provide research-based policy solutions that sustainably reduce poverty and end hunger and malnutrition.

#### **PEPPER IT WITH**

CGIAR, Global Hunger Index, Minimum Support Price, Climate Resilience Agriculture

#### **Way Forward**

Policies, institutions, and investments that take advantage of new opportunities and technologies, increase access to basic services, create more and better rural jobs, foster gender equality, and restore the environment can make rural areas vibrant and healthy places to live and work.

### **Global Report on food crisis 2019**

#### **Why in News?**

Recently released Report on Global Food Crisis 2019 finds that around 113 million people in 53 countries experienced acute food insecurity in 2018, compared to 124 million in 2017.

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#### **About the Report**

The Global Report on Food Crisis is **released annually by the Food Security Information Network (FSIN), led by the UN Food and Agriculture Organization (FAO)**, the World Food Programme (WFP) and IFPRI. The report provides the latest estimates of severe hunger worldwide and at the country level, as well as analysis of the key drivers behind current hunger trends, to help humanitarian aid organizations and development organizations better coordinate to address the root causes of food crises.

**Various Partners** involved in producing the Global Report on Food Crises 2019 are: European Union, FAO, Global Food Security Cluster, Global Nutrition Cluster, UN Office for the Coordination of Humanitarian Affairs (OCHA), UNICEF, USAID among others.

#### **Key findings of the Report**

- Food insecurity remains a global challenge.
- The number of people facing food crises has come down slightly from 2017. **However the number of countries affected has risen**. Moreover, an additional 143 million people in another 42 countries are just one step away from facing acute hunger.

- Nearly two-thirds of those facing acute hunger are in just 8 countries: Afghanistan, the Democratic Republic of the Congo, Ethiopia, Nigeria, South Sudan, Sudan, Syria and Yemen.
- Climate and natural disasters pushed another 29 million people into acute food insecurity in 2018. And 13 countries - including North Korea and Venezuela - are not in the analysis because of data gaps.

### **Key Suggestions**

- Report highlights the need for the **humanitarian-development-peace nexus to build the resilience** of affected and vulnerable populations saving lives through livelihoods to reverse and prevent food crises.
- To truly end hunger, the report calls for attack on the root causes: conflict and displacement, political and economic instability, climate change and economic shocks. Programmes that make a community resilient and more stable will also reduce the number of hungry people.
- The report calls for more investment in conflict mitigation and sustainable peace, women empowerment, quality nourishment and education of children, improvement in rural infrastructure.
- In addition, investments in agricultural development and social safety nets will also help create a buffer against climate and weather driven disasters.
- To meet these needs effectively, improved data collection, analysis, and sharing is necessary.

**Acute food insecurity** is when a person's inability to consume adequate food puts their lives or livelihoods in immediate danger.  
**Chronic hunger** is when a person is unable to consume enough food to maintain a normal, active lifestyle over an extended period.

**PEPPER IT WITH**  
CILSS, FEWS NET, SICA, SADC, IGAD, WFP, IFPRI, FAO's Food Security and Nutrition report

## **Ways and Means Advances (WMA)**

### **Why in News?**

Recently the Reserve Bank of India, in consultation with the Government of India, has raised the limits for Ways and Means Advances (WMA) for the first half of the financial year 2019-20 at Rs 75000 crore. The Reserve Bank may trigger fresh floatation of market loans when the Government of India utilizes 75% of the WMA limit.

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### **WMA scheme for Central Government**

- The WMA scheme for the **Centre was introduced in 1997, abolishing the four-decade old system of adhoc Treasury Bills to finance the Central Government deficit.**
- This facility can be availed by the government in time bound manner i.e. for 90 days. **Interest rate for WMA is currently charged at the repo rate.**
- Overdraft is allowed for even lesser period of time i.e. not beyond 10 consecutive working days. The interest rate on overdrafts is kept higher i.e. 2 percent more than the repo rate. There is also requirement of minimum balance to be maintained by the Government of India with the Reserve Bank of India regarding this.

### **What is WMA?**

As the debt manager for government, RBI provides short-term loan to centre as well as state governments to **bridge temporary liquidity mismatches**. This temporary loan facility is called Ways and Means Advances (WMA). The RBI retains the flexibility to revise the limit at any time, in consultation with the Government of India, taking into consideration the prevailing circumstances.

**When WMA limit is exhausted and the government still needs liquid funds, it is termed as overdraft.**

## WMA Scheme for State Governments

- The RBI has been extending Ways and Means Advances (WMA) to State Governments **since 1937**. There are two types of WMA for states – Special and Normal WMA.
- The State Governments are sanctioned Special WMA based on their holdings in Government of India (GOI) dated securities/ Treasury Bills. The States are required to avail of Special WMA limits first before seeking accommodation under the normal WMA limits.
- The normal WMA limits are based on three-year average of actual revenue and capital expenditure of the state.
- States' overdrafts (OD) with RBI represent their drawls exceeding the authorized limits of WMA, both normal and special. A State Government account can be in overdraft for a maximum 14 consecutive working days with a limit of 36 days in a quarter.
- The rate of interest on WMA is linked to the Repo Rate. **Surplus balances of State Governments are invested in Government of India 14-day Intermediate Treasury bills** in accordance with the instructions of the State Governments.

**PEPPER IT WITH**  
Monetized deficit, Adhoc Treasury Bill, FRBMA

## Way forward

The cash management of GOI has considerably deteriorated in the recent past, with situations of large surplus and large deficit. This has put tremendous pressure on RBI with respect to liquidity management and conduct of monetary policy. Therefore Reserve Bank has expressed its desire to put in place a rule- based WMA limit in future, based on objective parameters in consultation with Government of India.

## FC holds discussions on 'Fiscal Relations across levels of Government'

### Why in News?

The 15<sup>th</sup> Finance Commission (FC) recently held a high level roundtable on '**Fiscal Relations across levels of government**', which was organized in partnership with the World Bank, OECD and ADB.

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### Areas of discussion

### Sub-national debt, fiscal rules and sustainability

One of the Terms of Reference (ToR) made to 15<sup>th</sup> FC is to review the current level of debt of the Union and the States and recommend a fiscal consolidation roadmap for sound fiscal management.

### Current status

- The Central Government debt is estimated at 48.9 per cent of GDP for 2018-19. It is expected that Central Government liabilities will come down to 47.3 per cent of GDP in 2019-20 (As per Budget 2019-2020).
- The outstanding liabilities of the State Governments stands at 23.4 per cent of GSDP at end-March 2017, with a range of 46.3 per

**Finance Commission** (Article 280): It is a **quasi-judicial body** constituted by the President of India every fifth year or at such earlier time as he considers necessary.

The Finance Commission makes recommendations to the President of India on the following matters:

1. The distribution of the net proceeds of taxes between the Centre and the states
  2. The principles governing grants-in-aid to the states by the Centre
  3. The measures needed to augment the consolidated fund of a state to supplement the resources of local bodies.
  4. Any other matter referred to it by the president
- The **15<sup>th</sup> FC** has award period from 2020 to 2025 under chairmanship of Shri **N.K. Singh**.

- cent (Punjab) and 15.1 per cent (Chhattisgarh) (as per the RBI Study on State Budgets).
- Discussions focused on the vertical distribution (between centre and states) as well as horizontal distribution (of state's share among states) of government debt limit i.e. 60% of GDP for centre and states combined (as mandated by FRBM Act).
- Intergovernmental transfer design, incentives and fiscal equalization**
- One of the major tasks of the FC is addressing vertical and horizontal imbalance in the fiscal resources between Union and States While designing formula-based transfers to sub-national governments, equalization becomes an important consideration.
- Discussion focused on the options available to design an equalization scheme for the Indian federation, given the constraints of data on unit cost of service delivery and on the taxable potential of the Centre and States.
- The ToR also requires FC to recommend performance-based incentives to states based on items in indicative list like efforts on GST, population control, increasing capital expenditure, implementation of flagship programs etc.
- The meeting discussed the criterion for incentive (i.e. focus on prospective performance or past accomplishments) and the need for balance between equity and efficiency, considering that the better-off States generally score better in efficiency consideration. International experiences of related cases were also discussed.

### **Public Financial Management (PFM)**

Reforms in PFM systems are a continuous process. Pace of implementation of PFM reform measures (for centre and states both) recommended by previous FCs has been slow.

Discussion focused on possible causes such as lack of institutional framework (to operationalize and implement these recommendations) at Union level or State level etc.

### **Revenue generation in third-tier of government**

- FC also has the mandate to recommend the measures to enhance the revenue raising capability of the third tier of the government.
- Property taxation is one of the major sources of raising revenue by local bodies. Some local bodies have attempted different models to streamline and systematize property collection within their jurisdiction. However, very few have been successful in improving revenue collection through property taxes.
- The discussions cantered around how to make the 3<sup>rd</sup> tier self-sufficient especially when the GST has subsumed many taxes which earlier used to generate revenue for local bodies. The reforms required, global practices, ways to help local governments to raise their own revenue through the scheme of devolution, grants and others were discussed.

The **Fiscal Responsibility and Budget Management (FRBM) Act** was enacted in 2003 to provide institutional / statutory backup to the roadmap for fiscal consolidation. It provides for time bound fiscal deficit reduction target for centre as well as state governments. As per the amended FRBM Act, the Central Government shall take appropriate steps to ensure that:

- ♣ The general government debt (centre and state combined) does not exceed 60%;
- ♣ The Central Government debt does not exceed 40% of GDP by the end of FY 2024-25.

**PEPPER IT WITH**  
NITI Aayog, Local bodies,  
ToR, Fiscal consolidation

### **RBI divests its entire stake in NABARD and NHB**

#### **Why in News?**

The Reserve Bank of India (RBI) has divested its entire stake held in National Housing Bank (NHB), and National Bank for Agriculture and Rural Development (NABARD) to the government raising its stake to 100%.

The decision is based on the recommendations of **Narasimham Committee II**.

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### **About NHB**

- It is the Apex level institution for housing, setup under the under the **National Housing Bank Act, 1987**.
- It was established on the recommendations of High-Level Group under the Chairmanship of Dr. C. Rangarajan.
- NHB has been established to achieve, inter alia, the following objectives-
  - To promote a sound, healthy, viable and cost-effective housing finance system to cater to all segments of the population and to integrate the housing finance system with the overall financial system.
  - To promote a network of dedicated housing finance institutions to adequately serve various regions and different income groups.
  - To augment resources for the sector and channelise them for housing.
  - To make housing credit more affordable.
  - To regulate the activities of housing finance companies based on regulatory and supervisory authority derived under the Act.

### **Narasimham Committee II**

#### **Major Recommendations:**

- ❖ **For Autonomy:** It suggests that the minimum shareholding by Government/RBI in the equity of nationalized banks and SBI should be brought down to 33%.
- ❖ **Reform Role:** The RBI should totally withdraw from the primary market in 91 days Treasury Bills and allow foreign institutional investor to invest in Treasury bill market.
- ❖ **Stronger Banking System:** Third-tier banks should be promoted and strengthened to be autonomous, vibrant, effective and competitive in their operations.
- ❖ **Foreign Banks:** Foreign banks may be allowed to set up subsidiaries or joint ventures in India. Such subsidiaries or joint ventures should be treated on par with other private banks and subject to the same conditions about branches and directed credit as these banks.

### **About NABARD**

- NABARD came into existence by transferring the agricultural credit functions of RBI and refinance functions of the then Agricultural Refinance and Development Corporation (**ARDC**).
- It was established based on the recommendations of the Committee set up by the Reserve Bank of India (RBI) under the chairmanship of **Shri B. Shivaraman**.
- It promotes sustainable and equitable agriculture and rural development through participative financial and non-financial interventions, innovations, technology and institutional development for securing prosperity
- It looks after the matters concerning policy, planning and operations in the field of credit for agriculture and other economic activities in rural areas in India.

### **PEPPER IT WITH**

Debt Recovery Tribunal, Indradhanush, Bankruptcy and Insolvency code, PARA, S4A, MCLR.

## **Profit Attribution to Permanent Establishment (PE) in India**

### **Why in News?**

The Central Board of Direct Taxes (CBDT) has invited stakeholders' comments on a draft committee report on attribution of profits in case of a permanent establishment (PE).

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### **Background**

Recognizing the significance of issues relating to attribution of profits to a permanent establishment as well as the need to bring greater clarity and predictability in the applicable

tax regime, a Committee was formed to examine the existing scheme of profit attribution to PE under Article 7 of DTAAs and recommend changes in Rule 10 of the Income-tax Rules, 1962. The Committee has submitted its report and it has been decided to seek suggestions/comments of the stakeholders and the general public.

### **Permanent Establishment (PE) in India**

- A Permanent Establishment in India is a fixed place of business, wholly or partly carried out by a foreign enterprise operating in India. Such fixed place of business can be a branch office, a place of management, a factory, a warehouse, a workshop etc. However, the definition of permanent establishment differs in each tax treaty.

- India recognises and acknowledges the PE concept in its international tax treaties under 'Article 5 – Permanent Establishment'.

### **Income tax Act**

**1961, provide for the concept of a 'business connection' in Section 9 of the Act and PE in Section 92F of the Act.**

- A foreign company needs to pay taxes in India on income received or deemed to have been received in India, or on income that accrues or is deemed to accrue or arise through a 'business connection' in India

- **Business Connection include any business activity carried out by a person on behalf of a foreign company, where the person has the authority to conclude contracts on behalf of the**

**foreign company and exercises this authority, maintains a stock of goods in India and regularly delivers these on behalf of the foreign company and secures orders for the foreign company or its group companies in India. (But if a person is an independent agent of a foreign company then in the ordinary course of its**

### **PMLA prevails over Bankruptcy Act**

The Delhi High Court has held that the Prevention of Money Laundering Act (PMLA) prevails over the Bankruptcy Act and insolvency code when it comes to attachment of properties obtained as "proceeds of crime". It is because of Section 71, PMLA which has the overriding effect over other existing laws in the matter of dealing with "money-laundering" and "proceeds of crime".

Further Court said that the PMLA, Recovery of Debt and Bankruptcy Act (RDBA), Securitization and Reconstruction of Financial Assets and Enforcement of Securities Interest (SARFAESI) Act and Insolvency and Bankruptcy Code (IBC) must co-exist and be enforced in harmony.

### **Supreme Court Observation**

- ❖ Supreme Court in **RD Aggarwal case** adjudicated that isolated events should not constitute a business connection and the foreign company should be able to demonstrate continuity of its business activities in India.
- ❖ Further, there should be a real and intimate connection between the business activities of the foreign company and its activities in India, including business activities such as back office operations and support services, which do not constitute a PE in the country.
- ❖ It has also observed that where no business operations are undertaken in India, business connection is not established in the country.

### **Multilateral Convention to Implement Tax Treaty Related Measures to Prevent BEPS (MLI)**

The MLI offers concrete solutions for governments to close the gaps in existing international tax rules by transposing results from the OECD/G20 BEPS Project into bilateral tax treaties worldwide. The MLI modifies the application of thousands of bilateral tax treaties concluded to eliminate double taxation. It also implements agreed minimum standards to counter treaty abuse and to improve dispute resolution mechanisms while providing flexibility to accommodate specific tax treaty policies. India is a signatory of MLI.

**business, the agent may not be its PE in the country).** Certain other exclusions have been made, e.g., for sourcing activities, purchase of goods in India for the purpose of export, etc.

- Consequently, in view of the inclusive definition of PE and the concept of a 'business connection' under the Act, in most cases, the provisions of the tax treaties are beneficial and therefore applicable for eligible foreign companies.
- Indian **tax laws provide that royalty or fees for technical services (FTS)**, effectively connected with a PE or a fixed place of business in India, will be taxable in the country on a net basis.
- The concept of PE in domestic tax laws forms as a part of statutory **Transfer Pricing (TP) provisions**, which covers various types of PEs.
- There are Four types of Permanent Establishment in India:
  - ✓ Fixed Place- office, place of business equipment etc.
  - ✓ Service- Employees visiting India to render services.
  - ✓ Agency-Securing and concluding orders in India
  - ✓ Installation PE- Machinery Installation and supervision.

**PEPPER IT WITH**  
BEPS, DTAA, GFA, ALP, OCED, CBDT

### **Profit Attribution**

- **Taxation of non-residents in India is governed by the provisions of the Income-tax Act, 1961 and the provisions of the Double Taxation Avoidance Agreement(s) [DTAA(s)]** concluded or adopted by the Central Government under the powers conferred under Section 90 or 90A of the Act, respectively.
- In India, if a non-resident has a business connection in India, **profit attribution is only permissible on the part of its income that is 'reasonably attributable'** to its operations in the country. Furthermore, if its business is carried out through a dependent agent, profit attribution to the dependent agent is only permissible on the income attributable to the operations it carries out in India.
- **Under Article 7** in the Indian treaties, profits are to be attributed to the PE as if it were a distinct and separate entity on the basis of the accounts of the PE and where such accounts are not available to enable determination of profits attributable to the PE, the profits attributable to the PE can be determined under the domestic laws.
- OCED recommends the use of **Arm's length Price (ALP)** for the calculation of Transfer pricing, however India has reservation on the method and under the Income Tax Act 1961 it is using the approach like **Global Formulary Apportionment (GFA)** approach.

### **Exercise Sea Vigil**

#### **Why in News?**

Recently **Indian Navy conducted exercise Sea Vigil** which was a maiden national level Coastal Defence Exercise.

#### **Highlights of Sea Vigil**

- The exercise witnessed the simultaneous activation of the coastal security apparatus across the country involving maritime stakeholders at the Centre and all the 13 Coastal States and Union Territories.
- The aim of the exercise is to **provide a realistic assessment of strengths and weakness of maritime security and in turn national security.**
- Exercise has tested inter and intra agency activation and technical cooperation like real time sharing of information.
- Key takeaways from the exercise debrief were deliberated and disseminated to all for further action/ follow-up.
- The feedback from the exercise, and the deliberations, would be presented at the next meeting of the National Committee for Strengthening Maritime and Coastal Security (NCSMCS).

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## NCSMCS

The National Committee for Strengthening Maritime and Coastal Security (NCSMCS) is a **national-level forum and an apex review mechanism** for maritime and coastal security, in which all concerned ministries and government agencies are represented. It is headed by Cabinet Secretary.

It was established to review important matters pertaining to coastal security and for effective centre-state coordination. The same committees were established at state and district level. Also, joint operations centres (JOCs) of the Navy and coastal security operations centres of the Indian Coast Guard were set up.

## Non-military preemptive strike

A non-military pre-emptive strike means a strike conducted proactively on a non-military (also non civilian) target that too in **self-defence** rather than to take revenge or for retribution. It is termed so in order to avoid military response as a reaction as well as to avoid the diplomatic pressure from across the world. **Hitting a military target is construed as an act of war and may invite military response** from the receiving state.

India has termed, the precise attack targeted on the terror camps near the border area in Pakistan conducted after suicide bombing attack on CRPF personnel in Pulwama, Jammu and Kashmir allegedly carried out and claimed by JeM, as a non-military pre-emptive strike.

## **PEPPER IT WITH**

Exclusive Economic Zone, Indian Coast Guard, SAGAR, Blue Economy

## **Army invokes emergency powers for missile deal**

### Why in News?

The Army is in the process of procuring **Spike-LR Anti-Tank Missiles from Israel and Igla-S Very Short-Range Air Defence Systems (VSHORAD)** from Russia through a set of new financial powers for emergency procurements sanctioned by the Defence Ministry.

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### What are Emergency Powers?

- After the Pulwama attack government has given emergency powers to the armed forces for buying equipment to enable them to fight wars on the western border with Pakistan.
- Under the latest emergency financial powers, armed forces have been given a **free hand to procure equipment worth up-to ₹300 crore on a priority basis.**
- The services also can choose to buy equipment from a single vendor and without the concurrence of the integrated financial advisor.
- The weapon systems allowed to be bought, must be acquired and fielded within three months of the proposal, extendable to 6 months.
- For the procurement under the emergency orders, the forces **need not even take concurrence of the Integrated Financial Advisor** from the defence finance department.

## Spike LR

It is an anti-tank missile with 4,000m range. Spike-LR can also be fitted on light combat vehicles. In **fire-and-forget mode**, the soldier activates the missile, locking the tracker on the target and pushes the fire button to launch. The missile automatically propels itself towards the target without any additional interaction and this fire-and-forget capability allows the soldier the option of relocating to a new firing position or to reload immediately for the next engagement. **Reloading takes less than 15 seconds.**

## **PEPPER IT WITH**

NAG, RAFALE, OSA, Defence Procurement Policy

## Assam Rifle

### Why in News?

The Delhi High Court has sought the response from the Cabinet Committee on Security on a plea seeking directions to remove the dual control of Assam Rifles and **bring it under the Ministry of Defence**.

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### Issue

- A petition filed by the Assam Rifles Ex-Servicemen Welfare Association on the difficulties faced by the retired personnel of the force about the payment of pension due to the dual control of the force.
- The dual leadership has caused administrative problems and many Assam Rifle personnel were being deprived of promotion due to dual control.
- The issue will now be decided by the Cabinet Committee on Security (CCS) which is chaired by the Prime Minister and comprises the Minister of External Affairs, the Home Minister, the Finance Minister and the Defence Minister.
- Both Ministry of Home Affairs and Ministry of Defence decided to abide by the decision taken by Cabinet Committee on Security.

### About Assam Rifles

- ✓ Assam Rifles, the 184-year-old paramilitary force of the country, **is under the administrative control of the Ministry of Home Affairs while the operational control lies with the Ministry of Defence**.
- ✓ The Assam Rifles came into being in 1835, as a militia called the 'Cachar Levy'. With approximately 750 men, this Force was formed to primarily protect British Tea estates and their settlements against tribal raids. Subsequently, all these Forces were reorganised and renamed as the 'Frontier Force' as their role was increased to conduct of punitive expeditions across the borders of Assam.
- ✓ The Post-Independence role of the Assam Rifles continued to evolve ranging from conventional combat role during Sino-India War 1962, operating in foreign land as part of the Indian Peace Keeping Force (IPKF) to Sri Lanka in 1987 (Op Pawan) to peacekeeping role in the North-Eastern areas of India in the face of growing tribal unrest and insurgency wherein the maintenance of law and order, countering insurgency and reassuring the people of the region became important tasks for the Assam Rifles.

#### Indian Army Open Vacancy for Women in Military Police

- ❖ For the first time the Indian Army has begun online registration of women for recruitment as soldiers into the military police.
- ❖ It is seen as the impact of government decision which dictated that women would be inducted into the force in the **"Personnel Below Officer Rank" (PBOR) category** in a graded manner to eventually comprise 20 percent of total Corps of Military Police.
- ❖ Those appointed under **Personnel Below Officer Rank (PBOR) are given the responsibilities to investigate offences such as rape, molestation and theft; serve military operations where the Army needs police assistance; assistance in evacuation of villages during cross-border hostilities; and ceremonial as well as policing duties.**

#### PEPPER IT WITH

Paramilitary Forces, Women in Uniform, Cabinet Committee on Security



### Exercise Bold Kurukshetra

- The 12th edition of joint military exercise between **India and Singapore, BOLD KURUKSHETRA 2019** was held recently.
- It was a four day long joint training exercise which focused on developing interoperability and conduct of joint tactical operations in mechanised warfare.
- The troops learnt about each other's organisations and best practices being followed in combat. The exercise was a grand success and taught valuable lessons to troops of both the participating nations.
- Bold Kurukshetra was conducted under the ambit of the bilateral agreement for joint army training and exercises between the Singapore and Indian armies.
- The exercise underscores the strong and long-standing bilateral defence relationship between both countries, as well as improves cooperation between the two armies.

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### AUSINDEX-19

- The **Australian and Indian Navy** concluded the two-week long **bilateral maritime exercise code-named AUSINDEX** recently.
- This was the **third edition** of the exercise and included a series of advanced warfare drills in all three dimensions comprising anti-submarine warfare exercises, air defense exercises, anti-surface warfare exercises including live-fire drills, replenishment at sea, and cross deck flying.
- The bilateral exercise was aimed "to strengthen and enhance mutual cooperation and interoperability between the IN and RAN, providing opportunities for interaction and exchange of professional views between the personnel of the two navies".
- The current edition of the exercise had the participation of the highest number.

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### Battle of Kangla Tongbi

#### Why in News?

The **Platinum Jubilee of the Battle of Kangla Tongbi War** was commemorated on 07 Apr 2019 by Army Ordnance Corps at Kangla Tongbi War Memorial near Imphal honouring the valiant brave hearts of Ordnance Personnel of 221 Advance Ordnance Depot who made their supreme sacrifice in the line of duty during the battle of **World War-II on the night of 6/7 April 1944**.

#### About the battle

Japanese forces had planned a three pronged offensive to capture Imphal and the surrounding areas. In their attempt to extend their line of communication to Imphal, the 33rd Japanese Division cut in behind the 17th Indian Division at Tiddim (Myanmar) and establishing themselves firmly on the main Kohima – Manipur highway, started advancing towards Kangla Tongbi. At Kangla Tongbi, a small but determined detachment of 221 AOD put up stiff resistance against the advancing Japanese forces.

The position of 221 AOD was not at all sound from a tactical point of view. It was exposed to the enemy from all sides and had to rely on its own combatant manpower for its defence. Major Boyd, the Deputy

#### Pidakal War (Andhra Pradesh)

- The annual **Ugadi festival is marked with the 'Pidakala War'**. The devotees believe that the practice brings health, prosperity and rains to the villages.
- Every year, the people of Kairuppala and neighbouring villages of Andhra Pradesh take part in the symbolic war that occurs over a Hindu mythological marriage dispute.
- One side throws pidakala or cow-dung cakes in the name of the Goddess Bhadrakali while the other do so in the name of Lord Veerabhadraswamy, until one side wins and they all celebrate the wedding of the two.

Chief of Ordnance Officer (DCOO) was made in charge of the operations for defence of the Depot. A Suicide squad comprising of Major Boyd, Havildar/ Clerk Store Basant Singh, Conductor Panken and other personnel from the Depot was created.

## **Bharati Script**

### **Why in News?**

A team from **IIT Madras** has developed a method for reading documents in **Bharati script** using a multi-lingual optical character recognition (OCR) scheme.

The team has also created a **finger-spelling method** that can be used to generate a sign language for hearing-impaired persons using finger spelling technique in collaboration with TCS Mumbai.

### **About Bharati Script**

- Bharati script is a unified script **for nine Indian languages** (Devnagari, Bengali, Gurmukhi, Gujarati, Oriya, Telugu, Kannada, Malayalam and Tamil) developed by a team from IIT Madras.
- Urdu and English alphabet systems have a very different phonetic organisation. So, they have not been included so far.
- In general, optical character recognition schemes involve first separating (or segmenting) the document into text and non-text. The text is then segmented into paragraphs, sentences words and letters.
- Each letter has to be recognised as a character in some recognisable format such as **ASCII or Unicode**. The letter has various components such as the basic consonant, consonant modifiers, vowels etc.
- Bharati is being proposed as a common script for India**. The Roman script is used as a common script for many European languages (English, French, German, Italian etc.), which facilitates communication across nations that speak and write those languages.
- Likewise a common script for the entire country is hoped to bring down many communication barriers in India.

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- A very early Buddhist work **Lalitavistara** mentions that as many as 64 scripts were in use in ancient India.
- Brahmi script was first deciphered by **James Princep in 1837AD**.
- The **Sharada script** evolved from Gupta Brahmi in the 9th century AD. In its earlier forms it was widespread over the northwest parts of the Indian subcontinent and was the progenitor of the Gurmukhi script, but later it became restricted to Kashmir, where it was the principal means of writing until the 20th century.

### **PEPPER IT WITH**

American Standard Code for Information Exchange (ASCII), Signature guide, Kharosthi Script, Brahmi Script

## **Kandhamal Haldi**

- 'Kandhamal Haldi' is a variety of turmeric **indigenous to southern Odisha**. It has more oleo resin and volatile oil contents compared to other turmeric varieties. It gives strong aroma and has a high medicinal value.
- Orissa has recently earned the Geographical indication (GI) tag for 'Kandhamal Haldi' from Intellectual Property India (IPI), **an organisation under the Union ministry of Commerce & Industry**. 'Kandhamal Haldi' has been placed under Class-30 type.
- The GI recognition coincided with the Orissa's Foundation Day (Utkal Divas).
- The GI tag was primarily developed with the purpose of recognising the unique identity connecting different products and places. For a product to get GI tag, it has to have a unique quality, reputation or characteristic which is attributable to its geographic origin.

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## Garia Puja festival

- Garia Puja is a Puja done by the tribes of the **Tripura state**. This festival is celebrated as a **harvest festival by the ethnic tribes** and celebrations are done during March-April.
- The festival is celebrated in a traditional way by the people of Tripura and celebrated throughout the state with a lot of splendor and joy.
- The Puja is mainly conducted by Jhumias. A bamboo pole is worshipped with flowers and garlands by the tribals which symbolizes the Lord Garia, the deity of livestock and wealth.

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## Vishu, the Malayam New Year

- Vishu is the Hindu New Year of Kerala which follows the solar cycle of the lunisolar as the first day of month called Medam.
- The word Vishu, which means 'equal' in Sanskrit, ushers in spring equinox. Lord Krishna is worshipped on this day.
- Vishu coincides with **Baisakhi** (Sikh New Year), **Pohela Boishakh** (Bengali New Year), **Bohag Bihu** (Assamese New Year) and **Puthandu** (Tamil New Year).
- New Year in Vikram Samvat starts from the first day of Chaitra Shukla Paksha which roughly falls around 21/22 march.

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## Haka Dance

- Haka**, (Maori: "dance") Maori posture dance that involves the entire body in vigorous rhythmic movements, which may include swaying, slapping of the chest and thighs, stamping, and gestures of stylized violence.
- It is accompanied by a chant and, in some cases, by fierce facial expressions meant to intimidate, such as bulging eyes and the sticking out of the tongue. Though often associated with the traditional battle preparations of male warriors, *haka* may be performed by both men and women, and several varieties of the dance fulfill social functions within Maori culture.
- Since 1972 the performance of *haka* has been one of the hallmarks of the widely popular Te Matatini performing arts festival, held biennially in New Zealand.

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## Miscellaneous

### Reiwa

Japan's new imperial era beginning May 1 **will be called "Reiwa."**

The new imperial era will begin when Crown Prince Naruhito takes oath as a new emperor. This is a long tradition in Japan that the ascension of a new emperor to the Chrysanthemum Throne spurs a new era in the nation, which is marked by a new name. **Current era under Emperor Akihito is known as "Heisei".**

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### Abu Dhabi International Book Fair, 2019

UAE has announced that India will be the Guest of Honour country at the ADIBF 2019. The fair aims to highlight the UAE's rich heritage, showcasing its authenticity and modernity, as well as its cultural and literary output.

The book fair will celebrate India, with its authentic culture, arts, heritage and knowledge-based traditions.

### Online Harms White Paper

- UK's Department for Digital, Culture, Media and Sport (DCMS) has proposed an independent watchdog that will write a "**code of practice**" for tech companies.

- The paper suggests establishing an independent regulator that can write a "code of practice" for social networks and internet companies
- The plans cover a range of issues that are clearly defined in law such as spreading terrorist content, child sex abuse, so-called revenge pornography, hate crimes, harassment and the sale of illegal goods.
- But it also covers harmful behaviour that has a less clear legal definition such as cyber-bullying, trolling and the spread of fake news and disinformation.

### **Earth Day**

It is an annual event celebrated around the world on April 22 to demonstrate support for environmental protection. First celebrated in 1970, it now includes events coordinated globally by the Earth Day Network in more than 193 countries.

Earth Day Network, the organization that leads Earth Day worldwide, has chosen the theme for 2019, to protect threatened and endangered species.

### **Mount Agung**

**Mount Agung** on Indonesia's resort island of Bali has erupted again, spewing volcanic ash into the sky to a height of two kilometres.

Two other volcanoes popular with tourists on the island of Java also continue to erupt. Mount Bromo in East Java and Mount Merapi in Yogyakarta have exclusion zones in place.

### **Café Scientifique**

Café Scientifique, the first such initiative of Kerala, envisages to bring science back into popular culture by demystifying scientific research for the public and empowering non-scientists to comfortably assess science and technology issues, particularly those that impact social policy making.

Café Scientifique is a grassroots public science initiative based on the French Café Philosophique model. Originating in England, the concept quickly gained popularity and was adopted by other countries.

### **World's first national 5G network**

**South Korea launched** the world's first nationwide 5G mobile networks.

The technology is crucial for the future development of devices such as self-driving vehicles and is expected to bring about \$565 billion in global economic benefits by 2034.

### **Chain-melted state**

It is a new kind of matter **that can be both solid and liquid at once**. In this chain-melted state, molten and solid layers intertwine at the atomic level.

### **Helium hydride**

- The most ancient type of molecule in our universe has been detected in space, backing up theories of how the early chemistry of the universe developed after the big bang.
- The positively charged molecule known as helium hydride is believed to have played a starring role in the early universe, forming when a helium atom shared its electrons with a hydrogen nucleus, or proton.
- Not only is it thought to be the first molecular bond, and first chemical compound, to have appeared as the universe cooled after the big bang, but it also opened up the path to the formation of molecules of hydrogen.
- Data was collected using an instrument onboard a mission known as Sofia, a joint project between Nasa and the German Aerospace Center.

### **UN awards**

- Two schemes of the West Bengal government for skill development and distribution of bi-cycles to students have won the prestigious World Summit on the Information Society (WSIS) awards of the United Nations. **The schemes are "Utkarsh Bangla" and "Sabooj Sathi"**.
- The **"Utkarsh Bangla" project aims** at creating a pool of skilled candidates who are industry ready, **while under the "Sabooj Sathi" scheme**, bi-cycles are distributed to students between class IX and XII studying in government run and government aided schools and madrasahs of the state.

- The West Bengal government had received another UN award in 2017 for its '**Kanyashree**' project, a targeted conditional cash transfer scheme aimed at promoting education among girls.
- WSIS Prizes is an international contest to create an effective mechanism to evaluate and recognise individuals, governments and private bodies for outstanding success in implementing development oriented strategies that leverage the power of ICTs as an enabler of the development.

### **Russia's highest civilian award**

- Russia announced that it will confer its highest civilian award, the "**Order of the Holy Apostle Andrew the First**," on Indian Prime Minister Narendra Modi for his work on bilateral ties.
- The order was presented to the Prime Minister of India for his distinguished contribution to the development of a privileged strategic partnership between Russia and India and friendly ties between the Russian and Indian peoples.
- The Order of the Holy Apostle Andrew the First is awarded to prominent government and public figures, prominent representatives of science, culture, art and various sectors of the economy for "exceptional services that contribute to the prosperity, greatness and glory of Russia."

### **The Order of Zayed**

The United Arab Emirates (UAE) has decided to confer the country's highest civilian award "The Order of Zayed" on Prime Minister Narendra Modi **for boosting bilateral relations between the two countries.**

This will make him the first Indian Prime Minister to receive the award. He has already been conferred with Saudi Arabia's highest civilian honour -- the King Abdulaziz Sash, the award, named after Abdulaziz Al Saud, the founder of the modern Saudi state.

### **Maharshi Badrayan Vyas Samman**

The distinction is conferred in recognition of substantial contribution in the field of **Sanskrit, Persian, Arabic, Pali, Prakrit, Classical Oriya, Classical Kannada, Classical Telugu and Classical Malayalam.**

### **Saraswati Samman**

- It is the highest recognition in the field of Indian literature and carries a cash purse of Rs 15 lakh, apart from a citation and a plaque.
- Telugu poet K Siva Reddy is to be conferred the prestigious award for 2018, for his collection of poems titled Pakkaki Ottigilite (Turning Aside While Lying Down).
- The award, instituted by the KK Birla Foundation, is given annually for an outstanding literary work written in any official Indian language and published during the preceding 10 years.

### **Rabindra Nath Tagore Literary Prize**

Rabindranath Tagore Literary Prize, existing since 2018, is a US \$10,000 prize, is a platform for World Peace, Literature, Art, Education and Human Rights, and has twofold purpose: to award the finest in Indian literature, as honorable legacy to Rabindranath Tagore and to recognize positive and lasting impact on society and its change with our Social Achievement award.

The second edition of Rabindranath Tagore Literary Prize was awarded to author **Rana Dasgupta for his 2010 novel "Solo"**, a tale of estrangement and the ultimate failure of material existence.

### **Exchange Traded Fund (ETF)**

Exchange Traded Funds are **mutual funds listed and traded on stock exchanges like shares.** Usually, ETFs are passive funds where the fund manager doesn't select stocks on other's behalf. Instead, the ETF simply copies an index and endeavours to accurately reflect its performance. **In an ETF, one can buy and sell units at prevailing market price on a real time basis during market hours.**

Government is focusing on Exchange Traded Funds (ETFs) route to disinvest its holdings in public sector companies rather than sell them on a piecemeal basis in the market. One such



vehicle is the **Bharat 22 ETF, a fund which houses 22 public sector companies**. It allows the Government to park its holdings in selected PSUs in an ETF and raise disinvestment money from investors at one go. It tracks the specially made S&P BSE Bharat 22 Index, managed by Asia Index Private Limited. This index is made up of 22 PSU stocks and with a few private sector companies.

### **Bamboo rice**

Bamboo rice also known as **Mulayari**, is a special rice variety with beautiful and natural short grain that is **grown out of a dying bamboo shoot**. When the bamboo shoot breathes its last, it flowers into this rare variety of rice seeds. It is said that the bamboo rice harvesting is a major source of income for the **tribal communities** such as living in the interiors of **Wayanad Sanctuary in Kerala**.

Bamboo rice like any other rice is rich in various nutrients such as **carbohydrates, fiber and protein**. As it has **low glycemic index**, it is considered to be a healthier option for diabetics. The rice has **low or no fat** and is **rich in vitamin B**. The tribes in Kerala use this rice to **cure joint pain** owing to the presence of immense **calcium** and **phosphorus** content.

### **Strait of Hormuz**

- After withdrawing from the Iran Nuclear Deal, US has tightened its sanctions over Iran.
- In, reply Iran has used its old weapon of threatening USA of **blocking Strait of Hormuz** also called **Strait of Ormuz**, channel linking the **Persian Gulf (west) with the Gulf of Oman and the Arabian Sea** (southeast). The strait is 35 to 60 miles (55 to 95 km) wide and separates Iran (north) from the Arabian Peninsula (south).
- It sees maximum traffic of world oil supply. In order to save its interest US is deploying the USS Abraham Lincoln carrier strike group and a bomber task force to the U.S. Central Command (Centcom) region. Centcom's operational area includes the Middle East and Central Asia. This paves way to another regional crisis in already volatile region.



### **Greta Thunberg**

- Greta Thunberg is a Swedish teen activist who has encouraged **students to skip school to join protests demanding faster action on climate change**, leading to the movement that has spread to other European nations and even beyond in over 100 countries with school students spilling out into the streets for protest.
- It has generated mass movement in India.
- **Fridays for Future —calling for protest every Friday** until the Centre and State implement proactive policies to curb global warming. The aim of the movement is to make citizens and policy makers work towards mitigating climate change by tackling greenhouse emissions.
- Few Norwegian lawmakers have nominated Swedish teen activist, who has become a prominent voice in campaigns against climate change, for the Nobel Peace Prize.

### **Gangandeep Kang**

Gangandeep Kang has become the first Indian woman to be **elected to the Fellow of the Royal Society (FRS)**. Dr. Kang, currently engaged with the Translational Health Science and Technology Institute, Faridabad, is known for her inter-disciplinary **research** studying the transmission, development and prevention of enteric infections and their sequelae in children in India. **She has built national rotavirus and typhoid surveillance networks** and conducted phase 1-3 trials of vaccines, which has supported two WHO pre-qualified vaccines. She has also won many accolades including the Infosys prize.

The Royal Society of London has recently announced a list of 51 eminent scientists elected to its fellowship in the year 2019. Princeton professors Manjul Bhargava and Akshay Venkatesh have also been elected to the FRS.

### **Homo luzonesius**

- A new species of ancient human (**with specimen, named Homo luzonensis**), under 4ft tall and adapted to climbing trees, has been discovered from Callao cave on Luzon island in the Philippines, providing a twist in the story of human evolution.
- It has been dated to 50,000-67,000 years ago – when modern humans and the Neanderthals were spreading across Europe and into Asia.
- It was once thought that no humans left Africa until about 1.5 million years ago, when a large-bodied ancient human called *Homo erectus* set off on a dispersal that ultimately allowed it to occupy territory spanning Africa and Spain, China and Indonesia.
- Then, according to the traditional narrative, after a few hundred-thousand years of not much happening, our own ancestors dispersed from Africa about 50,000 years ago.

### **PARAM Shivaay**

- 'Param Shivay' is the supercomputer of **833 teraflop capacity** built at the cost of Rs 32.5 crore under the National Super Computing Mission.
- It was recently inaugurated at the Indian Institute of Technology (IIT), Banaras Hindu University (BHU) by the Prime Minister of India. A postal stamp and postal stamp album were also released on the centenary year of the institute.
- Scientists, teachers and research students, government research laboratories in adjacent engineering colleges to IIT-BHU can avail benefits of the projects. About 40 per cent computer power will be used by the students of Navodaya Vidyalaya.
- India's first supercomputer called **PARAM 8000 was launched in 1991**. At present, Indian Institute of Tropical Meteorology has Pratyush, National Centre for Medium-Range Weather Forecasting has Mihir and IISc has SERC-Cray as supercomputers in India.

### **Sidhmukh Nohar project**

- Sidhmukh and Nohar project is a major irrigation project constructed to utilize the share of Rajasthan in **Ravi-Beas surplus** water over and above pre-partition from the existing Bhakra Main line canal in Punjab to accommodate the increased flows.
- The project provides irrigation facilities to areas under Sidhmukh and Nohar command. The two project benefits districts of Sriganganagar and Churu in Rajasthan.
- The Supreme Court is currently hearing the issue of diversion of Beas water for Sidhmukh Nohar Project in Rajasthan.

### **Lord Howe Island**

- Lord Howe Island is located at some 600 km offshore from Sydney, Australia. It is home to the world's southern-most coral reef containing many diverse and rare species not found anywhere else on the earth and is a **UNESCO World Heritage Site**.
- Rising sea temperatures due to climate change were affecting even the most isolated ecosystems resulting in severe coral bleaching up to 90% at Lord Howe's inshore, shallow lagoon reefs.
- Bleaching occurs when abnormal environmental conditions, such as warmer sea temperatures, cause corals to expel tiny photosynthetic algae, draining them of their colour.

### **Concept Clearing Questions**

1. What are the legal provisions available to combat Sexual harassment of women at Judiciary workplace by judges? Elucidate your answer considering recent allegation of sexual harassment by CJI.
2. Briefly discuss FAME II and bring out the key features of the initiative. Also discuss how it will help India in reducing Carbon emission.
3. A blanket ban on prisoners' right to vote under Section 62(5) of the RPA 1951 "is a violation of the spirit and soul of the constitution as well as the basic principle of equality envisaged under Article 14, 19 and 21. Discuss with examples.
4. Who is a Service Voter? Discuss the tools available for the Service Voter to cast their vote.
5. Facebook-owned WhatsApp has launched a new platform to address the issue of fake news during upcoming Lok Sabha elections called 'CheckPoint Tipline'. Suggest steps to check the increasing use of social media in catering fake news and reducing its negative impact on election campaign platform. Substantiate with examples.
6. What are the similarities which made recent uprisings in the Arab world to be called as Arab Spring 2.0? Also enumerate with example the drawbacks of Arab Spring 1.0.
7. The province of Sistan-Balochistan is not the problem of Iran alone. Comment. What in your opinion are the steps India should take to preserve its interests?
8. Malaria is one of the biggest sources of misery for billions of vulnerable people of the world. In the context of the statement highlight efforts taken by WHO in countering the menace of Malaria. Also, give account of India's efforts in countering malaria.
9. The demand of Sadar-e-riyast and Prime minster for the state of Jammu & Kashmir expose the political faultlines present in the Valley. Elucidate.
10. BCIM corridor present more challenges for India than opportunities. Elucidate. What in your opinion should be India's response that preserves and promote its interest in the region?
11. Media which is often termed as fourth pillar of Democracy and plays a crucial role in society is facing serious threats. In the context of the statement highlight the issues media faced according to World Press Freedom Index report. Also, comment on the lacunas of Press freedom in India.
12. Slavery is like a snake which just changes its skin and remains venomous to human rights. Discuss.
13. "The pill of cross border trade on LoC is too tough to swallow". In the context of the statement highlight the challenges India faces in cross border trade at LoC. Suggest some remedial measures.
14. Highlight the challenges brought forward by the Global Air Report 2019. Explain the role of National E-Mobility Mission in countering the menace of Air Pollution in India.
15. Despite being among the biggest E-commerce market, India decided to have Arm's Length distance from the WTO E-Commerce talks. Discuss.

### **P.T Oriented Questions**

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. Consider the following statements about the Arab League                         <ol style="list-style-type: none"> <li>1. It is a union of Arab-speaking African and Asian countries.</li> <li>2. India has the observer status in the League.</li> <li>3. Its members include Oman, Qatar, Iran, Yemen and Iraq among others.</li> </ol> </li> </ol> | <ol style="list-style-type: none"> <li>(a) Only 1</li> <li>(b) 1 and 3 only</li> <li>(c) 1 and 2 only</li> <li>(d) All of the above</li> </ol> |
| <ol style="list-style-type: none"> <li>2. Consider the following about Capital Gains Tax and choose the correct one/s</li> </ol>  |  |

Code:

1. It taxes any Income derived from a Capital asset movable or immovable
  2. Capital gains are not applicable when an asset is inherited because there is no sale, only a transfer.
- Code
- (a) 1 only
  - (b) 2 only
  - (c) 1 and 2
  - (d) None of the above
3. 'Check Point Tipline' recently in news is
- (a) A scheme to promote the trade through checkpoints across the Indian border
  - (b) A new platform to address the issue of fake news
  - (c) A software to track error in accounting database of the Government
  - (d) None of the above
4. Consider the following about Golan Heights and choose the correct one/s
1. UN recently recognised Israeli sovereignty over the Golan Heights, seized from Syria in 1967.
  2. It is a 1,200 square kilometer plateau on the Israel-Syria border
- Code:
- (a) 1 only
  - (b) 2 only
  - (c) 1 and 2
  - (d) None of the above
5. 'Param Shivay' recently in news is
- (a) A supercomputer built under the National Super Computing Mission
  - (b) A temple of Lord Shiva recently inaugurated in Varanasi, UP
  - (c) A colossal statue of Lord Shiva erected in Ujjain, MP
  - (d) None of the above
6. Consider the following about Directive Principles of State Policy and choose the correct one/s
1. The concept of Directive Principles of State Policy was borrowed from the Irish Constitution.
  2. It calls to secure for the citizens a uniform civil code throughout the territory of India.
  3. They are non-justifiable in nature.
- Code:
- (a) 1 and 2
  - (b) 1 and 3
  - (c) 2 and 3
  - (d) All the above
7. Consider the following statements and choose the correct one/s
1. Fundamental duties were added by 42nd and 86th Constitutional Amendment acts.
  2. They were added to the Constitution on the recommendations of the Swaran Singh Committee
  3. To vote in an election is a fundamental duty.
- Code:
- (a) 1 and 2
  - (b) 1 and 3
  - (c) 2 and 3
  - (d) All the above
8. Consider the following statements about Asian Development Bank and choose the correct one/s
1. It is a multi-lateral lending agency modeled on the lines of World Bank.
  2. India has 2nd highest voting rights in ADB.
- Code:
- (a) 1 only
  - (b) 2 only
  - (c) 1 and 2
  - (d) None of the above

9. Consider the following about Joint Comprehensive Plan of Action (JCPOA) and choose the correct one/s
1. It is an international agreement on the nuclear program of Iran and the P5 nations
  2. USA recently walked out of the deal
- Code:
- (a) 1 only
  - (b) 2 only
  - (c) 1 and 2
  - (d) None of the above
10. Consider the following about National Clean Air Programme and choose the correct one/s
1. NCAP is the first ever effort in the country to frame a national framework for air quality management with a time-bound reduction target.
  2. NCAP is a five-year action plan with 2019 as the first year. It aims at 20%-30% reduction of PM5 and PM10 concentration by 2024.
  3. NCAP is legally binding and specifies action against non-implementation.
- Code:
- (a) 1 and 2
  - (b) 1 and 3
  - (c) 2 and 3
  - (d) All the above
11. Consider the following statements about Kashmir stag (hangul) and choose the correct one/s
1. It is endemic to Dachigam National Park
  2. It is listed among the top fifteen species of high conservation priority by the Government of India
  3. It is classified as Critically Endangered by IUCN
- Code:
- (a) 1 and 2
  - (b) 1 and 3
  - (c) 2 and 3
  - (d) All the above
12. Konkan is naval exercise between
- (a) India and US
  - (b) India and Japan
  - (c) India and UK
  - (d) India and France
13. Consider the following statements about PINAKA and choose the correct one/s
1. Pinaka is a guided rocket weapon area system (WAS) with a range of 40 km.
  2. It has been inducted to Indian army from Israel
- Code:
- (a) 1 only
  - (b) 2 only
  - (c) 1 and 2
  - (d) None of the above
14. The recently adopted Jaipur Declaration is related to
- (a) BIMSTEC
  - (b) Plastic pollution
  - (c) BRICS
  - (d) India Africa Cooperation
15. Consider the following statements about 'Kandhamal Haldi'
1. It is a variety of turmeric indigenous to Odisha with more oleo resin and volatile oil contents compared to other turmeric varieties.
  2. It has recently earned the Geographical indication (GI) tag.
- Which of the above statements is /are correct
- (a) Only 1
  - (b) Only 2
  - (c) Both 1 and 2
  - (d) Neither 1 nor 2
16. If a wetland of international importance is brought under the
- (a) 2 and 3
  - (b) All the above



- 'Montreux Record', what does it imply? (CSE 2014)
- Changes in ecological character have occurred, are occurring or are likely to occur in the wetland as a result of human interference.
  - The country in which the wetland is located should enact a law to prohibit any human activity within five kilo meter from the edge of the wetland
  - The survival of the wetland depends on the cultural practices and traditions of certain communities living in its vicinity and therefore the cultural diversity therein should not be destroyed
  - It is given the status of 'World Heritage Site'
17. With reference to Bombay Natural History Society (BNHS), consider the following statements: (CSE 2014)
- It is an autonomous organization under the Ministry of Environment and Forests.
  - It strives to conserve nature through action-based research, education and public awareness.
  - It organizes and conducts nature trails and camps for the general public.
- Which of the statements given above is/are correct?
- 1 and 3 only
  - 2 only
  - 2 and 3 only
  - 1, 2 and 3
18. Consider the following languages: (CSE 2014)
- Gujarati
  - Kannada
  - Telugu
- Which of the above has/have been declared as 'Classical Language / Languages' by the Government?
- 1 and 2 only
  - 3 only
  - 2 and 3 only
  - 1, 2 and 3
19. The Radcliffe Committee was appointed to (CSE 2014)
- Solve the problem of minorities in India
  - Give effect to the Independence Bill
  - Delimit the boundaries between India and Pakistan
  - Enquire into the riots in East Bengal
20. In medieval India, the designations 'Mahattara' and 'Pattakila' were used for (CSE 2014)
- Military officers
  - Village headmen
  - Specialists in Vedic rituals
  - Chiefs of craft guilds
21. Consider the following about Lokpal and choose the correct one/s
- Lokpal will consist of a chairperson and a maximum of eight members, of which 50% shall be judicial members and 50% shall be from SC/ST/OBCs, minorities and women.
  - Any society or trust or body comes under its jurisdiction.
  - It does not allow a Lokpal inquiry if the allegation against the PM relates to international relations, external and internal security, public order, atomic energy and space.
- Code:
- 1 and 2
  - 1 and 3
  - 2 and 3
  - All the above
22. Consider the following Statements about Purchasing Managers' Index (PMI)
- It is an indicator of business activity based on a monthly survey of supply chain managers.

2. It is released for both- the manufacturing and services sectors.  
Which of the above statements is /are correct?  
(a) Only 1  
(b) Only 2  
(c) Both 1 and 2  
(d) Neither 1 nor 2
23. The Global Talent Competitive Index (GTCI) is released by  
(a) WIPO  
(b) WEF  
(c) INSEAD  
(d) None of the above
24. Consider following statements about the 'Bangladesh-China-India-Myanmar (BCIM) Economic corridor '  
1. It is the result of decades old discussion under Track-II process known as the 'Kunming Initiative'  
2. It is one of the most important leg of China-led Belt and Road Initiative (BRI) umbrella.  
Which of the above statements is /are correct?  
(a) Only 1  
(b) Only 2  
(c) Both 1 and 2  
(d) Neither 1 nor 2
25. India is **not** the part of which of the following World Bank Group institutions  
(a) International Development Association (IDA)  
(b) International Finance Corporation (IFC)  
(c) Multilateral Investment Guarantee Agency (MIGA)  
(d) International Centre for Settlement of Investment Disputes (ICSID)
26. Consider the following statements about the 'technical textiles'  
1. These are manufactured primarily for their functional properties rather than aesthetic and decorative characteristics.
2. Technical Textiles have potential application in watershed management due to permeability, flexibility and ease of underwater placement.  
Which of the above statements is /are correct?  
(a) Only 1  
(b) Only 2  
(c) Both 1 and 2  
(d) Neither 1 nor 2
27. Consider the following about Mission Raksha Gyan Shakti and choose the correct one/s  
1. It aims to boost to the Intellectual Property Rights culture in indigenous defense industry.  
2. Directorate General of Quality Assurance will coordinate and implement the programme.  
Code:  
(a) 1 only  
(b) 2 only  
(c) 1 and 2  
(d) None of the above
28. Consider the following about National Housing Bank and choose the correct one/s  
1. It is a wholly owned subsidiary of Reserve Bank of India  
2. It is principal agency to promote housing finance institutions both at local and regional levels  
Code:  
(a) 1 only  
(b) 2 only  
(c) 1 and 2  
(d) None of the above
29. Consider the following statements about Bamboo rice  
1. It is a special rice variety with natural short grain, grown out of a dying bamboo shoot.

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|---|--|
| <p>2. It has low glycemic index and more fat.<br/>Which of the above statements is /are correct?<br/>(a) Only 1<br/>(b) Only 2<br/>(c) Both 1 and 2<br/>(d) Neither 1 nor 2</p> <p>30. Consider the following about SPARC scheme and choose the correct one/s</p> | <p>1. The scheme aims at improving the research ecosystem of India's higher educational institutions.<br/>2. All Indian Institutions whether private or government are eligible to apply.<br/>Code:<br/>(a) 1 only<br/>(b) 2 only<br/>(c) 1 and 2<br/>(d) None of the above.</p> |
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