



VAJIRAM & RAVI

(Institute for IAS Examination)

Current Affairs (February 2022)

the RECITALS

Editor's Cut

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AAHT

Russia - Ukraine
War

Union Budget
2022-2023

Misuse of
section 498A
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Pradhan Mantri Matru Vandana Yojana (PMMVY)

- The government has recently announced that for the **revamped PMMVY** under Mission Shakti, the maternity benefit amounting to ₹5000 is also to be provided for **second child only if it is a girl**. This is to discourage pre-birth sex selection and promote the girl child.
- However, this has met with sharp criticism from activists who have demanded that it be universalized.

About PMMVY: It is a maternity benefit programme that was rolled out by Government of India in 2017.

Objective	<ul style="list-style-type: none"> To provide partial compensation for the wage loss in terms of cash incentives so that the woman can take adequate rest before and after delivery of the first living child.
Beneficiaries	<ul style="list-style-type: none"> All Pregnant Women and Lactating Mothers (PW&LM), excluding <ul style="list-style-type: none"> ✓ PW&LM who are in regular employment with Central or State Governments or PSUs. ✓ Those who are in receipt of similar benefits under any law for the time being in force. A beneficiary is eligible to receive benefits under the scheme only once. In case of <u>miscarriage or still birth</u>, the beneficiary would be eligible to claim the remaining installment(s) in event of any future pregnancy.
Features	<ul style="list-style-type: none"> Cash incentive of Rs 5000 in three instalments 1st transfer (at pregnancy trimester) of ₹1,000 requires the mother to: <ul style="list-style-type: none"> ✓ Register pregnancy at Anganwadi Centre (AWC) whenever she comes to know about her conception. ✓ Attend at least one prenatal care session and taking Iron-folic acid tablets and TT1 (tetanus toxoid injection). ✓ Attend at least one counselling session at the AWC or healthcare centre. 2nd transfer (six months of conception) of ₹2,000 requires the mother to: <ul style="list-style-type: none"> ✓ Attend at least one prenatal care session and TT2 3rd transfer (three and a half months after delivery) of ₹2,000 requires the mother to: <ul style="list-style-type: none"> ✓ Register the birth ✓ Immunize the child with OPV and BCG at birth, at six weeks and at 10 weeks. ✓ Attend at least two growth monitoring sessions within three months of delivery. Additionally, the scheme requires the mother to: <ul style="list-style-type: none"> ✓ Exclusively breastfeed for six months and introduce complementary feeding as certified by the mother. ✓ Immunize the child with OPV and DPT.
Additional Cash incentive	The eligible beneficiaries would receive the incentive (Rs 1000) given under the Janani Suraksha Yojana (JSY) for Institutional delivery . So, on an average a woman gets Rs 6000
Implementing authority	Ministry of Women and Child Development is the nodal implementing authority. The scheme is implemented using the platform of Anganwadi Services scheme of <u>Integrated Child Development Services (ICDS)</u> .

Issues With The Revamped Provision

- To provide maternity benefit only to the mother of the girl child is **illegal** as the **National Food Security Act, 2013** lays down that every pregnant woman and lactating mother are entitled to it.

- For second child as girl, it is to promote the birth of a girl child is nothing but posturing since it **penalizes** the mother for not giving birth to a girl child.
- Subsequent adding of more conditions to the scheme will prove to be a **bureaucratic nightmare**, which can be overcome if the scheme is universalized.
- Women will be able to **access the scheme only after delivery**, which will not have any impact on their **nutritional uptake** during the course of their pregnancy

Evaluation

- **Performance**- Since its inception in 2017, PMMVY has covered **2.01 crore women** nationally, disbursing a total amount of **Rs. 8,722 crore**. But the annual estimate of the targeted beneficiaries by the Government has remained the same over the years.
- **Target**- While the estimated eligible population of pregnant and lactating mothers in India was **128.7 lakh for 2017-18**, the target set by the Government was 51.70 lakh beneficiaries, which is only **40% of eligible population**. This means that we have an **exclusion error of at least 60%** since 2017.
- **Enrolment and Disbursement**- It has witnessed a downward fall in the last two years as per the data of the Ministry of Women and Child Development. In 2020-21, more than **50%** of registered beneficiaries did not receive all three instalments and there was a **9% drop in enrolment**.
- **Budgetary allocation**- The overall budget for women and child development was **reduced by 20%** for 2021-22. Additionally, Budget allocation for the PMMVY has also been reduced as it has been clubbed under **SAMARTHYA** along with multiple other schemes such as Beti Bachao Beti Padhao, Mahila Shakti Kendra and Gender Budgeting/Research/Training. The overall budget of **SAMARTHYA** is ₹2,522 crore, which is nearly equivalent to the budget of PMMVY alone in the previous financial years.
- Most women continue to work during & post-pregnancy since they cannot afford to lose wages. Additionally, they also spend on out-of-pocket expenses during pregnancy.

What Steps Must Be Taken For PMMVY?

- **Expansion Of Scheme**: Of the total live births in India, 49.5% comprises first-order births and **29.9% are second-order births**, as per Sample Registration Survey 2019. The maternity benefit under the PMMVY has to be extended to the **second live birth** similar to the predecessor scheme, the Indira Gandhi Matritva Sahyog Yojana.
- **Increase Maternity Benefit Amount**: The current entitlement of Rs. 5,000 provided over one year amounts to **one month's wage loss** (as per **Mahatma Gandhi National Rural Employment Guarantee Act wage rate of Rs. 202**). There must be an increase in the maternity benefit amount since the primary objective of the PMMVY is to provide partial wage compensation.
- **To Be In Line With Maternity Benefit Act, 1961** which mandates **12 weeks** of maternity leave for women with two or more children, pregnant and lactating mothers should receive 12 weeks of wage compensation amounting to Rs. 15,000

As per Maternity Benefit (Amendment) Act, 2017- Women who have completed 80 days in the 12 months immediately preceding the date of her expected delivery is entitled to maternity leaves for a maximum of 26 weeks of which not more than 8 weeks shall be preceding the expected date of her delivery.

- **Simplification Of Process**: The **reduced coverage** can be attributed to the lack of awareness within targeted beneficiaries, process level challenges, requirement of a mother and child protection (MPC) card, **bank passbook** and registration form for each of three instalments, etc.
- Recently, Government has clarified that **Aadhaar of Husband** is not mandatory under PMMVY, to facilitate the inclusion of single mothers and abandoned mothers.
- **Revisit The Design**: There is a need to revisit the design & implementation of this scheme, drawing lessons from States like **Odisha** which is successfully prioritising maternal health & nutrition in a pragmatic manner.

All major schemes of Ministry of Women & Child Development have been classified under **3 umbrella schemes**.

Saksham Anganwadi & POSHAN 2.0	Mission VATSALYA	Mission Shakti (Mission for Protection and Empowerment for Women)	
		SAMBAL	SAMARTHYA
<ul style="list-style-type: none"> • Umbrella ICDS – Anganwadi Services • Poshan Abhiyan • Scheme for Adolescent Girls • National Creche Scheme 	<ul style="list-style-type: none"> • Child Protection Services • Child Welfare Services 	<ul style="list-style-type: none"> • One Stop Centre • Mahila Police Volunteer • Women’s Helpline /Swadhar/Ujjawala /Widow Homes etc 	<ul style="list-style-type: none"> • Beti Bachao Beti Padhao • Creche • Pradhan Mantri Matru Vandana Yojana • Gender Budgeting /Research



Anaemia Mukht Bharat (AMB)

- Union Minister of State for **Health and Family Welfare** provided information on Anaemia Mukht Bharat (AMB) strategy.
- According to WHO, women in the reproductive age group and having **haemoglobin levels** lower than **12 grams per decilitre (g/dL)**, children under five with lower than **11.0 g/dL** , and men with less than **13 g/dL** are considered anaemic.

Reasons For High Prevalence In India

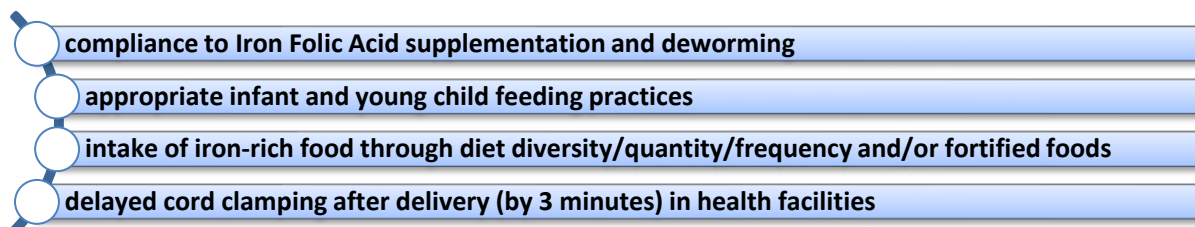
- **Iron-deficiency and vitamin B12-deficiency** anaemia are the two common types of anaemia in India. Among women, iron deficiency prevalence is higher than men due to menstrual iron losses and the high iron demands of a growing foetus during pregnancies.
- **Lack of millets** in the diet due to overdependence on rice and wheat, insufficient consumption of green and leafy vegetables, and dominance of packaged and processed foods which are low in nutrition could be the reasons behind high prevalence of anaemia in India.

About AMB Strategy

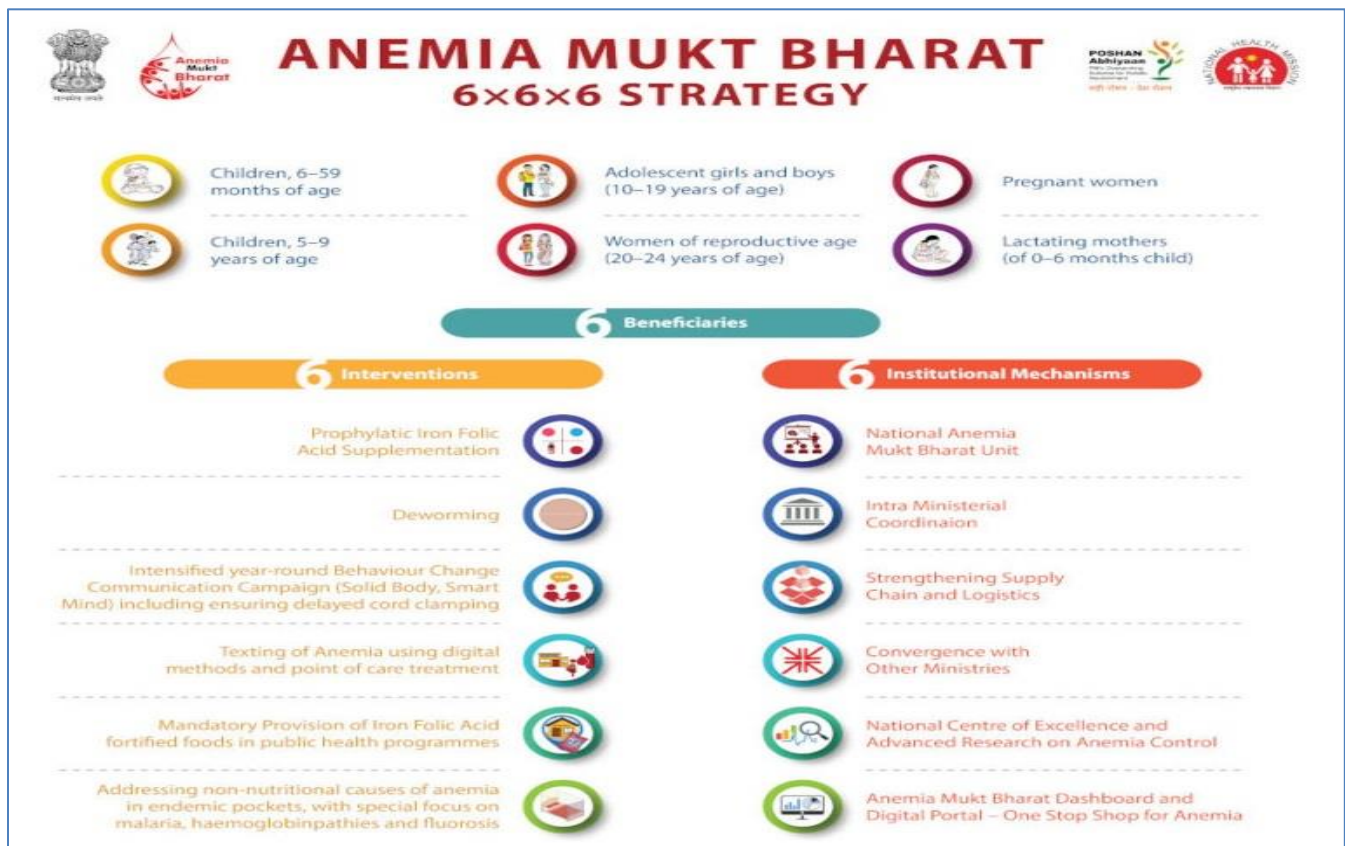
AMB strategy was launched in 2018 with the target to reduce anaemia in vulnerable age groups such as women, children and adolescents in **life cycle approach** by providing preventive and curative mechanisms through **6X6X6 strategy** including six target beneficiaries, six interventions and six institutional mechanisms for all stakeholders to implement the strategy.

Under AMB strategy, the interventions for tackling the problem of anaemia in all the States and UTs include:

- Prophylactic Iron and Folic Acid Supplementation** in all six target age groups.
- Intensified year-round **Behaviour Change Communication (BCC) Campaign** for:



- Ensuring **testing and treatment of anaemia**, using *digital methods* and point of care treatment, with special focus on pregnant women and school-going adolescents.



- iv) Addressing **non-nutritional causes of anaemia** in endemic pockets with special focus on malaria, hemoglobinopathies and fluorosis.
- v) Management of severe anaemia in pregnant women by administration of **IV Iron Sucrose/Blood transfusion**.
- vi) Providing **incentives to ANM for identification** and follow-up of pregnant women with severe anaemia in high priority districts (HPDs)
- vii) **Training** of Medical Officers and front line-workers on newer Maternal Health and Anaemia Mukht Bharat guidelines
- viii) **Field level awareness** by ASHAs through community mobilization, IEC and BCC activities.

Evaluation

Under Phase I, 22 states and UTs were surveyed and in a majority of these states and UTs, more than half the children and women were found to be anaemic.

The prevalence of anaemia among different groups as per **National Family Health Survey 5 (2019-21)**:

Men (15-49 years)	Women (15-49 years)	Adolescent boys (15-19 yrs)	Adolescent girls	Pregnant women (15-49 years)	Children (6-59 months)
25.0%	57%	31.1%	59.1	52.2	67.1%

Measures Taken By Government To Make AMB Programme More Effective

- i) Working with other line departments and ministries for strengthening implementation.
- ii) Engaging National Centre of Excellence and Advanced Research on Anaemia Control (NCEAR-A) at AIIMS, Delhi in capacity building of health care providers
- iii) Strengthening supply chain and logistics.

- iv) Development of **AMB Training Toolkit** for capacity building of health care providers & recent launch of Anaemia Mukh Bharat **e-Training Modules** to facilitate training of the health care providers through virtual platform.
- v) **Health Management Information System & Mother Child Tracking System** being implemented for reporting and tracking the cases of anaemic and severely anaemic pregnant women.
- vi) **Universal Screening of Pregnant Women for Anaemia**: It is a part of Ante-Natal Care (ANC) and all pregnant women are provided **iron and folic acid tablets** during their ante-natal visits.
- vii) **Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)**: It has been launched to focus on conducting special ANC check up on **9th of every month** with the help of Medical officers to detect and treat cases of anaemia.
- viii) **Operationalization of Blood Bank** in District Hospitals and Blood Storage Unit in sub district facilities

Health is a State subject and the primary responsibility for strengthening health care services including implementation of national programs lies with the respective State/UT government. Ministry of Health and Family Welfare provides financial and technical support to States/UTs under National Health Mission (NHM) as proposed during annual Programme Implementation Plan. Covid-19 pandemic has also hampered AMB programme implementation contributing to anaemia prevalence among all the age groups.



Supreme Court on Death Penalty

Supreme Court (SC) commuted the Death sentence of a man, convicted of rape and murder of a seven year old girl to life imprisonment. It may become noteworthy example to the anti-death penalty cause.

Key Point Of The Judgement

- SC has said that he shall **not** be entitled to **premature release or remission** before undergoing actual imprisonment for a period of **30 years**.
- It was mentioned that it is unsafe to treat this case as **rarest of rare** category.
- The Court advised trial judges to consider the mitigation factors in favour of life imprisonment.
- SC referred to the evolution of the **principles of penology**. It further explained that penology had grown to accommodate the philosophy of safeguarding of human life.

Penology: It is study of punishment of crime and prison management. It is **division of criminology** that is connected to philosophy and practice of society in its effort to repress criminal activities.

Previous Supreme Court Judgement

Jagmohan Singh v State of UP 1973

- SC has said that deprivation of life is constitutionally permissible if that is done according to the **procedure established by law**.

Bachan Singh v the State of Punjab 1980

- SC advocated the **rarest of rare doctrine**.
- According to this death penalty is not to be awarded except in rarest of rare case.

Macchi Singh v State of Punjab 1983

- SC laid down certain **considerations for determining** whether a case falls under the category of rarest of rare cases or not.

Shankar Kisan Rao Khade vs State of MH 2013

- Capital punishment can be awarded only if there are **“zero mitigating circumstances”** favouring the conflict. The award of death penalty should be **“society-centric”** and the litmus test is whether society will approve the awarding of death sentence or not.

Status of Death Penalty in Indian

- Prior to the Criminal Procedure (Amendment) Act (Cr PC) of 1955, the death penalty was the rule and life imprisonment an exception in India. The courts were bound to give an explanation for awarding a lighter penalty than death for capital offences.
- After the **amendment of 1955**, courts were at liberty to grant either death or life imprisonment.
- As per Section **354 (3) of the Cr PC, 1973** the courts are required to state reasons **in writing for awarding the maximum penalty.** The situation has been reversed and a **life sentence is the rule and death penalty an exception** in capital offences.
- As per official statistics, 720 executions have taken place in India after it became independent, which is a minuscule fraction of the people who were awarded death penalty by the trial courts.

IPC prescribes 'death' for offences such as:

- Waging war against the Govt of India. (Sec. 121)
- Abetting mutiny actually committed (Sec. 132)
- Giving or fabricating false evidence upon which an innocent person suffers death. (Sec. 194)
- Murder (Sec. 302)

Some Laws That Provide Death Penalty As A Form Of Punishment

- **Commission of Sati (Prevention) Act, 1987:** Direct or indirect abetment of sati.
- **SC & ST (Prevention of Atrocities Act), 1989:** Giving false evidence leading to the execution of an innocent member belonging to SC/ ST.
- **Protection of Children from Sexual Offences (POCSO) Act, 2012:** Rape of a minor below 12 years of age.
- **Narcotic Drugs and Psychotropic Substances Act, 1985:** Financing, producing, manufacturing as well as the sale of certain drugs for repeat offenders.
- **Unlawful Activities (Prevention) Act, 1967**
- **Army, Navy and Air Force Acts:** For certain specified offences committed by members of the armed forces.

Arguments Supporting Death Penalty

- **Controlling Law And Order:** In 1991, Supreme Court cited its use in defending law and order as the reason for its continuance.
- **Problem of Terrorism & Neighbourhood:** India's neighbourhood is not peaceful, unlike Scandinavia. On the contrary, vested interests attempt to destabilize the very idea of our nation from across every border it shares. Moreover, cases of violent terror are constant reminders of the need to protect national stability by ensuring appropriate responses to such actions and the death penalty forms part of the national response.
- **Moral Support For Death Penalty:** A punishment cannot be judged by its impact on criminals but by its impact on those who are still innocent.
- **Retributive/Deterrence Effect:** Those who defend the death penalty often do it on the basis of retributive justice. Moreover, its alleged usefulness extends from being a potential deterrent to serving as a primordial need for retribution.
- **Rarest of rare cases:** The death penalty is imposed only in rarest of rare cases that shock the conscience of society. This is reflective in the fact that in the last 13 years, only four people have been executed.

Arguments Against Death Penalty

- Study has found that it has **not acted as a deterrent** against crime, which is being cited for retaining it. Infact, in US, the death penalty States have far worse homicide rates than abolitionist States. For deterrence to work, the severity of the punishment has to coexist with the certainty and swiftness of the punishment. The death penalty has not deterred terrorism, murder or even theft.
- The death penalty is not only barbaric and immoral, it also contradicts the criminal justice system's core objectives- to **reform and rehabilitate offenders** while ensuring that the accorded punishment deters others

from committing crime. With a death sentence, the cause of redistributive justice appears to be served, but what of reformative justice?

- **Nothing is infallible.** Errors of judgement can't be avoided in court's decision. The strongest, practical argument against capital punishment is its irrevocability. The dangers are most evident from the Supreme Court's judgment in 2009 in **Santosh Kr. Bariar v. State of Maharashtra**. Here, a bench comprising Justices S.B. Sinha and Cyriac Joseph ruled that previous judgments of the Court, in which 13 death sentences were validated, were rendered *per incuriam*, or in other words were rendered in ignorance of the law laid down in Bachan Singh's case.

In 2012, 14 eminent retired judges wrote to the President pointing out that the SC has erroneously given death penalty to 15 people since 1996, of which 2 were hanged. This is the gravest known miscarriage of justice in the history of crime in independent India.

- **Problems in Implementation:** The recent *Death Penalty India Report* by the National Law University, Delhi indicates that structural flaws in our criminal procedure and criminal justice system are most pronounced in death penalty cases.
- **Arbitrary Application:** There has been an arbitrary manner/application in which death penalty is awarded by different judges (*judge-centric variations*) and the way public discourse influences such decisions.
- **Pressure Of Public Opinion On Judiciary:** In individual cases, the decision on death penalty depends on the nature of the crime, its gravity, cruelty and the number of fatalities. But in recent times, public outrage, the need for deterrence, and the clamour for a befitting punishment to render substantial justice have dominated the discourse.
- **International resolution:** In 2007, the *UN General Assembly* passed a resolution calling for a moratorium on the administration of the death penalty. Two-thirds of countries in the world has abolished it. India certainly does not need it as it serves no purpose. The evidence is all to the contrary.

Way Forward

Morality of death penalty is a debatable. It is important to understand deeply how to tackle dreadful crimes. For deterrence to work, the severity of the punishment has to coexist with the certainty and swiftness of the punishment.



Hijab Row And Freedom of Religion Practices

Context

- The Karnataka High Court is hearing a clutch of petitions challenging **the government order** banning the hijab in Government Educational Institutions.
- On February 5, the Karnataka government passed an order exercising its powers under **Section 133(2) of the Karnataka Education Act, 1983**. The provision grants powers to the state to issue directives for government educational institutions to follow. In 2013, under this provision, the state had issued a directive making uniforms compulsory for education institutions.
- Referring to the 2013 directive, the latest directive specifies that **a headscarf is not part of the uniform**.

Grounds On Which Karnataka Government Order Is Being Challenged

- The recent judgement is against **Article 25 (1)** which grants every person "freedom of conscience and the right to freely **profess, practice and propagate** religion". It is the duty of state that there is no interference or obstacle to exercise this freedom. However, State can restrict the right on grounds of public order, decency, morality, health and other state interests.

- The petitioners have argued that wearing a hijab is an **expression protected under Article 19(1)(a)** of the Constitution which guarantees the right to freedom of speech and expression. Constitutionally, a right under Article 19(1)(a) can only be limited on the “reasonable restrictions” mentioned in Article 19(2). This includes sovereignty and integrity of India, friendly relations with foreign states, public order, decency or morality or in relation to contempt of courts, defamation or incitement to an offence. The petitioners have argued that a student silently wearing a hijab/headscarf and attending class cannot in any manner be said to be a practice that disturbs “public order” and is only a profession of their faith.
- The petitioners have also argued that the ban on headscarves violates the **fundamental right to equality under Article 14** since other religious markers, such as a *turban worn by a Sikh*, are not explicitly prohibited.
- Hindus, Sikhs and Christians have their religious symbols. Various religious groups have used turbans, caps, strolls, vermilion marks, talismans, mangalsutra etc to signify their clan, caste, ethnicity, marital status and theological identity. Thus, Plurality and diversity exists in our society. Then why has the hijab only been chosen for this hostile discrimination? **Article 15** says the state should not discriminate against citizens on the basis of their religion, race, caste, sex and birthplace.
- Students come from different religions, castes and nations. They speak different mother tongues, eat different kinds of food and wear different kinds of clothes and ornaments. In many ways, the classroom of a government educational institution is truly representative of the society within which it is instituted, since it provides democratic access to students from all sections of society. Thus, **homogeneity must not be imposed on students in garb of dress code** and educational institutions must remain spaces of diversity and inclusivity.

How has Public order been Interpreted by Courts?

- Courts have broadly interpreted it to mean something that affects the community at large and not a few individuals.
- In **Ram Manohar Lohia vs State of Bihar (1965)**, the Supreme Court held that in the case of ‘public order’, the community or the public at large have to be affected by a particular action.
- One has to imagine three concentric circles, the largest representing ‘law and order’, the next representing ‘public order’ and the smallest representing ‘security of State’

Views Supporting The Ban

- SC in **Hindu Religious Endowment Madras Vs Sri Lakshmindra Thirtha Swamiar** of Sri Shishur Mutt (1954) case states that term “religion” will cover **all rituals and practices integral to a religion**. It also said that “**essentiality test**” will determine the definition of core religious practices entitled to protection by freedom of religion under the Constitution. The essentiality test was followed many times by honourable Court.
 - ✓ In a 2004 ruling, SC held that the Ananda Marga sect had no fundamental right to perform Tandava dance in public streets, since it did not constitute an essential religious practice of the sect
 - ✓ While these issues are largely understood to be community-based, there are instances in which the court has applied the test to individual freedoms as well. For example, in 2016, the SC upheld the discharge of a Muslim airman from the Indian Air Force for keeping a beard.
 - ✓ Armed Force Regulations, 1964, prohibits the growth of hair by Armed Forces personnel, except for “personnel whose religion prohibits cutting of hair or shaving of face”. The court essentially held that keeping a beard was not an essential part of Islamic practices.
- The Karnataka Govt states that wearing a headscarf is **not an essential religious practice** for Muslims that can be protected under Article 25 of the Constitution. The order *takes refuge in the cases* decided by different High Courts to hold that banning the headscarf is not violative of fundamental rights, particularly freedom of religion.
 - In **Fathima Tasneem vs State of Kerala 2018**, another Bench of HC ruled differently and held that collective rights of an institution would be given primacy over individual rights of the petitioner.
 - In **Fathema Hussain Sayed v Bharat Education Society 2003**, the Bombay High Court ruled against allowing hijab, despite the argument that wearing a headscarf is an essential religious practice which

must be protected under the Constitution. The High Court referred to relevant verses from the Quran and held that the book did not prescribe wearing of a headscarf before other women.

- Kerala’s Muslim Educational Society (MES), which controls 150 educational institutions, has banned “any dress that covers the face” for girls on all the campuses it runs. An official circular says “The MES will not encourage any type of veil on its campus. Managers of each MES institution will have to ensure that girl students do not come to the campus with their faces covered.” If a Muslim institution has itself ban hijab, why there is so much polarisation against Karnataka government decision.
- Dozens of countries, from China to liberal democracies such as Switzerland, France and Belgium too have banned the hijab in public places in the last few years. Nearer home, the hijab is compulsory in Afghanistan and Iran, optional in Pakistan and banned in Sri Lanka and Myanmar.

It is now the duty of judiciary to rise to the occasion and deliver an authoritative ruling that can guide the executive as well as citizens of the Country.



Money Laundering

- Supreme Court is currently examining the issues related to **misuse of the Prevention of Money Laundering Act (PMLA)** by the government and the Enforcement Directorate (ED).
- It is also examining the constitutional validity of various provisions of PMLA for allegedly being violative of basic principles of natural justice and criminal jurisprudence.

Allegations

- Being Used for **Ordinary Crimes**
- Lack of **Transparency and Clarity** about ED’s selection of cases to investigate. Even the Enforcement Case Information Report (ECIR) - an equivalent of the FIR - is considered an “internal document” and not given to the accused.

Money Laundering

- **Money laundering** is the **illegal process of converting money earned from illegal activities** (such as drug trafficking) into “clean” money.
- The money from the illegal activity is considered dirty, and the process of money laundering, “launders” (cleans) it to make it look clean.
- **Clean money is money that can be freely used in legitimate business operations** and does not have to be hidden from the authorities.
- Hawala, bulk cash smuggling, fictional loans, shell companies and trusts, real estate, gambling, and fake invoicing are some of the common methods of money laundering.

Process of Money Laundering

1st stage

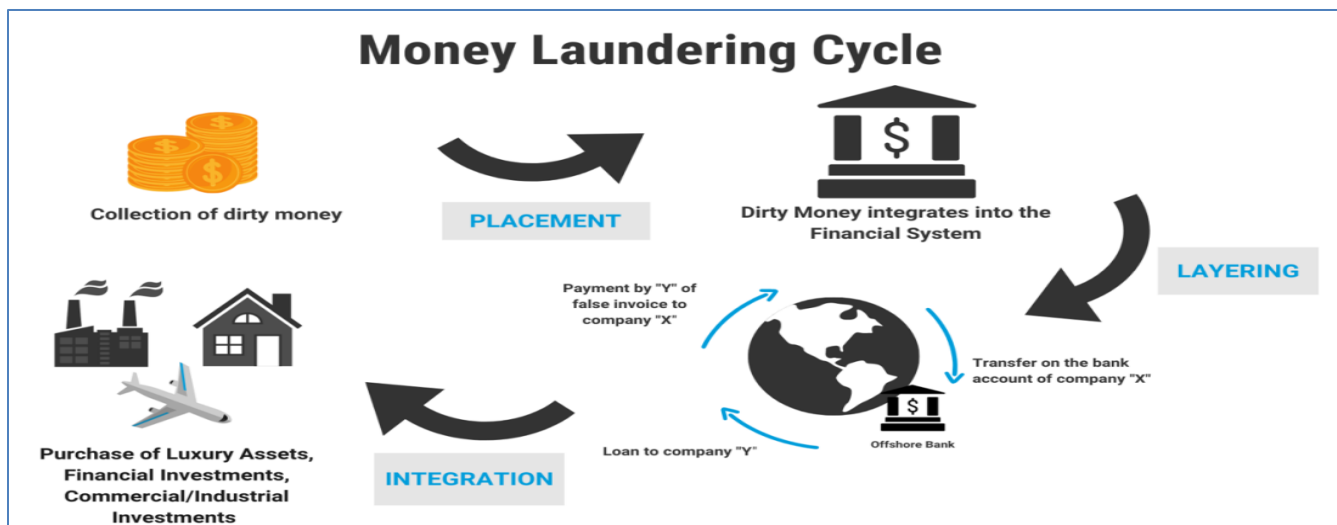
- It is when the money derived through illegal activities is introduced into the formal financial system called **placement**.

2nd stage

- Called **layering** involves continuous transfer of money through multiple transactions, forms, investments, or enterprises, to make it virtually impossible to trace the money back to its illegal origin.

3rd final stage

- Called **Integration** where the money is freely used legally without the necessity to hide it any further.



Consequences Of Money Laundering

Economic Distortions

- Money laundering hurts the development of legitimate private sector through the supply of products **priced below production cost**, making it difficult for legitimate activities to compete.
- Criminals may turn enterprises (which were initially productive) into **dormant entities** to launder their funds leading to a decrease in the overall productivity of the economy.
- Furthermore, it can also cause unpredictable changes in money demand as well as high volatility in international capital flows and exchange rates.

Erosion Of Financial Sector

- Flows of large sums of laundered funds in or out of financial institutions can undermine the stability of financial markets.
- In addition, it may damage the reputation of financial institutions involved, resulting in a loss of trust and goodwill with stakeholders. In worst case scenarios, it may also result in bank failures and financial crises.

Reduction In Government Revenue

It also reduces tax revenue as it becomes difficult for the government to collect revenue from related transactions which frequently take place in the underground economy.

Socio-economic Cost

- The socio-economic effects of money laundering are many as the laundered money can be used to expand existing criminal operations and finance new ones.
- This may lead to the transfer of economic power from the market, the government and the citizens to criminals, leading to more corruption and crimes like drug trafficking and terrorism.

Efforts To Combat Money Laundering

- Large-scale money laundering schemes invariably contain cross-border elements. Since it is an international problem, international co-operation is necessary in the fight against it.
- International organisations, such as United Nations or Bank for International Settlements, took some initial steps at the end of the 1980s to address the problem.
- In 1989, **Financial Action Task Force (FATF)** was established by a Group of Seven (G-7) Summit, to examine and develop measures to combat money laundering.
- Following the creation of FATF, **regional groupings** – European Union, Council of Europe, Organisation of American States, established anti-money laundering standards for their member countries.

- The Caribbean, Asia, Europe and Southern Africa have also created regional anti-money laundering task force-like organisations.
- United Nations **Global Programme against Money Laundering (GPML)** was established in 1997 in response to the mandate given by the 1988 Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances.
- The broad objective of GPML, as a unit within United Nations Office on Drugs and Crime (UNODC), is to strengthen the ability of UN Member States to implement measures in anti-money laundering and countering the financing of terrorism.

Prevention of Money Laundering Act, 2002

- In India, PMLA 2002 was enacted to fight the criminal offence of legalizing the income/profits from an illegal source.
- The Act puts the responsibility on banking companies, financial institutions and intermediaries to verify identity of clients, maintain records and share information in prescribed form to Financial Intelligence Unit - India (FIU-IND).
- The **Enforcement Directorate** in the Department of Revenue, Ministry of Finance, is responsible for investigating offences of money laundering under PMLA.

About FATF

- FATF is an **inter-governmental body** set up in 1989, with an aim to set standards and promote effective implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system.
- **Secretariat: Paris**
- It has **35-member (Including India)** jurisdictions and **2 regional organisations** - the European Commission and the Gulf Co-operation Council. In addition, it has two observers and nine associate members, which are primarily regional organisations.
- There are also a number of observer organisations, which either have a related area of work that deals with enforcement like Europol, financial institutions like the IMF and UN bodies or groups linked with counter terrorism or money laundering.
- The FATF functions as an independent body guiding policy, with its president selected by the plenary for a one-year period.

Objectives of PMLA

- Prevent money-laundering
- Confiscate and seize the property obtained from money laundering
- Prevent channelising of money into illegal activities and economic crimes
- Deal with any other issue connected with money laundering

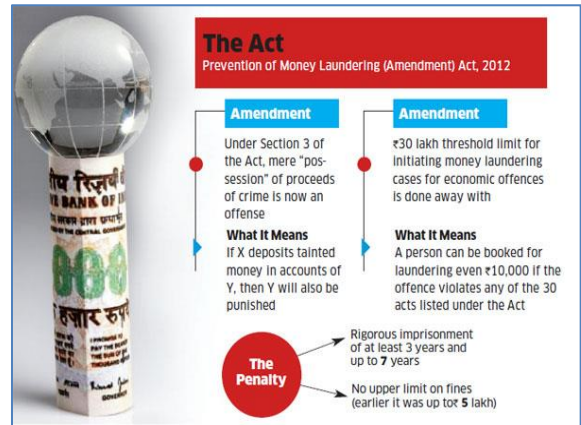
Offences Under PMLA

- Various offences mentioned under Indian Penal Code, Narcotics Drugs and Psychotropic Substances (NDPS) Act, Prevention of Corruption Act, Antiquities and Art Treasures Act, Copyright Act, Trademark Act, Wildlife Protection Act, and Information Technology Act are covered under PMLA.
- The Act also **covers trans-border crimes** and reflects the dedication to tackle money laundering across global boundaries.
- Any person found guilty of money-laundering shall be punishable with rigorous imprisonment from **three years to seven years.**

PMLA (Amendment) Act, 2012

- The amendment seeks to treat money laundering as a **stand-alone crime**. Earlier Money Laundering was not an independent crime; rather depended on another crime, known as the '*predicate offence*' or '*scheduled offence*'

- The most crucial amendments are deletion of provisions in sub-sections (1) of **Section 17** (Search and Seizure) and **Section 18** (Search of Persons). These provisions required the pre-requisite of an **FIR or charge sheet** by other agencies that are authorised to probe the offences listed in the PMLA schedule
- An explanation is added to Section 45 that clarifies that all PMLA offences will be **cognisable and non-bailable**.
- Adds the concept of '**reporting entity**' which would include a banking company, financial institution, intermediary etc.
- It has provided for provisional attachment and confiscation/ freezing of property of any person involved in such activities



Financial Intelligence Unit – India (FIU-IND)

- ▲ It is an independent body reporting directly to the Economic Intelligence Council (EIC) headed by Finance Minister of India.
- ▲ It was established in 2004 as the **central national agency responsible for receiving, processing and analyzing information relating to suspect financial transactions**.
- ▲ It is responsible for coordinating & strengthening efforts of national & international intelligence.
- ▲ It also undertakes investigations for pursuing the global efforts against money laundering and related crimes.

Enforcement Directorate

- ▲ It is a **law enforcement agency and economic intelligence agency responsible for enforcing economic laws and fighting economic crime in India**.
- ▲ It is part of Department of Revenue, Ministry of Finance.
- ▲ The **prime objective of the ED is the enforcement of two key Acts namely, Foreign Exchange Management Act 1999 (FEMA) and Prevention of Money Laundering Act 2002**.



China and Pakistan Ink New CPEC Agreement

- China and Pakistan signed a new **agreement on industrial cooperation** as part of China Pakistan Economic Corridor (CPEC) plan.
- Prime Minister of Pakistan, Imran Khan, was on a four-day visit to attend the opening ceremony of the 2020 Beijing Winter Olympics.
- The new industrial cooperation agreement, signed during this visit, is a key part of what is being called as Phase II of CPEC.

Different Phases of CPEC

1st Phase

- Various agreements such as **energy, infrastructure, port development and the railway line** construction have been signed
- In total, the economic corridor project aims to add some 17,000 megawatts of **electricity generation** at a cost of around \$34 billion. The rest of the money will be spent on **transport infrastructure**, including upgrading the railway line between the port megacity of Karachi and the northwest city of Peshawar.

2nd Phase

- This agreement is aimed at boosting Chinese investment in Pakistan as well as transferring Chinese industrial capacity.
- In other words, 2nd phase primarily revolves around **Special Economic Zones development and industrialisation**.

About China-Pakistan Economic Corridor (CPEC)

- During April 2015 visit to Islamabad, Chinese President Xi Jinping and Pakistani PM Nawaz Sharif unveiled the \$46 billion CPEC.
- CPEC quickly ballooned to \$62 billion in pledges—one-fifth of Pakistan’s GDP—covering dozens of envisioned high-profile projects.
- The **corridor of 3,000-km long route of infrastructure projects links Xinjiang with Gwadar**, and also passes through Pakistan-occupied Kashmir (PoK) where China is investing in a number of projects.
- Often described as a flagship project of **Belt and Road Initiative (BRI)**, the stated goal of CPEC is:
 - ✓ To transform Pakistan’s economy by modernizing its road, rail, air, and energy transportation systems; and
 - ✓ To connect the deep-sea Pakistani ports of Gwadar and Karachi to China’s Xinjiang province and beyond by overland routes.



The BRI, launched in 2013, aims to link Southeast Asia, Central Asia, the Gulf region, Africa and Europe with a network of land and sea routes.

Opaque Funding of CPEC

- A substantial chunk of Chinese **development financing under the CPEC consists of loans** that are at or near commercial rates as opposed to grants.
- Pakistan received about half of all Chinese development finance in the form of **export buyer’s credit**.
 - ✓ I.e., money lent by Chinese institutions to Pakistan in order to facilitate the purchase of **equipment and goods to be bought by Chinese implementation partners**, besides awarding contracts to Chinese.
- There was no competitive international bidding in this process.
- As much as 40% of China’s lending to Pakistan does not appear on the government’s books. This is because of the fact that 40% of the loans have been disbursed in a way that blurs the distinction between private and public debt, doing away with the need for its disclosure as public debt.
- Thus, the nature of Chinese financing calls for a greater transparency.
- Pakistan has given an explicit or implicit **government liability protection to Chinese investors** in the form of sovereign guarantees or guaranteed returns on equity.

India and CPEC

CPEC and Sovereignty of India

- This corridor is not only passing through India’s territory but also posing a threat to the sovereignty and the territorial integrity of India.
- It passes through Gilgit-Baltistan area of Kashmir which is occupied by Pakistan. The corridor enters into Gilgit-Baltistan through Khujerab Pass.
- This area is a part of the erstwhile princely state of Jammu and Kashmir and claimed by India.

CPEC and Security threat to India

- Ever since the construction of the corridor is started, the Chinese military presence in the area is also embarked.
- In 2017, Chinese troops marched in the parade of Pakistan’s day in Islamabad. This was the first time when Chinese military took part in any parade outside its country
- Apart from the naval vessels deployed in Pakistan, eight submarines are also delivered to it by China. China is planning to build its 2nd naval base in Gwadar port after Djibouti in 2017.
- These activities of China are a serious security threat to India since China is encircling India into the Indian Ocean.

India's Response

- India has protested to China over the CPEC as it is being laid through the Pakistan-occupied Kashmir (POK).
- As per India, the initiatives of the connectivity must be based on the universally accepted and the other recognized international norms, transparency and equality, rule of law and must respect the sovereignty and the territorial integrity.



Russia - China Ties

Chinese President Xi Jinping hosted Russia's Vladimir Putin on the opening day of Beijing Winter Olympics. This was their first face-to-face meeting in more than two years. A Joint statement was issued after the meeting of these two leaders.

Key Highlights Of The Joint Statement

A. Close Strategic Relationship Between Beijing and Moscow

- Both the countries proclaimed a deep strategic partnership to balance the malign global influence of US.
- They affirmed that their new relationship is superior to any political or military alliance of the Cold War era.

B. Cooperation In Technology Arena

- Both are ready to strengthen cooperation on artificial intelligence and information security.
- They announced an agreement to cooperate on building complementarity between their two global satellite navigation systems, GLONASS and BeiDou.

C. Gas And Oil Supply Deals

- Russian state energy giants Gazprom and Rosneft agreed new gas and oil supply deals with Beijing worth tens of billions of dollars.
- The deals capitalise on Russia's drive to diversify its energy exports away from the West, which started in 2001 by signing of the **Treaty of Good-Neighbourliness and Friendly Cooperation**, paving the way for expanding economic and trade ties, including sales of defence equipment and energy by Russia to China, and Russia's backing for China's position on Taiwan.

D. Promotion of Trade In National Currencies because of unpredictability surrounding the use of the dollar.

E. Build A New International Order

The agreements signed during the visit marked the most detailed and assertive statement of Russian and Chinese resolve to work together to build a new international order based on their own interpretations of human rights and democracy.

F. Promotion of Multilateralism

The joint statement said both sides would deepen cooperation with India through Russia-India-China (RIC) framework and also work to boost the BRICS grouping.

Analysis

Both Sides Backed Each Other Over Several Controversial Issues

- In order to antagonise US and its allies, each side went significantly further than before in explicitly backing the other over key contentious issues.
- Russia voiced its support for China's stance that **Taiwan** is an inalienable part of China.
- Moscow and Beijing also voiced their opposition to **AUKUS alliance** between Australia, Britain and US. Both sides said it increased the danger of an arms race in the region.

- China joined Russia in calling for an end to **NATO enlargement** and supported its demand for security guarantees from the West.

Challenged The Hegemony of US

- Without naming Washington, they criticised attempts by certain states to establish global hegemony, fan confrontation and impose their own standards of democracy.
- They also expressed concern about the advancement of US plans to develop global missile defence and deploy its elements in various regions of the world.
- They hit out at the United States, accused NATO of expansionism in Europe, and blamed US' Indo-Pacific strategy for fomenting regional tensions.

Drivers Behind Improved China-Russia Ties

- Both countries want to maintain **peace along their 4,200-kilometer border**, and do not want to go back to the years of costly and risky confrontation. By 2006, the territorial dispute was fully resolved, removing major irritant in bilateral ties.
- The **two economies naturally complement each other**. Russia has a huge endowment of natural resources, but needs technology and capital. On the other hand, China has the potential to explore these synergies.
 - ✓ Trade between two neighbours has grown from \$10.7 billion in 2001 to nearly \$140 billion in 2021.
 - ✓ Beijing wants to ensure access to commodities transported over secure land routes from a friendly state, while Moscow wants to decrease its dependency on European markets and monetize Russia's natural resources.
 - ✓ Russia opened its doors wide for Chinese investments, and struck a USD 400 billion deal for Gazprom, the Russian state monopoly gas exporter, to supply 38 billion cubic metres (bcm) annually to China for 30 years from 2025.
- Despite significant differences between their domestic political setups, both China and Russia are ultimately **authoritarian regimes**. Issues like the imprisonment of the opposition leader Alexei Navalny in Russia or Beijing's human rights record in Xinjiang and Hong Kong never poison the exchanges between the two governments.
- **Parallel confrontation with United States and America's adventurism in Indo-Pacific** is driving Beijing and Moscow even closer together.

Limitations

- Both countries are extremely **sensitive about their strategic autonomy**, and therefore will seek to avoid entering into legally binding security guarantees like NATO.
- The two countries also have **different global security interests**.
 - ✓ For example, China is not incentivized to support Russia's annexation of Crimea, the war in eastern Ukraine, or Moscow's military operations in Syria and Africa.
 - ✓ By the same token, Moscow has few reasons to support China on Taiwan beyond paying lip service to One China policy, or on the nine-dash line in the South China Sea.
- China and Russia are also **engaged in espionage** against each other. In 2020 and 2021, evidence mounted over the level of Chinese spies' aggression in Russia, including hacking attempts aimed at stealing designs for latest weapons systems.
- There are also **obstacles to expanding economic ties** between China and Russia.
 - ✓ The Russian investment climate is becoming increasingly hostile for foreigners.
 - ✓ U.S. economic sanctions against both China and Russia complicate their cooperation even further.



US Announces Indo-Pacific Strategy

- US President Joe Biden’s administration has released its Indo-Pacific strategy. The strategy outlines Biden’s vision to more firmly anchor United States in the Indo-Pacific and strengthen the region in the process.
- Its central focus is **sustained & creative collaboration** with allies, partners, and institutions, within the region and beyond it.

Key Highlights Of The Strategy: Goals Pursued By USA In Indo-Pacific Region

A. Advance a Free and Open Indo-Pacific by --

- Investing in **democratic institutions, a free press, and a vibrant civil society**.
- Improving **fiscal transparency** in Indo-Pacific to expose corruption and drive reform.
- Ensuring that the **region’s seas and skies** are governed and used according to international law.
- Advancing common approaches to **critical and emerging technologies**, the internet and cyber space.

B. Build Connections Within And Beyond The Region

A free and open Indo-Pacific can only be achieved if **collective capacity** is built for a new age. This will be done by:

- Deepening US **five regional treaty alliances** with Australia, Japan, Republic of Korea (ROK), Philippines, and Thailand.
- Strengthening relationships with **leading regional partners**, including India, Indonesia, Malaysia etc.
- Contributing to an empowered and unified **ASEAN**.
- Strengthening the **Quad** and delivering on its commitments.
- Forging connections between the **Indo-Pacific and Euro-Atlantic**
- Expanding U.S. diplomatic presence in Indo-Pacific, particularly in Southeast Asia & Pacific Islands

C. Driving Regional Prosperity by:

- Proposing an **Indo-Pacific economic framework**, through which US will:

- Develop new approaches to trade that meet **high labour and environmental standards**
- Govern digital economies and cross-border data flows according to open principles, including through a new digital economy framework
- Advance resilient and secure supply chains that are diverse, open, and predictable
- Make shared investments in **decarbonization and clean energy**

- Promoting free, fair, and open trade and investment through the Asia-Pacific Economic Cooperation (**APEC**),
- Closing the region’s infrastructure gap through **Build Back Better World** with **G7 partners**

Indo-Pacific

BY THE NUMBERS



- ♦ **POPULATION:** Over half the world’s people, including 58% of youth
- ♦ **ECONOMY:** 60% of global GDP
- ♦ **GROWTH:** 2/3 of global economic growth
- ♦ **GEOGRAPHY:** 65% of the world’s oceans and 25% of its land

INDO-PACIFIC STRATEGY ELEMENTS



- ♦ **STRATEGIC ENDS:** Advance a free and open Indo-Pacific that is more connected, prosperous, secure, and resilient.
- ♦ **STRATEGIC WAYS:** Strengthen the U.S. role and build collective capacity with allies and partners and with regional institutions.
- ♦ **STRATEGIC MEANS:** Modernized alliances; flexible partnerships, including an empowered ASEAN, a leading India, a strong and reliable Quad, and an engaged Europe; economic partnership; new U.S. defense, diplomatic, development, and foreign-assistance resources; sustained focus on and commitment to the region at all levels of the U.S. government.

D. US Will Bolster Indo-Pacific Security By:

- Advancing integrated deterrence.
- Deepening cooperation and enhancing interoperability with allies.
- Maintaining peace and stability across the Taiwan Strait.
- Innovating to operate in rapidly evolving threat environments, including space, cyberspace, and emerging-technology areas.
- Continuing to deliver on AUKUS.
- Expanding U.S. Coast Guard presence and cooperation against other transnational threats.
- Working with Congress to fund the Pacific Deterrence Initiative and the Maritime Security Initiative.

E. Build Regional Resilience To Transnational Threats

The Indo-Pacific faces major transnational challenges. These are:

- Climate change - Pacific Islands battle existential rises in sea levels.
- The COVID-19 pandemic
- Natural disasters, resource scarcity, internal conflict & governance challenges

The strategy talks about building regional resilience to 21st-century transnational threats by:

- Working with allies and partners to develop **2030 and 2050 targets and policies** consistent with limiting global temperature increase to 1.5 degrees Celsius
- Reducing regional vulnerability to the impacts of climate change and environmental degradation
- Ending the COVID-19 pandemic and bolstering global health security

Indo-Pacific Action Plan

To implement this strategy, US will pursue **ten core lines of effort** in the next 12-24 months. These are:

- i) Drive new resources to the Indo-Pacific
- ii) Lead an Indo-Pacific economic framework
- iii) Reinforce deterrence
- iv) Strengthen an empowered and unified ASEAN
- v) Support India's continued rise and regional leadership
- vi) Deliver on the Quad
- vii) Expand US-Japan-RoK (Republic of Korea) cooperation
- viii) Partner to build resilience in the Pacific Islands
- ix) Support good governance and accountability
- x) Support open, resilient, secure and trustworthy technologies

India Specific Observation In The Document

- The strategy emphasised that US will continue to support India's rise and regional leadership, working with India bilaterally and through groups on a range of issues.
- The strategy plan said that US would steadily advance its **Major Defence Partnership** with India and support India's role as a net security provider. India was given the Major Defence Partner designation in 2016.
- US refers to India as a like-minded partner and **driving force in Quad**.

- It also mentions the fact that China's coercion and aggression is acute along Line of Actual Control with India.

Analysis

- The strategy leans heavily on **alliances, military deterrence and a stronger presence in Southeast Asia** to counter China's growing regional and global footprint.
- Many of the strategy's provisions appeared to be aimed at **countering China's economic clout, military power, and Belt and Road Initiative**. These are larger role for European allies in the Taiwan Strait and beyond; stronger regional trade; economic and infrastructure linkages and an empowered India.
- In a bid to support **US' outlined pivot to Asia**, the plan pledges to: open new US embassies and consulates throughout the region; expand Peace Corps; launch an Indo-Pacific Economic Framework; and expand the role of US Coast Guard.
- The strategy is **not trying to alter Beijing's thinking**. Rather, it wants to shape the strategic environment in which it operates.
- The strategy is focused on building a **balance of influence in the world that is maximally favourable to the USA and its allies**.

Please refer the topic "EU Unveils Indo-Pacific Strategy" in The Recitals- Sept' 2021 for more on Indo-pacific.



Diplomatic Boycott of Beijing Winter Olympics

- **India announced a diplomatic boycott** of Beijing Winter Olympics which started on February 4.
- By doing so, India joined a growing list of countries that did not send government delegations to the Chinese capital for Winter Olympics. The other countries are US, Canada, UK, Australia, New Zealand, Japan, and Netherlands.
- Although India has diplomatically boycotted the Beijing games, it will continue to be represented by just one athlete, alpine skier Arif Khan.
- Doordarshan decided not to telecast live the opening & closing ceremonies of Winter Games.

Winter Olympic Games 2022

- Having staged the 2008 Summer Olympics, Beijing will become the first city to host both the Summer and Winter Olympics.
- Beijing 2022 will be held across three zones – Beijing, Yanqing and Zhangjiakou.
- Events will be held in 15 disciplines across 7 sports. The first edition of the game in Chamonix had 5 sports.
- **Official mascot - A giant panda named Bing Dwen Dwen**
 - ✓ Bing means ice and also symbolises purity and strength, and "Dwen Dwen" represents children.
 - ✓ The mascot embodies the strength and willpower of athletes and will help to promote the Olympic spirit.

Important Delegations Visiting

- **Russian President, Pakistan Prime Minister and five Presidents from Central Asia** reached for the opening of the Winter Olympics.
- The Russian President will discuss the ongoing crisis with Ukraine with the Chinese President.
- The Pakistan Prime Minister is expected to discuss investments from China and speed up the 2nd phase of China Pakistan Economic Corridor (CPEC). China also sought to discuss developing **communications satellites** for Pakistan and construction of Pakistan Space Centre.

What Does Diplomatic Boycott Mean?

- Diplomatic boycott means a **country will not send official government delegations** to Beijing during the Games.
- Given the scale of Olympics, high-ranking officials from a country's government often travel to the Olympics. These officials are often labelled as the VIP visitors.
- However, a diplomatic boycott is a **token protest that has no impact on the sporting spectacle**. Thus, diplomatic boycott does not affect athletes' participation.
- Although many countries have boycotted, so far, no athlete has withdrawn from the Beijing games. E.g., the US even said it will fully support its athletes even as they diplomatically boycott the Winter Olympics.

Reasons For Boycotting Beijing Games

China antagonised India	<ul style="list-style-type: none">• In India's case, the boycott was announced after a Chinese soldier involved in the Galwan incident was made an Olympic torchbearer.
Diplomatic snub by western countries	<ul style="list-style-type: none">• The Western countries, led by US, made the diplomatic snub over China's alleged treatment of the Uyghur Muslims and human rights issues.
Pandemic-related risks	<ul style="list-style-type: none">• Some countries like Austria, New Zealand, Slovenia, Sweden and Netherlands have cited pandemic-related risks for not sending government officials.
Peng Shuai issue	<ul style="list-style-type: none">• Peng Shuai had accused a high-ranking communist party member, Zhang Gaoli, of sexually assaulting her. However, moments after Peng Shuai made her allegations, the posts were taken down and she disappeared from public view for days, sparking concerns about her safety.• Many countries, including US, Australia and Germany, have cited this as one of the reasons.



Winter Olympics

- It is the premier competition for sports that are played on ice or snow.
- It is held every 4 years and features participants from across the world.
- Ice skating, ice hockey, skiing and figure skating are some of the popular sports that are played

History

- The first Winter Olympics were held in 1924 in Chamonix, France.
- Winter sports were initially played at the Summer Olympics, with the 1908 London Olympics hosting four figure skating events and Antwerp 1920 having figure skating as well as ice hockey.
- However, in 1924, a separate event was created for winter sports, called the International **Winter Sports Week**. It was held in Chamonix, France – the host country for the 1924 Summer Olympics.
- Two years later, the International Winter Sports Week in Chamonix was officially recognised as the first Winter Olympic Games.

India participation in the Winter Olympics

- India has been participating at the Winter Olympics since 1964.
- Jeremy Bujakowski was the first Indian to qualify for the Winter Olympics when he competed at the 1964 Games in Austria in the men's downhill alpine skiing event.
- For Beijing 2022, alpine skier Mohammad Arif Khan has won quotas in two events – slalom and giant slalom.
- He is the only Indian to have secured a place at the upcoming Games till now.

Current Boycott Is Different From Earlier Boycotts

- During **1980 Moscow Olympics** and **1984 Los Angeles Games**, thousands of athletes did not participate due to the prevailing political situation at that time. However, athletes and officials from all countries will continue to take part in the Winter Olympics in Beijing unhindered.
- One of the key differences between then and now is the **commercial angle**. The Olympics are now a billion-dollar enterprise and a complete boycott could cost athletes, broadcasters and the organisers a fortune.

Impact Of Current Boycott On Future Olympics

- There are fears that the move led by the US could provoke China to do the same. The US and Australia are the hosts of the Summer Olympics in 2028 (Los Angeles) and 2032 (Brisbane), respectively.
- The US is reportedly looking to stage the Winter Olympics as well in the near future. With many key Olympic sponsors being Chinese, it could get tricky for the US bid.



30 Years of India-Israel Ties

- On January 30, India and Israel marked 30 years of full diplomatic relations and launched a commemorative logo.
- The logo features the Star of David and the Ashoka Chakra- the two symbols that adorn the national flags of both countries- and forms the numeral 30 depicting the 30th anniversary of bilateral relations. (See figure beside)



India-Israel Bilateral Relation



Both countries gained their independence from the UK within months of each other.

However, they headed in different directions for nearly four decades:

- India as a leader in **NAM** maintained close relations to **Arab world and Soviet Union**;
- Israel established close ties with the **US and Western Europe**.

The two famous foreign policy decisions of India in relation to Israel at the time of Independence included:

- India's participation in the **UN Special Committee on Palestine** and
- Its decision on Israel recognition as a State.
 - India had recognised Israel on September 17, 1950.
 - Full-fledged diplomatic relations between the countries were **established on January 29, 1992**.

Political Relations

- President Pranab Mukherji was the first Indian President to visit Israeli in 2015.
- PM Modi undertook an historic first ever visit by an Indian PM to Israel in July 2017. During this visit, the relationship was upgraded to a **strategic level**.
 - ✓ The 2017 visit was significant as it formally acknowledged the relationship at the highest levels **leaving behind hesitations of history**.
 - ✓ It also reflected **India's willingness to de-hyphenate its relationship with Israel and Palestine**.
- The then PM of Israel Benjamin Netanyahu made a return visit to India in January 2018.

Economic and Commercial Relations

- From US\$ 200 million in 1992 (comprising primarily of diamonds), merchandise trade diversified and reached US\$ 4.14 billion (excluding defence) during the period April 2020 – February 2021.
- The balance of trade is in India's favour. Also, India is Israel's **third-largest trade partner in Asia** and **seventh largest globally**.
- Though bilateral trade is dominated mainly by diamonds and chemicals, recent years has witnessed an increase in trade in areas such as electronic machinery and high-tech products; communications systems; medical equipment etc.
- **India continues to be a 'focus' country** for Israeli Government's increased trade efforts.
- Israel is also joining the India-led International Solar Alliance (ISA), to scale up the cooperation in renewable energy and partner in clean energy.

Agriculture

- Agricultural cooperation between the two sides is formalized through **three-year action plans**.
- The two sides are currently implementing the **fifth phase of the joint action plan** (2021-23). The Fourth Action Plan (2018-2020) aimed at increasing farmers' productivity and optimization of water use efficiency.
- Twenty- nine Centers of Excellence for Horticulture are fully active in twelve Indian states.

Water Technologies

- Ongoing cooperation in this sector was formalized through an MOU on Water Resources Management and Development Cooperation signed in November 2016.
- Israeli company IDE has built several **desalination plants** in India. A 100 MLD per day desalination plant set up by IDE at Nemelli in Tamilnadu was commissioned in 2013.
- **Israeli drip irrigation technologies** and products are now widely used in India.

Defence & Security

- There are regular exchanges between the armed forces.
- Israel has been among the top four arms suppliers (along with US, Russia and France) to India with military sales worth around \$1 billion every year. Indian armed forces have inducted a wide array of Israeli weapon systems. E.g.,

Phalcon AWACS (airborne warning and control systems) and Heron

Searcher-II and Harop drones

Barak anti-missile defence systems & Spyder quick reaction anti-aircraft missile system

India is now finalising “Project Cheetah” to arm Heron drones with laser-guided bombs

Cooperation in S&T and Space

- It is overseen by the Joint Committee on S&T, established under the S&T Cooperation Agreement signed in 1993.
- During the visit of PM Modi in July 2017, an MoU for establishing **India-Israel Industrial R&D and Innovation Fund (I4F)** was signed.
- This MoU, with a contribution of US\$ 20 million from each side over 5 years, is playing an important role in jointly undertaking R&D projects.

Culture and Education

- The relations between the two peoples go back to more than two millennia. India has welcomed Jews for several centuries and their contribution has enriched Indian culture.
- India and Israel signed a **Cultural Exchange Programme** (for the period of 2020-23) in August 2020 to facilitate bilateral cultural exchanges.
- There are approximately 1200 Indian students in Israel, mostly at the doctoral and post-doctoral levels.

Irritants In India-Israel Relationship

Palestinian issue

- India does continue to walk a tightrope, between its **historical ties with Palestine and its newfound love for Israel**.
- Last year, India’s statement in the UNSC on the Israel-Palestine violence virtually held Israel responsible for the violence.
- India expressed its strong support to the just Palestinian cause and **unwavering support for the two-state solution**.

Iran issue

- Israel considers Iran an existential threat. India, on the other, has a historical relationship with Iran.
- It finds the cooperation useful for energy supplies, and an alternative route through **Chabahar port** to Afghanistan and Central Asia.

India, Israel and Arab world triangle

- While Israel has inherent differences with Arab countries, India has significant stakes there.
- However, the signing of **Abraham Accord** (peace deal between Israel and countries of Arab world such as UAE, Bahrain) provides the much-needed space for India to strengthen the relation with Israel as well as with the countries of Arab World.

Bilateral Trade and investment still below potential

- Bilateral trade has not diversified much—diamonds and chemicals still make up for the large chunk of the pie.

Voting Pattern of India at UN

- India abstained on a UNHRC resolution in 2015, and criticized Israel for aerial Bombing on Gaza.
- In September 2020, the Economic and Social Council of UN has rebuked Israel for allegedly violating women’s rights. **India voted against Israel on this matter.**

What Makes Israel A Good Arms Supplier To India?

- India suffers from many constraints in defence production and acquisition including lack of technical expertise, complex bureaucracy, lack of manufacturing infrastructure etc. Israel fills these shortcomings by **supplying ready-to-use critical technologies**, even on short notices.
- Israel has always been a **'no-questions-asked supplier'**, i.e., it transfers even its most advanced technology without placing limits to its use.
- The Israeli imports are instrumental for India in patrolling and surveillance purposes in peacetime and eases the operational ability of armed forces in wartime.
- The export-oriented Israeli defence industry and its openness to establishing joint ventures **complement both 'Make in India' and 'Make with India' in defence.**



African Union Summit

The Heads of state had gathered at the African Union (AU) headquarters to kick off a two-day summit. The summit took place against the backdrop of the continent reeling from a **spate of military coups and coronavirus pandemic.**

Key Highlights

Union Condemned A Recent Wave Of Military Coups

- So far, there have been six coups or attempted coups in Africa over the past 18 months.

Expressed Concern Over Unprecedented Number Of Member States Getting Suspended From Bloc

- Four member states have been suspended by the AU's **Peace and Security Council** since mid-2021 because of unconstitutional changes of government.
- **Burkina Faso became the 4th country** to be suspended by the AU. It was suspended after disgruntled soldiers toppled President Roch Marc Christian Kabore. Guinea, Mali and Sudan are also currently suspended.
- The participating members expressed concern over these suspensions. At no time in the history of the African Union, **four countries were suspended in one calendar year** (in 12 months).

AU's Ties With Israel

- In July 2021, Moussa Faki Mahamat, chair of the AU Commission, accepted **Israel's accreditation to the bloc.** This triggered a rare dispute within a body that values consensus.
 - ✓ Accredited non-African states are able to attend some conferences, access non-confidential AU documents and present statements at meetings that concern them.
 - ✓ They are treated as an observer by this union.
- This decision was supposed to be debated during the current summit and then put on vote. However, this divisive debate was suspended.
 - ✓ A **two-thirds majority would be required** to overrule this decision taken by the Chairman of AU Commission.

Purpose of AU

- The AU is guided by its vision of “An **Integrated, Prosperous and Peaceful Africa**, driven by its own citizens and representing a dynamic force in the global arena.”
- A **deadline of 2063 has been set** to achieve this mission, representing the centenary of the OAU's formation.
- Agenda 2063's aspirations include:
 - ✓ A prosperous Africa, based on inclusive growth and sustainable development
 - ✓ An integrated continent, politically united, based on the ideals of Pan-Africanism
 - ✓ An Africa of good governance, democracy, respect for human rights, justice & rule of law.
- To achieve the goals set by Agenda 2063, the **AU is setting itself a series of five 10-year plans**, with the first plan running from 2014 to 2023.



Role Of AU In Promoting Peace In The Continent

- The AU believes that conflicts must be settled before there can be a chance of achieving prosperity. To this end, it has set up a **Peace and Security Council in 2004**.
- The council may **intervene in conflicts**, replacing the principle of non-interference with one of non-indifference.
- The council can **deploy military forces** in situations which include genocide and crimes against humanity. It can authorise peacekeeping missions.
- The AU oversees the **New Partnership for Africa's Development (NEPAD)**. This is an anti-poverty blueprint which offers a bargain with the West - the promotion of good political and economic practice in return for more aid and investment.
- The African Union has **regularly suspended member-states over coups d'etat**, re-admitting them when they return to constitutional rule.

Criticism

- Questions have been raised whether the AU can be more effective than its predecessor.
- Critics point out that many of its leaders are the same people who presided over the OAU, an **organisation that became known as the dictators' club**.
- AU had **failed to act** earlier over the civil war in Libya. It was ineffective in stopping the recent wave of military coups in the continent (six coups or attempted coups over the past 18 months).
- Money is another sticking point. There are doubts about whether the AU can **afford to fund** some of its ambitious schemes.
- Under a **voluntary peer review scheme**, AU members are expected to ensure that each other's governments adhere to democratic principles and sound economic practice.
- However, doubts have been raised over the political will of AU to do so. As a result, there is widespread corruption in the continent.

India Gets Maritime Security Coordinator

- The Centre has appointed the **first National Maritime Security Coordinator (NMSC)** to ensure effective coordination and cooperation among multiple central and state authorities.
- Vice Admiral (retd) **G Ashok Kumar** has been appointed as India's first NMSC.

Role & Responsibility of NMSC

- NMSC is created to act as an **interface between civilian and military maritime domain** with the objective of enhancing **security architecture** and **energy security** of India.
- He will be the **principal advisor to the government** on maritime security domain and will act as a **nodal point for all issues** related to maritime security
- The NMSC will **work in coordination with National Security Council (NSC) Secretariat**, headed by NSA
- NMSC will also ensure cohesive policies & plans in maritime domain, including on the technology front.

Need For This Post

To Address The Issues Of Sea Blindness And Security Vagueness

- India has suffered from sea blindness over centuries with **land-based security doctrines**.
- Also, India has 9 coastal states and 4 UT's, who believe that maritime and coastal security is responsibility of the central government. They have little to increase the maritime domain awareness.

Need To Break The Silos Of Multiple Authorities Involved In Maritime Issue

- Many institutions are involved in maritime issues. These authorities range from external affairs, defence, home and shipping ministries to the Navy, Coast Guard, customs, intelligence agencies, port authorities, state governments and maritime police forces.
- All these institutions tend to **work in silos with overlapping jurisdictions** and are constantly at odds with each other.

Maritime Security Of Vast Coastlines

- India has along 7,516-km coastline, including island territories, and a **2 million sq km Exclusive Economic Zone**.
- Creation of this post is seen as part of the country's attempt to bolster its maritime security following the 26/11 Mumbai terror attack.

Economic And Energy Security

- **90% of India's trade by volume & 70% by value** transit through the seas. Creation of this post will help strengthen the country's maritime and energy security as well as expanding blue economy and technology requirements.
- The Indian government is set to clear the Deep Ocean Mission for the blue water economy.

Geostrategic Need

- China is penetrating into the Indian Ocean through Pakistan and Myanmar.
- The creation of NMSC will give a boost to India's SAGAR doctrine under which, India has envisioned a role of net security provider for itself in the IOR.

Recommended By Group of Ministers Formed After Kargil War

- The GoM had recommended in its report that **an apex body for management of maritime affairs** should be formed for institutionalised linkages between the Navy, Coast Guard and the concerned Ministries of Central and State Governments.

Previous Effort To Create This Post

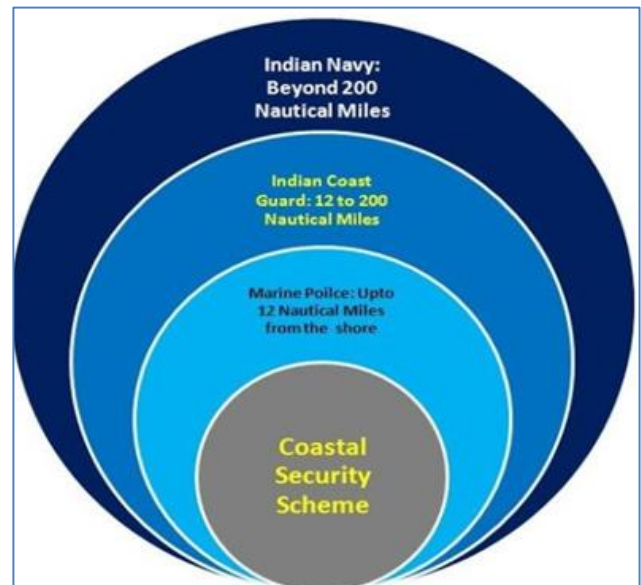
- After the 26/11 terror attacks in 2008, the Defence Ministry had proposed the creation of a Maritime Security Advisory Board, and appointment of a Maritime Security Advisor. However, these proposals were kept pending.
- After the attack, the **National Committee on Strengthening Maritime and Coastal Security** against threat from the sea (NCSMCS) was set up in 2009 with Cabinet secretary as its chairman.
- However, NCSMCS meets only occasionally to coordinate among various agencies and stakeholders.

India's Coastal Security

- Coastal border management was institutionalised in **2004** with the establishment of the Department of Border Management in the MHA.
- However, after the '26/11' attacks, coastal and maritime security underwent a paradigm shift. These included:
 - ✓ A **three-tier security grid** the Indian Navy, the coast guard, and the marine police.
 - ✓ **Increased electronic surveillance** using Coastal radar chain, Automatic identification system (AIS), Vessel traffic management and information system
 - ✓ Establishment of the National Command Control Communication and Intelligence (NC3I) Network
 - ✓ **Sagar Prahari Bal** for protection of naval bases has been raised by Navy
 - ✓ Establishment of **Information Fusion Centre – Indian Ocean Region (IFC-IOR)**

Associated Issues

- There are no formal or commonly accepted definitions of concepts like 'maritime security', 'coastal security' and 'coastal defence'. Sometimes, it leads to vagueness.
- Multiple institutions are involved and there is lack of coordination.
- **Turf war** between MHA and Ministry of Defence (MoD). Demands are being made to bring Coast Guard under the control of MHA.
- Fishermen are considered as eyes and ears for coastal security. However, discontent among fishermen community, involvement of politics in fishermen issues etc. are further complicating the security architecture.
- Inadequate infrastructures, acute shortage of manpower are posing challenges in providing maritime security in India.



Global axis of power is shifting from the West to the East so the sea lanes around India are going to get busier which may create situations where countries have different interpretations of UNCLOS. The NMSC will help lay the blueprint for a truly modern maritime security system.

BUDGET 2022-23

- Union Minister for **Finance & Corporate Affairs** recently presented the Union Budget 2022-23.
- This Budget, presented in the 75th year of Independence, intends to set the stage for an **Amrit Kaal (time of nectar)** over the next 25 years, realising the following vision for India in 2047:
 - ✓ Complementing **growth** (macro-economic) with **all-inclusive welfare** (micro-economic)
 - ✓ Promoting digital economy & fintech, technology enabled development, energy transition, and climate action
 - ✓ Relying on virtuous cycle starting from private investment with public capital investment helping to crowd-in private investment.
- The Budget is divided into two parts:

Part A •Deals With Various Developmental Initiatives Across Different Sectors Of Economy

Part B •Deals With Taxation, Both Direct And Indirect.

Part A

Proposals in Budget 2022-23 are based on the following **four priorities**:

- **PM GatiShakti**
- **Inclusive Development**
- **Productivity Enhancement & Investment, Sunrise Opportunities, Energy Transition, Climate Action**
- **Financing of Investments**

PM GatiShakti National Master Plan (for world class modern infrastructure)

- It is a transformative approach for economic growth and sustainable development. The approach is driven by **seven engines**, namely Roads, Railways, Airports, Ports, Mass Transport, Waterways, and Logistics Infrastructure.
- These engines are supported by the complementary roles of Energy Transmission, IT Communication, Bulk Water & Sewerage, and Social Infrastructure.
- Finally, the approach is powered by Clean Energy and Sabka Prayas – the efforts of the Central Government, the state governments, and the private sector together
- The projects related to these 7 engines in the **National Infrastructure Pipeline** will be aligned with PM GatiShakti.
- The focus will be on planning, financing including through innovative ways, use of technology, and speedier implementation.



Road Transport

- National Highways Network to be expanded by **25,000 Km** in 2022-23. For this, Rs 20,000 crore will be mobilized, to complement the public resources.



Multimodal Logistics Parks

- Contracts for implementation of Multimodal Logistics Parks at **4 locations** through PPP mode will be awarded in 2022-23.

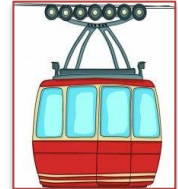


Railways

- **One Station-One Product** concept will be popularized to help local businesses & supply chains.
- 2,000 km of railway network will be brought under **Kavach**, the indigenous world-class technology for **safety and capacity augmentation** in 2022-23.
- 400 new-generation **Vande Bharat Trains** will be developed and manufactured in the next three years.
- 100 **PM GatiShakti Cargo Terminals** for multimodal logistics facilities will be set up during the next three years.
- **Integration of Postal & Railways networks** to provide seamless solutions for movement of parcels.

Parvatmala

- **National Ropeways Development Programme** will be taken up on PPP mode, as a preferred ecologically sustainable alternative to conventional roads in difficult hilly areas.
- It aims to **improve connectivity** and convenience for commuters, besides **promoting tourism**.
- Contracts for **8 ropeway projects** for a length of 60 km will be awarded in 2022-23. This may also cover congested urban areas, where conventional mass transit system is not feasible



Seamless Multimodal Movement of Goods and People



- Data exchange among all mode operators will be brought on **Unified Logistics Interface Platform (ULIP)**.
- This will lead to efficient movement of goods through different modes, reducing logistics cost and time, assisting just-in-time inventory management, and in eliminating unnecessary documentation.
- Most importantly, this will provide real time information to all stakeholders, and improve international competitiveness.
- Open-source mobility stack, for organizing seamless travel of passengers will also be facilitated
- Innovative financing and faster implementation for building **metro systems**.
- **Multimodal connectivity** between mass **urban transport and railway stations** will be facilitated.

Inclusive Development

Agriculture

- 2.37 lakh crore direct payments to 1.63 crore farmers were made for procurement of wheat and paddy in 2021-22.
- **Chemical free natural farming** will be promoted. Initial focus is on farmer's lands in 5 Km wide corridors along river Ganga.
- Syllabi of agricultural universities will be revised to meet the needs of natural, zero-budget & organic farming, modern-day agriculture, value addition and management.
- **Millet**s: 2023 has been announced as the International Year of Millets. Support will be provided for post-harvest value addition, enhancing domestic consumption and for branding millet products nationally and internationally.
- **Oilseed production**: To reduce dependence on import of oilseeds, a rationalised and comprehensive scheme to increase domestic production of oilseeds was announced.

Technology Facilitation

- A new scheme will be launched in PPP mode under which farmers will be provided with **digital and hi-tech services**. It will involve public sector research and extension institutions along with private agri-tech players and stakeholders of agri-value chain.
- **Kisan Drones** will be promoted for crop assessment, digitization of land records, spraying of insecticides, and nutrients.

Startup fund

NABARD will facilitate a fund under the **co-investment model**. The fund will finance start-ups for agriculture and rural enterprise, relevant for farm produce value chain.

The activities for these startups will include, machinery for farmers on rental basis at farm level, and technology including IT-based support for FPOs.

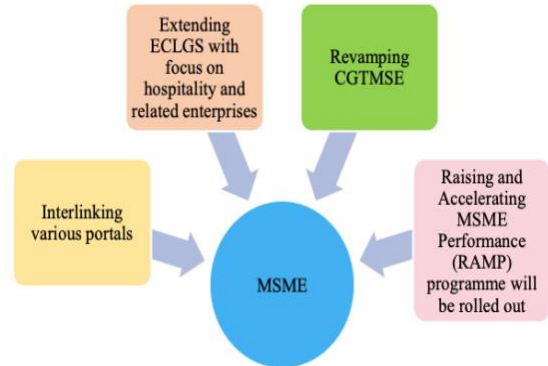
Irrigation

Implementation of **Ken – Betwa link project**. It will provide irrigation benefits to 9.08 lakh hectare land and drinking water supply for 62 lakh people in addition to 103 MW of hydro and 27 MW of solar power.

Furthermore, **draft Detailed Project Reports (DPRs) of five river links**- Damanganga-Pinjal, Par-Tapi- Narmada, Godavari-Krishna, Krishna-Pennar and Pennar-Cauvery have been finalized.

MSMEs

- **ECGLS**: The Emergency Credit Line Guarantee Scheme (ECLGS) has provided much-needed additional credit to more than 130 lakh MSMEs to deal with the impact of the pandemic.
- Thus, ECLGS will be extended up to March 2023 and its guarantee cover will be expanded by Rs 50,000 crore to total cover **of Rs 5 lakh crore**.
- The additional amount is exclusively allocated for the hospitality and related enterprises, as they are yet to regain their pre-pandemic level of business.
- **CGTMSE**: Similarly, Credit Guarantee Trust for Micro and Small Enterprises (CGTMSE) scheme will be revamped with required infusion of funds. This will facilitate additional credit of Rs 2 lakh crore for MSMEs and expand employment opportunities.
 - **RAMP**: Raising and Accelerating MSME Performance (RAMP) programme was announced with an outlay of Rs. 6,000 crore over 5 years, to make the MSME sector more resilient, competitive and efficient.
 - **Portal interlinking**: Udyam, e-Shram, National Career Service (NCS) and ASEEM portals will be interlinked, to widen their scope. They will now perform as portals with live, organic databases, providing G2C, B2C and B2B services.



Education

- **One class-One TV channel programme of PM eVIDYA**, will be expanded from 12 to 200 TV channels. This will enable all states to provide supplementary education in regional languages for classes 1-12.
- To promote crucial critical thinking skills, **750 virtual labs in science and mathematics**, and **75 skilling e-labs** for simulated learning environment, will be set-up in 2022-23.
- High-quality **e-content** in all spoken languages will be developed for delivery via internet, mobile phones, TV and radio through **Digital Teachers**.
- A **Digital University** will be established for world-class quality universal education with personalised learning experience.

Health

- **Technology** has taken **centre-stage**. Under Ayushman Bharat Digital Mission, an open platform for **National Digital Health Ecosystem** will be rolled out. It will consist of digital registries of health providers and health facilities, unique health identity, consent framework, and universal access to health facilities.
- **National Tele Mental Health Programme** has been announced, to provide better access to quality mental health counselling and care services.
- This will include a **network of 23 tele-mental health centres of excellence**, with NIMHANS being the nodal centre. The International Institute of Information Technology-Bangalore (IIITB) will provide technology support.
- **Integrated benefits** to women and children through Mission Shakti, Mission Vatsalya, Saksham Anganwadi and Poshan 2.0.
- Two lakh anganwadis to be upgraded to **Saksham Anganwadis**. Saksham Anganwadis are a new generation anganwadis with better infrastructure and audio-visual aids, powered by clean energy and providing improved environment for early child development

Skill Development

- Skilling programmes and partnership with the industry will be reoriented to promote continuous skilling avenues, sustainability, and employability. The **National Skill Qualification Framework (NSQF)** will be aligned with dynamic industry needs.
- Digital Ecosystem for Skilling and Livelihood (**DESH-Stack e-portal**) will be launched to empower citizens to skill, reskill or upskill through on-line training.
- Startups will be promoted to facilitate '**Drone Shakti**' through varied applications and for **Drone-As-A-Service (DrAAS)**. In select ITIs, in all states, the required courses for skilling will be started.

ALL INCLUSIVE WELFARE FOCUS



Har Ghar, Nal Se Jal: 3.8 crore households to be covered in 2022-23

PM Awas Yojana: 80 lakh houses to be completed in 2022-23

PM-DevINE: To fund infrastructure and social development based on felt needs of the North East

Aspirational Blocks Programme: For development of lagging blocks of aspirational districts

Vibrant Villages Programme: Targeting development of villages on the Northern Border left out from the development gains

Digital Banking by Post Offices: 100% of post offices to come on the core banking system

Digital Payments: Scheduled Commercial Banks to set up 75 Digital Banking Units in 75 districts

Productivity Enhancement & Investment, Sunrise opportunities, Energy Transition, & Climate Action

Sunrise Opportunities

- ▼ Like **Artificial Intelligence, Geospatial Systems and Drones, Semiconductor and its eco-system, Space Economy, Genomics and Pharmaceuticals, Green Energy, and Clean Mobility Systems**, can assist sustainable development at scale and modernize the country.
- ▼ Thus, the government will provide **supportive policies and regulations** to facilitate research and development and build domestic capacities there-by providing employment opportunities for youth, and make Indian industry more efficient and competitive.

Circular Economy

- ▼ Active public policies covering regulations, extended producers' responsibilities (EPR) framework and innovation facilitation to promote **Circular Economy**. This will help in **productivity enhancement** and create large opportunities for new businesses and jobs.
- ▼ A circular economy is a model of production and consumption, which involves sharing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible.

Carbon neutral economy

- ▼ Co-firing of 5-7 % **biomass pellets** in thermal power plants for transition to a **carbon neutral economy**. This will lead to CO2 savings of **38 MMT** annually, provide extra income to farmers, job opportunities to locals, and help avoid stubble burning in agriculture fields.
- ▼ Energy efficiency and saving measures through setting up of **Energy Service Company (ESCO)** business model in **large commercial buildings**.
- ▼ 4 pilot projects for **coal gasification and conversion of coal into chemicals** required for the industry have also been proposed.

Productivity Enhancement and Investment

- ▼ The Budget launched the next phase of **Ease of Doing Business 2.0 and Ease of Living**, based on the idea of **trust-based governance**.
- ▼ This new phase will be guided by **integration of the Central and State-level systems** through I-T bridges, digitisation of manual processes, single point access for all citizen-centric services, and a standardisation and removal of overlapping compliances.
- ▼ Over 25,000 compliances and 1,486 Union laws have already been removed in recent years.

e-Passport

- ▼ e-Passports with embedded chip and futuristic technology to be rolled out.

Green Clearances

- ▼ Scope of single window portal, **PARIVESH** (for green clearances) will be expanded to provide information to applicants.

Accelerated Corporate Exit

- ▼ **Centre for Processing Accelerated Corporate Exit (C-PACE)** will be established to facilitate and speed up the voluntary winding-up of companies from the currently required 2 years to less than 6 months.

AVGC Promotion Task Force

- ▼ An **animation, visual effects, gaming, and comic (AVGC)** promotion task force to be set-up to realize the potential of this sector, to employ youth and build domestic capacity for serving the country's markets and the global demand

Urban Planning

- ▼ Modernization of building byelaws, Town Planning Schemes (TPS), and Transit Oriented Development (TOD) will be implemented. This will facilitate reforms for the people to **live and work closer to mass transit systems**.
- ▼ For **developing India specific knowledge in urban planning and design**, and to deliver certified training in these areas, five academic institutions will be **designated as Centres of Excellence**.
- ▼ **Battery swapping policy** launched for setting up charging stations at scale in urban areas.

Land Records Management

- ▼ States will be encouraged to adopt **Unique Land Parcel Identification Number** to facilitate IT-based management of land records.
- ▼ Facility for transliteration of land records across any of **Schedule VIII languages** will also be rolled out.

Government procurement

- ▼ End-to-end **online e-Bill System** to be launched for use by all **Central ministries** for their procurements, to **enhance transparency and reduce delays in payments**.
- ▼ **Surety bonds** to be used as a substitute for bank guarantee will be made acceptable in government procurements. This will **reduce indirect cost for suppliers and work-contractors**.

AtmaNirbharta in Defence

- ▼ 68% of **capital procurement budget** earmarked for **domestic industry** in 2022-23, up from 58% in 2021-22.
- ▼ Defence R&D to be opened up for industry, startups and academia with 25% of defence R&D budget earmarked.
- ▼ Independent nodal umbrella body to be set up for meeting testing and certification requirements.

Export Promotion

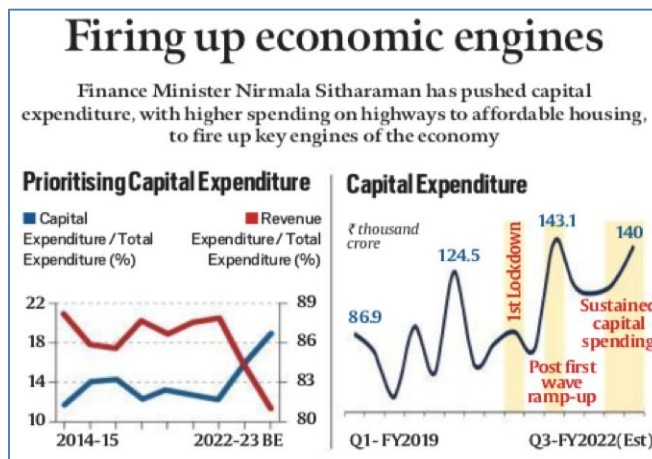
- ▼ **Special Economic Zones (SEZ) Act** to be replaced with a new legislation to enable States to become partners in **Development of Enterprise and Service Hubs**.

Telecom Sector

- ▼ Telecommunication in general & 5G technology in particular, can enable growth & offer jobs
- ▼ **Scheme for design-led manufacturing** to be launched to build a strong ecosystem for 5G as part of the **Production Linked Incentive Scheme**.
- ▼ Required **spectrum auctions** will be conducted in 2022 to facilitate rollout of 5G mobile services within 2022- 23.
- ▼ 5% of annual collections under **Universal Service Obligation Fund (USOF)** will be allocated to enable affordable broadband and mobile service proliferation in rural and remote areas

Public Capital Investment

- The outlay for capital expenditure has been increased sharply by **35.4%** from Rs. 5.54 lakh crore in the current year to **Rs. 7.50 lakh crore** in 2022-23. This would be **2.9% of GDP** in 2022-23.
- Effective Capital Expenditure:** Capital expenditure along with the provision for creation of capital assets through Grants-in-Aid to States will be **Rs. 10.68 lakh crore** in 2022-23, which will be about **4.1% of GDP**.
 - **Capital expenditure** is the money spent by the government on machinery, equipment, building, health facilities, education, acquiring land etc.

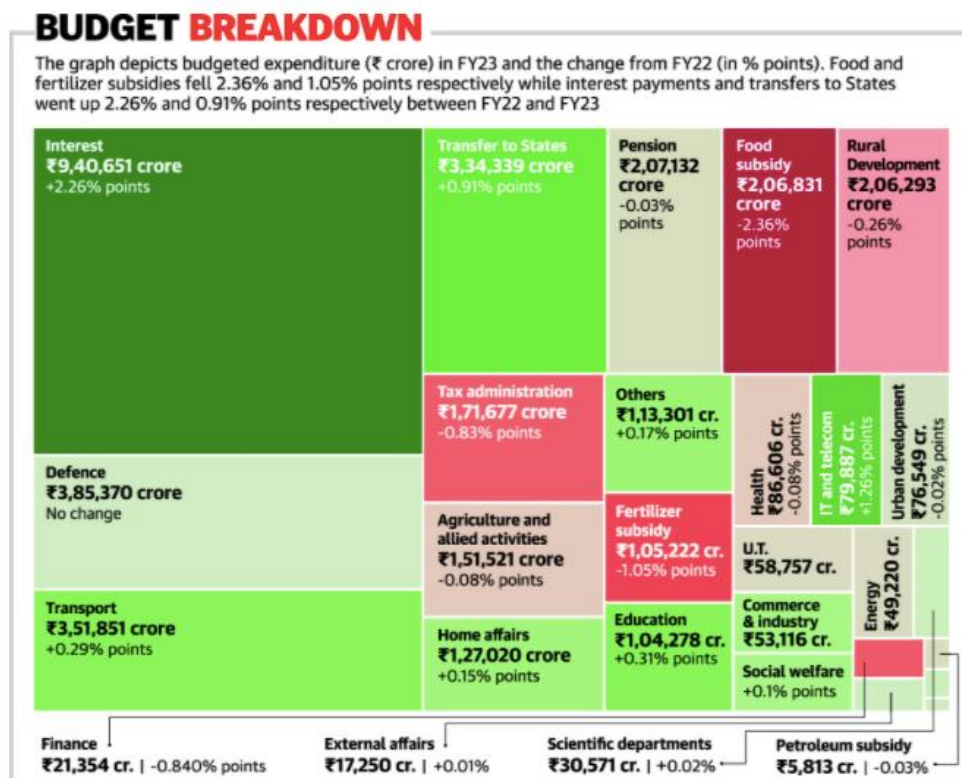


GIFT-IFSC

- World-class foreign universities** and institutions to be allowed in the GIFT City, to facilitate availability of high-end human resources for financial services and technology.
- An **International Arbitration Centre** to be set up for timely settlement of disputes under international jurisprudence.
- Services for global capital for sustainable & climate finance in the country would be facilitated in the GIFT City.

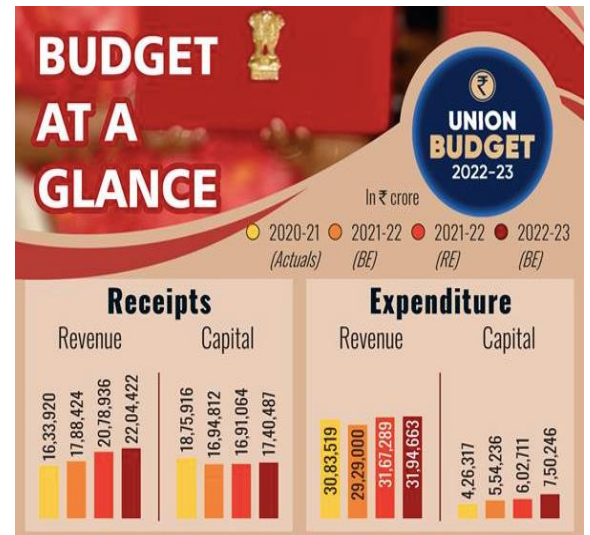
Providing Greater Fiscal Space to States

- Enhanced outlay for **Scheme for Financial Assistance to States for Capital Investment** from Rs. 10,000 crore in Budget Estimates 2021-22 to Rs. 15,000 crore in Revised Estimates for current year
- Allocation of **Rs. 1 lakh crore** in 2022-23 to assist the states in catalysing overall investments in the economy. These **fifty-year interest free loans** are over and above the normal borrowings allowed to the states.
- In 2022-23, States will be allowed a **fiscal deficit of 4% of GSDP**, of which 0.5% will be tied to **power sector reforms**.



Mobilising Resources

- For financing infrastructure needs, measures would be taken to enhance financial viability of projects including PPP, with technical and knowledge assistance from multi-lateral agencies. Financial Viability will also be ensured by adopting global best practices, innovative ways of financing, and balanced risk allocation.
- Data Centres and Energy Storage Systems** to be given infrastructure status. This will facilitate credit availability for digital infrastructure and clean energy storage.
- Venture Capital & Private Equity** invested more than Rs. 5.5 lakh crore last year facilitating one of the largest start-up & growth ecosystem. Measures to be taken to help scale this up.
- For encouraging important sunrise sectors, the government would promote **thematic funds for blended finance** with the government share limited to 20% and the funds being managed by private fund managers.
- Sovereign Green Bonds** would be issued for mobilizing resources for green infrastructure as part of the government's overall market borrowings in 2022-23.
- RBI will introduce the **Digital Rupee** using block-chain and other technologies from 2022-23. The Central Bank Digital Currency (CBDC) would give a big boost to digital economy and a more efficient and cheaper currency management system.

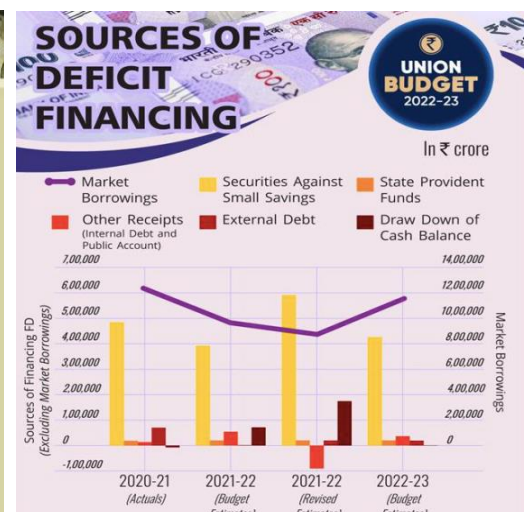
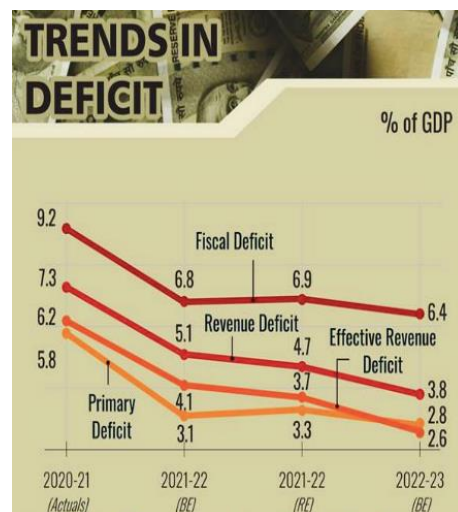


Fiscal Management

- India's **economic growth** in the current year is estimated to be **9.2%**, highest among all large economies
- Against a total expenditure of Rs.34.83 lakh crore projected in the Budget Estimates 2021-22, the Revised Estimate is Rs. 37.70 lakh crore.
- The **total expenditure** in 2022-23 is estimated at **Rs 39.45 lakh crore**, while the **total receipts** other than borrowings are estimated at **Rs 22.84 lakh crore**.

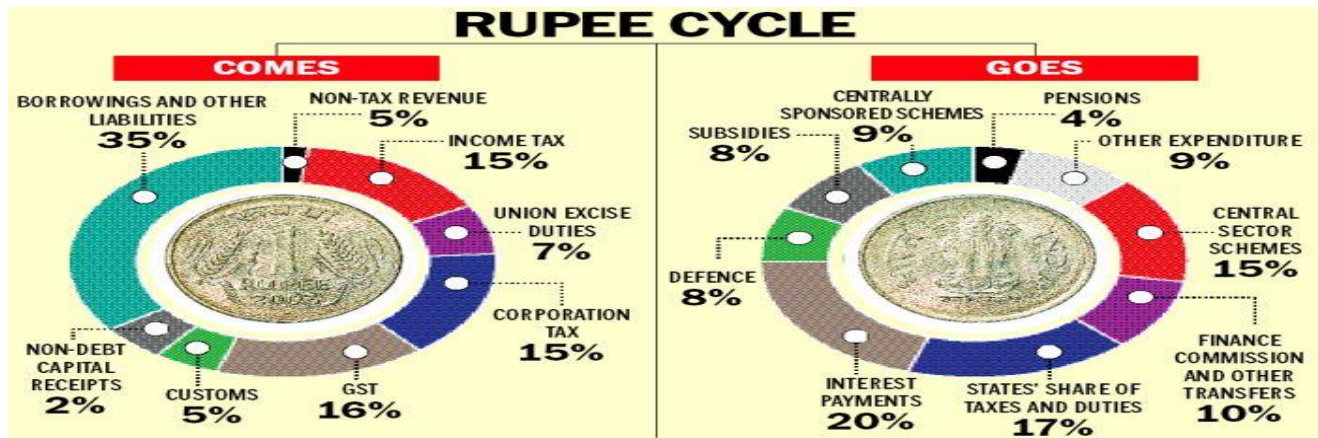
Fiscal Deficit

- The Revised Estimates for 2021-22 indicate a Fiscal Deficit of Rs. 15, 91,089 crore as against the Budget Estimates of Rs. 15, 06,812 crore.
- Further, the **Revised Fiscal Deficit** in the **current year** is estimated at **6.9%** of GDP as against 6.8% projected in the Budget Estimates.
- The **fiscal deficit for 2022-23** is estimated to be Rs. 16, 61,196 crore, estimated at **6.4%** of GDP, which is consistent with the broad path of fiscal consolidation announced last year to reach a fiscal deficit level below 4.5 per cent by 2025-26.



Market Borrowings

For 2022-23 are estimated to stand at Rs. 11,58,719 crore. The Revised Estimates for the same for 2021-22 are Rs. 8, 75,771 crore as against the Budget Estimates of Rs. 9, 67,708 crore.



PART B

Direct Taxes

Updated Return

- Provision to file an updated return on payment of additional tax within **two years** from the end of the relevant assessment year. This would give taxpayers an opportunity to correct any omissions or mistakes in correctly estimating their income for tax payment.

Cooperative societies

- To provide a level playing field between cooperative societies and companies, Alternate Minimum Tax paid by cooperatives brought down from **18.5 to 15%**.
- Surcharge on cooperative societies reduced from **12% to 7%** for those having total income of more than Rs 1 crore and up to Rs 10 crores.

Tax relief to Persons with disability

- Payment of annuity and lump sum amount from insurance scheme to be allowed to differently abled dependent during the lifetime of parents/guardians, i.e., on **parents/ guardian attaining the age of 60 years**.

Parity in National Pension Scheme (NPS) contribution

- Tax deduction limit increased from **10% to 14%** on employer's contribution to the NPS account of State Government employees bringing them **at par with central government employees**.

Incentive for Start-ups

- In order to assist start-ups during the pandemic, period of incorporation has been extended by one more year up to 31st March 2023, for eligible start-ups to avail tax benefits.
- This incentive was earlier available to eligible start-ups established before 31st March 2022.

Incentives to newly incorporated manufacturing entities

- To establish a globally competitive business environment, a concessional tax regime of 15% tax was introduced earlier for certain newly incorporated domestic manufacturing companies.
- Now, the last date for commencement of manufacturing or production has been extended by one year to 31st March 2024 (from 31st March 2023), to avail the tax benefits.

Direct Taxes

Scheme for taxation of virtual digital assets

- Specific tax regime for virtual digital assets (like crypto-currencies and non-fungible tokens) introduced. Any income from transfer of any virtual digital asset to be taxed at the rate of 30%.
- No deduction for any expenditure or allowance, while computing such income except cost of acquisition. Loss from transfer of virtual digital asset cannot be set off against any other income.
- To capture the transaction details, TDS to be provided on payment made in relation to transfer of virtual digital asset at the rate of 1% of such consideration above a monetary threshold.
- Gift of virtual digital asset also to be taxed in the hands of the recipient.

Litigation Management

- A lot of time and resources are consumed in filing of appeals which involve identical issues.
- In cases where question of law is identical to the one pending in High Court or Supreme Court, filing of appeal by department **shall be deferred** till such question of law is decided by the court.
- This will greatly help in **reducing repeated litigation between taxpayers and the department.**

Deterrence against tax-evasion

- No set off, of any loss to be allowed against undisclosed income detected during search and survey operations.

Rationalizing TDS Provisions

- Benefits passed on to agents as business promotion strategy taxable in hands of agents.
- Tax deduction provided to person giving benefits, if the aggregate value of such benefits exceeds Rs 20,000 during the financial year.

Indirect Taxes

- **Special Economic Zones:** Customs Administration of SEZs to be fully IT driven and functions on the Customs National Portal – shall be implemented by 30th September 2022.
- **Customs Reforms:** Customs administration has reinvented itself and faceless customs has been fully established through liberalized procedures and integration of technology.

Project imports and capital goods

- It has been proposed to gradually **phase out concessional rates** in capital goods and project imports; and apply a moderate tariff of 7.5% – conducive to the growth of domestic sector and Make in India.
- Certain exemptions for advanced machineries that are not manufactured within the country shall continue.
- A few exemptions introduced on inputs, like specialised castings, ball screw and linear motion guide - to encourage domestic manufacturing of capital goods.

Review of customs exemptions and tariff simplification

- More than **350 exemption entries proposed** to be gradually phased out, like exemption on certain agricultural produce, chemicals, fabrics, medical devices, & drugs and medicines for which sufficient domestic capacity exists.
- Simplifying the Customs rate and tariff structure particularly for sectors like chemicals, textiles and metals and minimise disputes.

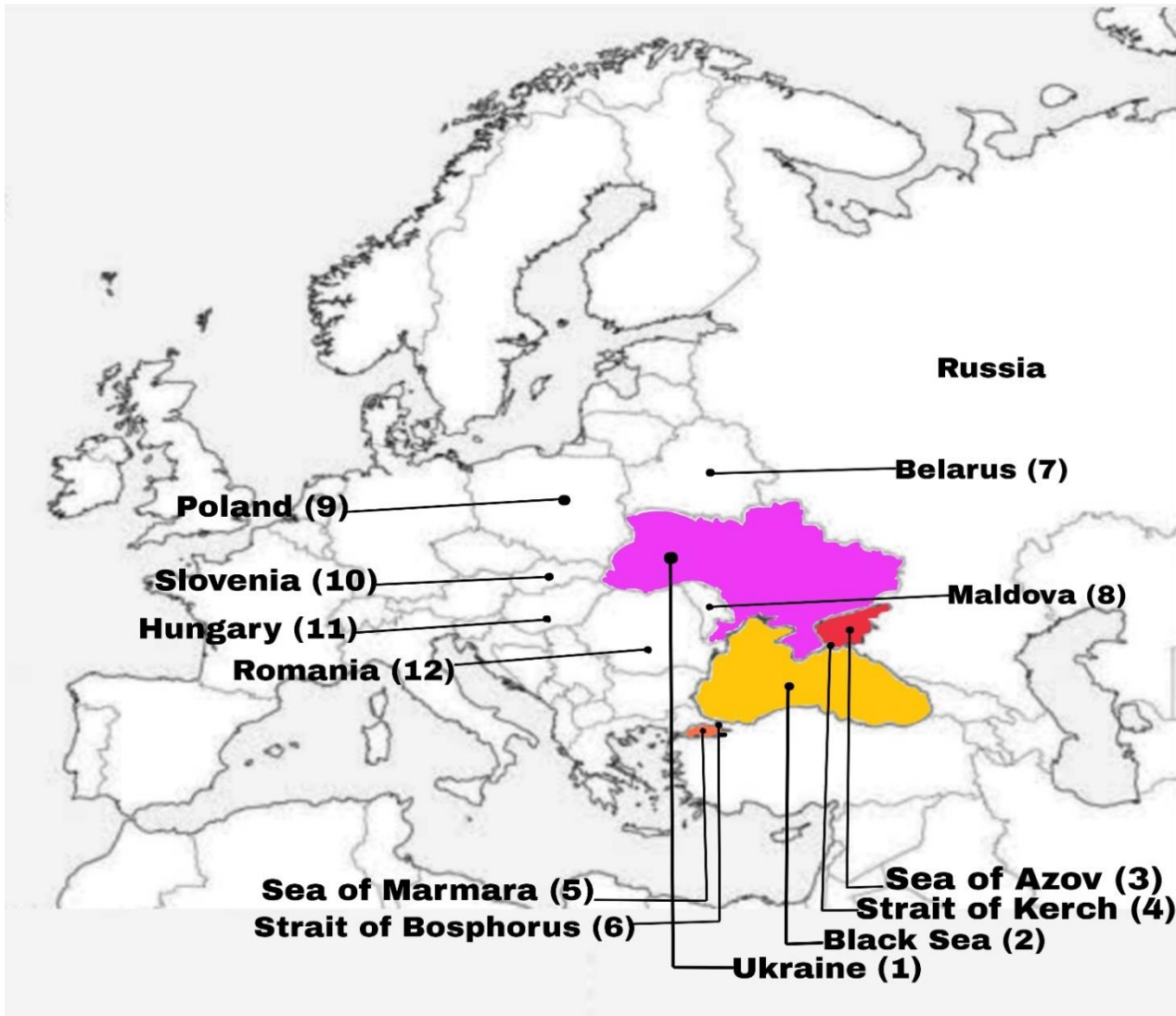
Sector specific proposals

- **Electronics:** Customs duty rates to be calibrated to provide a **graded rate structure** - to facilitate domestic manufacturing of wearable devices, hearable devices and electronic smart meters.
- **Gems and Jewellery:** A simplified regulatory framework to be implemented by June 2022 - to facilitate export of jewellery through e-commerce. Customs duty of at least Rs 400 per Kg to be paid on imitation jewellery import - to disincentivise import of undervalued imitation jewellery.
- **Chemicals:** To enhance domestic value addition, it has been proposed to reduce the customs duty on certain critical chemicals.
- **Exports:** Duty being reduced on certain inputs required for **shrimp aquaculture** - to promote its exports.
- **Encourage blending of fuel:** Unblended fuel to attract an additional differential excise duty of Rs 2/ litre from October 2022

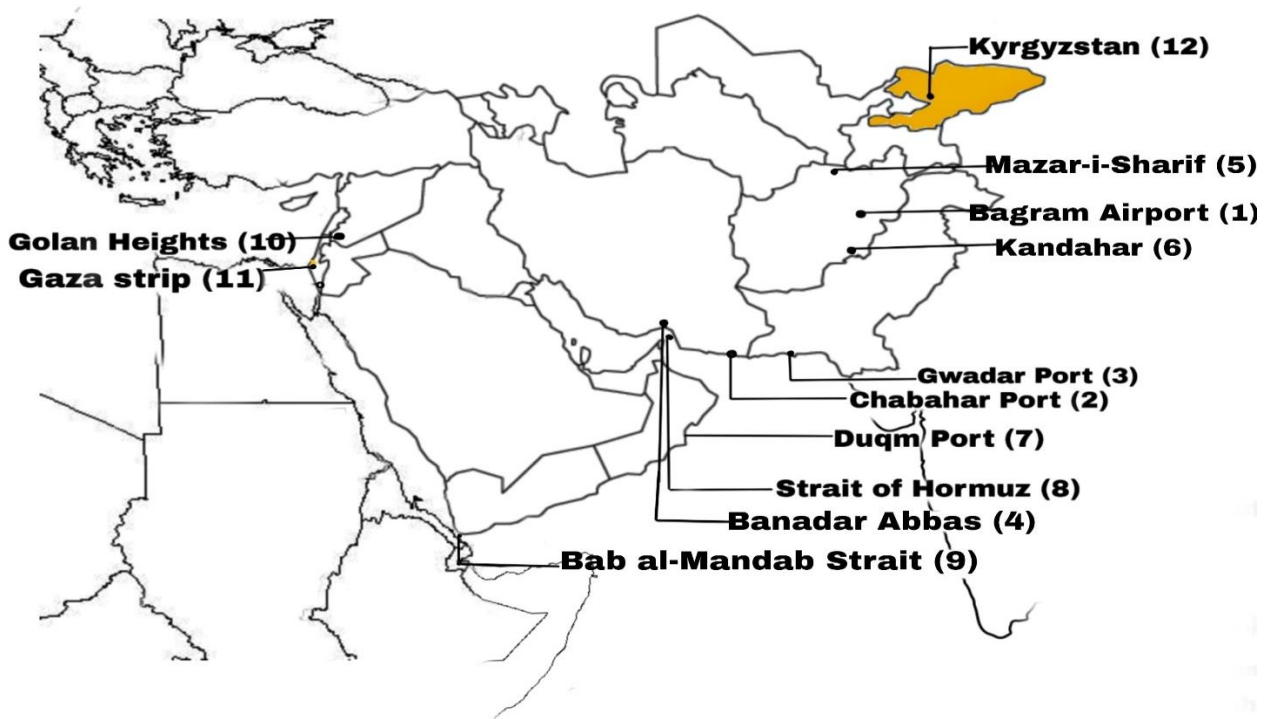
MSME

- Exemption being rationalised on implements and tools for agri-sector which are manufactured in India.
- Customs duty exemption given to steel scrap last year extended for another year to provide relief to MSME secondary steel producers.
- Certain anti- dumping and countervailing duty on certain steel products being revoked – to tackle prevailing high prices of metal in larger public interest.

MAPS: PLACES IN NEWS

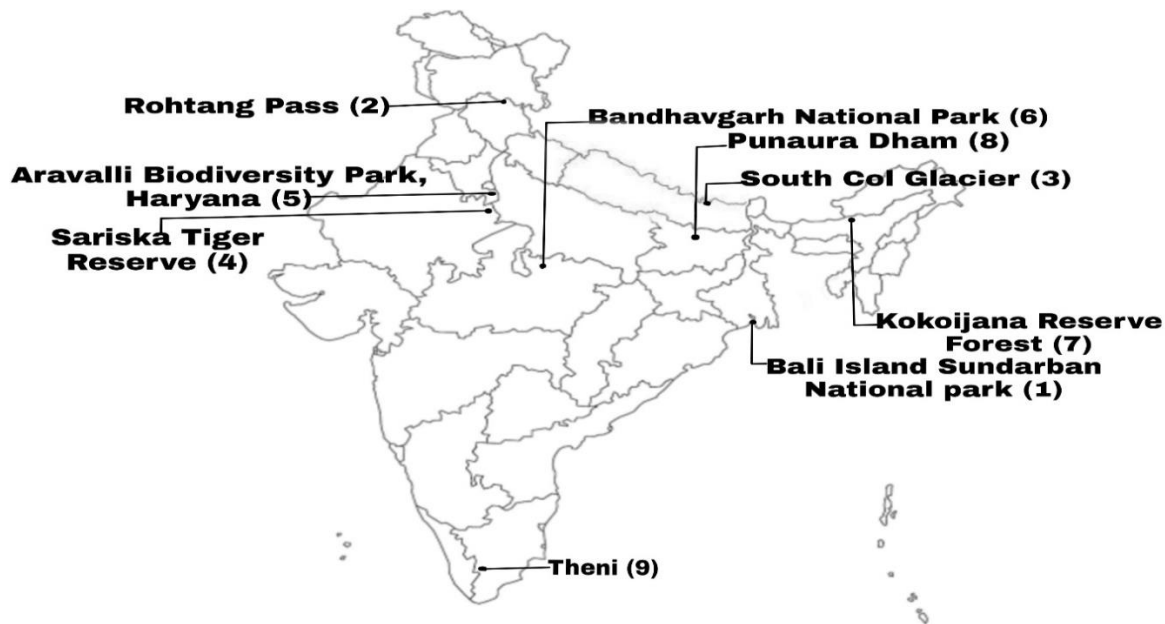


1	Ukraine	Russia declared war on Ukraine which is a country in Eastern Europe. It is the second-largest country by area in Europe after Russia.
2	Black sea	The bordering countries are: Russia, Ukraine, Georgia, Turkey, Bulgaria and Romania.
3	Sea of Azov	Ukraine Closes Sea of Azov amid Military Action by Russia, which is a sea in Eastern Europe connected to the Black Sea by the narrow Strait of Kerch .
4	Strait of Kerch	It is the waterway between mainland Russia and Crimea. It connects the Black Sea and the Sea of Azov
5	Sea of Marmara	The Sea of Marmara is an inland sea located entirely within the borders of Turkey. It connects the Black Sea to the Aegean Sea.
6	Strait of Bosphorus	Ukraine is increasing pressure on Turkey to ban Russian warships from the Bosphorus straits. It is the world's narrowest strait used for international navigation. It connects Black Sea with Sea of Marmara
7	Belarus	Belarus holds referendum to renounce non-nuclear status. It is a landlocked country in Eastern Europe. It is bordered by Russia, Ukraine, Poland, and Lithuania and Latvia.



1	Bagram Airport	Taliban have denied reports of the foreign troops' presence at Bagram Airfield in Afghanistan. Formerly it was the largest U.S. military base in Afghanistan.
2	Chabahar Port	The first India-Central Asia Summit decided to form a Joint Working Group at Chabahar Port to address the issues of free movement of goods and services between India and Central Asian countries.
3	Gwadar Port	Baloch Rebels Claim Responsibility for Attack Near China-Funded Gwadar Port, which is situated on the shores of the Arabian Sea, in Pakistan.
04	Bandar Abbas	Bandar Abbas is a port city on the southern coast of Iran , on the Persian Gulf. The city occupies a strategic position on the narrow Strait of Hormuz .
5	Mazar-i-Sharif	Pakistan and Republic of Uzbekistan agreed on the formation of a Special Purpose Vehicle for expediting the Mazar-e-Sharif-Kabul-Peshawar Rail project.
6	Kandahar	India signs MoU to hand over wheat to United Nation's World Food Programme (WFP) in Kandahar, a city in Afghanistan.
7	Duqm Port	Duqm Port is a seaport located in Oman . This Port has become a key part of India's attempts to prevent China from enlarging its 'string of pearls'.
8	Strait of Hormuz	International Maritime Exercise 2022 (IMX 22) was conducted in the Strait of Hormuz which is a strategically important strait that links the Persian Gulf with the Arabian Sea and the Gulf of Oman.
9	Bab al-Mandab strait	The Bab-al-Mandeb is a strait between Yemen on the Arabian Peninsula, and Djibouti and Eritrea in the Horn of Africa. It connects Red Sea to Gulf of Aden .

10	Golan Heights	Russia has criticized Israeli settlement expansion plans in the Golan Heights. It captured from Syria by Israel during the Six-Day Middle-East War of 1967.
11	Gaza Strip	A 2000-year-old Roman cemetery of at least 20 ornately decorated graves has been discovered near the shoreline in the northern Gaza strip.
12	Kyrgyzstan	Researchers spot the dhole in Kyrgyzstan after 3 decades.



1	Bali Island Sundarban National Park	KVIC is transforming tiger-infested Bali Island in dense mangroves of Sundarbans by self-employment activity, located west Bengal.
2	Rohtang Pass	Atal Tunnel has been officially recognised by world book of record as world longest tunnel above 10,000 feet , which is built under the Rohtang Pass in Himachal Pradesh.
3	South Col Glacier	Researchers have found that South Col Glacier has lost more than 54m of thickness of ice in last 25 year.
4	Sariska Tiger Reserve	Better habitat management has helped tiger flourish in Sariska tiger reserve which is located in Alwar district, Rajasthan .
5	Aravalli Biodiversity Park	Aravalli Biodiversity Park in Gurugram, Haryana was declared as India's first OCEM site .
6	Bandhavgarh National Park	1000-year-old sculpture of recline Lord Vishnu has been restored from Bandhavgarh national park, Madhya Pradesh.
7	Kokoijana Reserve Forest	Villagers in Assam opposed the upgrade of Kokoijana Reserve Forest into wildlife sanctuary.
8	Punaura Dham	Punaura Dham in Sitamarhi district, Bihar was included in Ramayana Circuit of Swadesh Darshan scheme .
9	Theni	Tamil Nadu government has filed an affidavit in Supreme Court stating that it would not permit the proposed Indian Neutrino Observatory at Bodi West Hill in Theni district.

SOCIAL ISSUES

SeHAT

Ministry of Defence (MoD) has launched services for **home delivery or Self Pickup** of Medicines for *veterans and serving military personnel services* under an online medical consultation platform named **Services e-Health Assistance and Teleconsultation (SeHAT)**

About SeHAT

- It is the **tri-services teleconsultation service** of the MoD designed for all entitled personnel and their families. As a part of the Government's commitment to Digital India and e-Governance, Defense Minister has launched SeHAT in May 2021.
- **SeHAT stay home OPD** is a patient-to-doctor system where the patient can consult a doctor remotely through the internet using his Smartphone, laptop, Desktop or Tablet. The consultation occurs through video, audio and chats at the same time.
- The user **does not need to pay anything** to seek teleconsultation & can simply access the services by visiting the website, or by using the SeHAT apps.
- Since its launch, there have been more than 10,000 successful teleconsultations on SeHAT, with a strong team of 2000 plus doctors onboard.

eSanjeevani is a similar free OPD service run by the MoHFW (Ministry of Health and Family Welfare) for all citizens.

Intensified Mission Indradhanush (IMI) 4.0

Ministry of Health virtually launched **Intensified Mission Indradhanush (IMI) 4.0**. Let's see the chronology of schemes related to immunization of child.

Universal Immunisation Programme	<ul style="list-style-type: none"> • The Immunization Programme in India was introduced in 1978 as 'Expanded Programme of Immunization (EPI)' by the Ministry of Health and Family Welfare. • In 1985, the Programme was modified as 'Universal Immunization Programme (UIP)'. UIP prevents mortality and morbidity in children and pregnant women against 12 vaccine-preventable diseases (VPD) i.e. diphtheria, Whooping cough, tetanus, polio, tuberculosis, hepatitis B, meningitis and pneumonia, <u>Haemophilus influenzae type B infections, Japanese encephalitis (JE)</u>, rotavirus vaccine, pneumococcal conjugate vaccine (PCV) and measles-rubella (MR). • Vaccination against Japanese Encephalitis and Haemophilus influenzae type B is being provided in selected districts of the country.
Mission Indradhanush	<ul style="list-style-type: none"> • But in the past, it was seen that the increase in immunization coverage had slowed down and it increased at the rate of 1% per year between 2009 and 2013. • To accelerate the coverage, Mission Indradhanush was envisaged and implemented since 2015 to rapidly increase the full immunization coverage to 90%. • It was also identified as one of the flagship schemes under Gram Swaraj Abhiyan and Extended Gram Swaraj Abhiyan.
IMI	<ul style="list-style-type: none"> • It was launched in 2017 with greater focus on urban areas which were one of the gaps of Mission Indradhanush. • It focused to improve immunisation coverage in select districts and cities to ensure full immunisation to more than 90% by December 2018 instead of 2020.
IMI 2.0	<ul style="list-style-type: none"> • It was a nationwide immunisation drive to mark the 25 years of Pulse polio programme

	<p>(2019-20).</p> <ul style="list-style-type: none"> It had targets of full immunization coverage in 272 districts spread over 27 States. It aimed to achieve at least 90% pan-India immunisation coverage by 2022.
IMI 3.0	<ul style="list-style-type: none"> Launched in 2021. Focus of IMI 3.0 was children and pregnant women who had missed their vaccine doses during the Covid-19 pandemic. Beneficiaries from migration areas and hard to reach areas were targeted as they might have missed their vaccine doses during Covid-19.
IMI 4.0	<ul style="list-style-type: none"> It will ensure that Routine Immunization (RI) services reach unvaccinated and partially vaccinated children and pregnant women. Children up to 2 years will be covered in this drive. While the pace of routine immunisation has slowed down due to Covid-19 pandemic, IMI 4.0 will immensely contribute in filling the gaps and make lasting gains towards universal immunisation. Three rounds of IMI 4.0 will be conducted in 416 districts, including 75 districts identified for Azadi ka Amrit Mahotsav across 33 States/UTs. These districts have been identified based on vaccination coverage as per the latest <u>NFHS-5 report, Health Management Information System (HMIS) data</u> and burden of vaccine-preventable diseases.

Achievements So Far

- Till date, 10 phases of Mission Indradhanush have been completed covering 701 districts across the country.
- As of April 2021, a total of **3.86 crore children and 96.8 lakh pregnant women** have been vaccinated.
- The first two phases of Mission Indradhanush resulted in 7% increase in full immunization coverage in a year.
- A survey (IMI- CES) carried out in 190 districts covered in Intensified Mission Indradhanush (5th phase of Mission Indradhanush) shows 5% points increase in full immunization coverage as compared to NFHS-4.
- The immunization coverage has shown a considerable improvement as per the latest reports of National Family Health Survey-5 (2019-21) as compared to NHFS-4(2015-16).
- The Full Immunization Coverage among children aged 12-23 months of age has increased from 62% (NFHS-4) to 76.4% (NFHS-5).

Pradhan Mantri Jan Arogya Yojana & NFSA Integration

Union Health Ministry said that **National Health Authority (NHA)** is working to integrate the database of **Socio-Economic Caste Census (SECC) 2011 beneficiaries** with the **National Food Security Act (NFSA) portal** so that beneficiaries can seek information regarding their entitlements under the **AB PM-JAY using their ration card number**.

About The Integration

- NHA is mandated with the implementation of Ayushman Bharat Pradhan Mantri–Jan Arogya Yojana (AB PM-JAY). The scheme provides health assurance of up to ₹5 Lakhs per family per year, for secondary and tertiary care-related hospitalizations.
- NHA is also working on a proposal to use **Fair Price Shops or ration shops** for providing information related to the scheme and entitlement under the scheme to eligible beneficiaries.
- This will provide an additional avenue to beneficiaries along with the existing Common Service Center for card creation.

- The NHA has collaborated with various ministries implementing welfare schemes to strengthen the different aspects of scheme implementation including beneficiary awareness campaigns, beneficiary database (SECC 2011) enrichment etc.

Intended Benefits of This Proposal

- **Integrating Fair Price Shops With Health.**
- **Developing More Service Points.**
- Making **Beneficiary identification** process convenient.
- **Common Identity Enabler:** Aadhaar being a common identity across the majority of government databases will enable this integration. Further, Aadhaar also ensures certainty regarding beneficiary identification through e-KYC. e-KYC enables paperless delivery of services in a targeted manner.
- **Cross-Platform Integration:** NHA will collaborate with various ministries.
- **Towards Universal Health Coverage**

AB-PMJAY

- The AB-PMJAY offers health insurance to 10.74 crore poor, rural families and identified occupational categories of urban workers' families.
- The project offers an annual health cover of ₹5,00,000 per family (on a family floater basis). It covers medical and hospitalisation expenses for several secondary care and tertiary care procedures.
- The households included are based on the deprivation and occupational criteria of Socio-Economic Caste Census 2011 (SECC 2011) for rural and urban areas respectively.
- The Rashtriya Swasthya Bima Yojana had a family cap of five members. However, based on learnings from those schemes, AB-PMJAY has been designed in such a way that there is no cap on family size or age of members. In addition, pre-existing diseases are covered from the very first day.

The beneficiary database enrichment under ABPM-JAY would mean adding additional parameters to the database for making searching easier. The majority of ABPM-JAY beneficiaries from SECC 2011 are also eligible for benefits under National Food Security Portal.

Nai Roshni Scheme

Government stated that during the last three years, funds to the tune of Rs. 26 crores have been sanctioned under Nai Roshni scheme through which around **one Lakh women** have been trained.

About Nai Roshni scheme

- It is a **Central Sector scheme** which aims to empower and enhance confidence in women by providing knowledge, tools and techniques for Leadership Development of Women.
- It was started in 2012-13.
- It is a six-day non-residential/five-day residential training programme conducted by selected Programme Implementing Agencies for the **women belonging to minority community** including their neighbours from other communities living in the same village/locality, in the age group of **18 to 65 years**.
- The training programme cover areas related to programmes for women, health and hygiene, legal rights of women, financial literacy, digital literacy, Swachh Bharat, Life Skills, and advocacy for social and behavioural changes, etc.
- The scheme provides for hand-holding of all the beneficiaries for a period upto **12 months** after the training.

Accelerate Vigyan Scheme

Science and Engineering Research Board (SERB) has invited applications under 'ABHYAAS', a program of 'Accelerate Vigyan' scheme, for summer season.

SERB is an autonomous body of Department of Science & Technology (DST), Ministry of Science & Technology.

About Accelerate Vigyan (AV) Scheme

- It strives to provide a big push to high-end scientific research and prepare a scientific workforce, which can venture into research careers and a knowledge-based economy.
- AV aims to expand the research base in the country, with three broad goals — **consolidation / aggregation of all scientific training programs, initiating high-end orientation workshops and creating opportunities for training and skill internships**. It was launched in June 2020
- **Implementation:** By an Inter-Ministerial Overseeing Committee (IMOC) involving all the scientific ministries/departments constituted for the purpose of supporting SERB

Components

ABHYAAS	<ul style="list-style-type: none">• It is an attempt to boost R&D in the country by enabling and grooming potential postgraduate / PhD students by developing dedicated research skills in selected areas / disciplines / fields.• This is especially important for researchers with limited opportunities to access such learning capacities / facilities / infrastructure• It has two components:<ul style="list-style-type: none">✓ High-End Workshops i.e. KARYASHALA✓ Training and Research Internships i.e. VRITIKA.
SAMMOHAN	<ul style="list-style-type: none">• It marks the beginning of Accelerate Vigyan.• It aims to encourage, aggregate and consolidate all scientific interactions in the country under one common roof• It has been sub-divided into two components<ul style="list-style-type: none">✓ SAYONJIKA is an open-ended program to catalogue capacity building activities in science & technology supported by all government funding agencies in the country.✓ SANGOSHTI is a pre-existing program of SERB for the organisation of workshops to facilitate the scientific community to establish an interaction with other individuals and research groups to enhance knowledge exchange.

Operation AAHT

- **Railway Protection Force** has launched a nationwide operation to **curb human trafficking**. As part of “Operation AAHT”, special teams will be deployed on all long-distance trains/routes with focus on rescuing victims, particularly women and children, from the clutches of traffickers.
- National Crime Records Bureau registers about 2,200 cases of Human Trafficking cases on an average each year.
- The Railways, which operate about 21,000 trains across the country daily, is the most reliable mode of transportation for the traffickers. RPF has rescued more than more than 2,000 women and children between 2017-21 from the clutches of traffickers.
- RPF could act as a bridge cutting across States to assist local police in mission to curb menace.
- Cyber cells would start patrolling the web/social media to look for digital footprints of Human Trafficking and focus would be more on trains originating from districts bordering Nepal, Bangladesh and Myanmar.

Innovations and Good Practices in Educational Administration

- Ministry of Education presented the 5th National Award for Innovations and Good Practices in Educational Administration (IGPEA).

- **National Institute of Educational Planning and Administration (NIEPA)** has instituted the National Award for IGPEA for **District and Block** Level Education Officers.
 - ✓ NIEPA, under Ministry of Education, is a premier organization dealing with capacity building and research in planning and management of education **not only in India but also in South Asia**.
- It was launched by NIEPA in **2014** with an aim to encourage innovations and good practices in educational administration at grassroot level
- **Objective:** To recognize innovative ideas and practices adopted by the district and block level education officers for effective management of educational administrative system

Draft National Higher Education Qualification Framework (NHEQF)

- UGC has released draft National Higher Education framework to **assess students on a range of learning outcomes**. It is a part of **National Education Policy (NEP) 2020** to assess students at different levels.
- The country needs to move towards developing a **nationally accepted and internationally comparable** and acceptable qualifications framework to facilitate transparency and comparability of higher education qualifications at all levels.

Provisions of Draft NHEQF

- The framework is **not** intended to promote a **uniform curriculum or national common syllabus**.
- It aims to uplift higher education institutions to a **common level of benchmarking** to ensure that all institutions are providing quality education.
- The draft framework has outlined several **learning level “descriptors”** or parameters based on which **students can be assessed** at every level.
- These parameters include generic learning outcomes, constitutional, ethical & moral values, employment ready skills, entrepreneurship mindset and application of knowledge & skills among others.
- The NHEQF has divided parameters into **levels 5 to 10**.
 - ✓ **Levels 1 to 4** cover the school education.
 - ✓ The NHEQF level 5 represents learning outcomes appropriate to the **first year** (first two semesters) of the undergraduate programme of study, while Level 10 represents learning outcomes appropriate to the doctoral-level programme of study.
- The draft envisaged that students on completion of a programme of study must possess and demonstrate the expected graduate profile/attributes acquired.
- It also fixes the **number of credits** required to clear the different levels of the **four-year** undergraduate programme, postgraduate degrees and doctoral degrees.

The **NEP 2020 allows multiple entry and exits at the undergraduate level**. It effectively means that students can exit after completing one year of undergraduate programme with a certificate, after two years with a diploma, after three years with a bachelor’s degree, or can complete four years and get an honours degree with a honours/research degree

National Qualifications Framework in India

National Framework (NVQF)	Vocational	Qualifications	Ministry of Labour and Employment developed it.
Vocational Framework (NVEQF)	Education	Qualifications	Ministry of Human Resource Development (renamed as Ministry of Education, after NEP 2020 recommendations) developed it.

These two frameworks were considered and used while developing the National Skills Qualifications Framework (NSQF) notified in 2013.

University Grant Commission (UGC)

It came into existence in 1953 but became a **statutory organisation** of the Government of India by UGC Act, 1956 under the Ministry of Education. The UGC's mandate includes promoting and coordination university education.

Vigyan Jyoti Programme

Second phase of Vigyan Jyoti programme commenced on February 11, 2021 on the occasion of International Day of Women and Girls in Science. Recently, it was extended to **100 districts** in its second phase.

Key Points of Vigyan Jyoti Programme

- It was launched by Department of Science & Technology (DST), **Ministry of Science and Technology** to create a level playing field for meritorious girls to pursue Science, Technology, Engineering, and Mathematics (STEM). It aims to address under representation of women in different fields of STEM.
- As a first step, the "Vigyan Jyoti" has been introduced in the year 2019-20 at the school level wherein meritorious girl students of **Class 9-12** are being encouraged to pursue higher education and career in STEM field.
- The Vigyan Jyoti envisaged hand-holding and interventions right from the school level i.e., Class IX and which will continue till the **PhD level** to encourage girls to pursue a career in underrepresented areas of STEM.
- Vigyan Jyoti activities include student-parent counselling, visit to labs and knowledge centres, partners role model interactions, science camps, academic support classes, resource material distribution and tinkering activities. Online academic support to students includes streaming of video classes, study materials, daily practice problems and doubt clearing sessions.
- The **Navodaya Vidyalaya Samiti (NVS)**, an autonomous organisation of the Ministry of Education, is implementation partner.
- **New Education Policy** and the **Science Technology and Innovation Policy** could make use of the demographic dividend to progress long in short time to help increase number of women in science.

DST runs other women-oriented programmes like:

- ✓ **Women Scientists Scheme** to help women with career-break
- ✓ **Indo-US Fellowship for Women in STEMM (WISTEMM)** program where women scientists can work in research labs of USA
- ✓ **Consolidation of University Research for Innovation and Excellence in Women Universities (CURIE)** programme for improving R&D infrastructure and establishing state-of-the-art research facilities in order to create excellence in S&T in women universities
- ✓ **Gender Advancement for Transforming Institutions (GATI)** program to develop a comprehensive Charter and a framework for assessing Gender Equality in STEM.
- ✓ Further, DST has also additionally established **Artificial Intelligence (AI) labs** in women universities with the goal to foster AI innovations and to prepare skilled manpower for AI-based jobs in future.

New India Literacy Programme

Government approved a new scheme "**New India Literacy Programme**" for the period of financial years 2022-2027.

Aim

It will cover all aspect of Adult Education to align with National Education Policy 2020. It will impart not only foundational literacy and numeracy but also to cover other components:

Critical life skills	•Including financial literacy, digital literacy, commercial skills, health care and awareness, child care and education, and family welfare
Vocational skills	•With a view towards obtaining local employment
Basic education	•Including preparatory, middle, and secondary stage equivalency
Continuing education	•Including engaging holistic adult education courses in arts, sciences, technology, culture, sports, and recreation, as well as other topics of interest or use to local learners, such as more advanced material on critical life skills

Why Is Such A Scheme Needed

- **Census 2011:** Absolute number of non-literates in 15 years and above age group is 25.76 crore (Male 9.08 crore, Female 16.68 crore).
- In consideration of the progress, with 7.64 crore persons certified as literates under **Saakshar Bharat programme** implemented during 2009-10 to 2017-18, it is estimated that currently around **18.12 crore adults** are still non-literate in India.

Salient Features Of The Scheme

- The term '**Adult education**' is replaced with '**Education for All**'
- The scheme will be implemented by Ministry of Education through **online volunteerism**. The training, orientation, workshops of **volunteers**, may be organized through **face-to-face mode**. All material and resources shall be provided digitally so that registered volunteers can easily access them via digital channels such as radio, television, portals and mobile phone-based free open-source apps.
- The scheme will cover non-literate of the age of 15 years and above in all state/UTs.
- The target is 5 crore learners @ 1.00 crore per year by using "Online Teaching, Learning and Assessment System (OTLAS)" in collaboration with National Informatics Centre, NCERT and NIOS
- It is centre sponsored scheme. The estimated total outlay of the scheme is Rs.1037.90 crore which includes Central share of Rs. 700 crore and State share of Rs. 337.90 crore respectively for the FYs 2022 -27
- Schools will be **unit for implementation** of the scheme.
- Use of technologies to impart Adult Education for wider coverage.

This is a progressive step for achieving 100% literacy and human development.

Bhasha Certificate Selfie

Ministry of Education launched a campaign Bhasha Certificate Selfie under **EK Bharat Shreshtha Bharat (EBSB)**.

Highlights of Campaign

- Bhasha certificate selfie initiative is encouraging people to upload their **selfie with the certificate** from their social media account.
- It is launched to encourage cultural diversity and to endorse multi linguisticism.
- It aims to ensure that people acquire basic conversational skills in Indian languages.
- It works to promote the **Bhasha Sangam mobile app** developed by Ministry of Education and My Gov.
 - ✓ In 2021, the Ministry of Education launched the Bhasha Sangam initiative under EBSB. It is an initiative developed by NCERT to teach basic sentences of everyday usage in 22 Indian languages (Eighth Schedule languages).
 - ✓ It is available on DIKSHA, ePathshala and through 22 booklets.

EK Bharat Shreshtha Bharat initiative

It is an initiative of Ministry of Education started in 2015 to promote engagement amongst the people of different states /UTs to enhance mutual understanding and bonding between people of diverse cultures.

National Merit Scholarship

Ministry of Education has appropriated the continuation of National Means-cum-merit scholarship (NMMSS) over the 15th Finance Commission cycle for a period of five years i.e. from 2021-22 to 2025-26. The financial outlay for the scheme is Rs 1827.00 crore.

Key Points

- It is **central sector scheme** launched in **2008-2009**.
- It aimed to award scholarship to laudable students of economically weaker sections to reduce drop-outs in class 8th. It encourages students to continue the study at the secondary stage.
- The scheme envisages award of one lakh fresh scholarship every year to selected students from class 9th and their continuation/renewal in classes X to XII
 - ✓ 22.06 lakh scholarships have been sanctioned till 2020-21 involving an expenditure of Rs. 1783.03 crore.
- **Eligibility:** Students whose parental income from all sources is not more than Rs 3,50,000/ per annum and students who are not studying in Kendriya Vidyalaya, Jawahar Navodaya Vidyalayas, Residential schools run by state Government institutions and private schools are not eligible for the scholarship.
 - ✓ At the time of selection for the award of scholarship, the candidate must have scored at least 55% marks or equivalent grade in Class VIII examination. There will be 5 % relaxation for SC/ST
- **Details of the Scholarship:** Scholarship of Rs. 12000/- per annum (Rs.1000/- per month) per student is awarded to selected students every year for study in classes from IX to XII.
 - ✓ The selection of students awarded the scholarships is made through an examination conducted by the State Governments.
 - ✓ Scholarships are disbursed by the SBI directly into the bank accounts of students on a quarterly basis.

SAMRIDH Initiative

NITI Aayog, Atal Innovation Mission and U.S. Agency for International Development (**USAID**) have announced a new partnership under the **Sustainable Access to Markets and Resources for Innovative Delivery of Healthcare (SAMRIDH)** initiative.

Objective

Launched in 2020, it aims to improve access to affordable and quality healthcare for vulnerable populations in **tier-2 and tier-3 cities and rural and tribal region**.

Key Point Of The Initiative

- Bringing innovation, affordability, accessibility and availability in health care system by reimagining Indian health care system through **blending philanthropic capital, public sector resources and research work**.
- -This new partnership will enhance SAMRIDH'S efforts to reach vulnerable population—leveraging AIM's expertise in innovation and entrepreneurship.
- This initiative is implemented by a Technical Support Unit managed by IPE Global.
- The SAMRIDH healthcare initiative is important to achieve sustainable goal no 3 and cost effective health care system in under develop regions.

How Is It Different From SAMRIDH Programme?

- Ministry of Electronics & Information Technology (MeitY) launched '**Start-up Accelerators of MeitY for Product Innovation, Development & growth (SAMRIDH)**' programme in August 2021.
- It was launched to create a conducive platform to Indian Software Product start-ups to enhance their products and secure investments for scaling their business.

ECONOMY

Scheme on Enhancement of Competitiveness in Capital Goods Sector

- **Ministry of Heavy Industries** recently notified **second phase** of the Scheme on Enhancement of Competitiveness in the Capital Goods Sector for **common technology development and services infrastructure**, with a financial outlay of ₹1,207 crore (Budgetary support of Rs.975 crore and Industry Contribution of Rs. 232 crore).
- The objective of phase II is to **expand and enlarge the impact** created by phase I of the scheme (launched in 2014). Phase 1 aims to **address the technological obsolescence, limited access to quality industrial infrastructure and common facilities**.
- Thus, providing greater impetus through creation of a strong and globally competitive capital goods sector that would contribute at least 25% to the manufacturing sector.
- At present the capital goods industry **contributes 12% to the manufacturing activity**.

Capital Goods

- Capital goods are physical assets that are used in the production process to manufacture products and services that consumers use.
- Capital goods include buildings, machinery, equipment, vehicles, and tools. Capital goods are **not finished goods**. Instead, they are used to make finished goods.
- India's Capital Goods manufacturing industry serves as a strong base for its engagement across sectors such as engineering, construction, infrastructure and consumer goods, amongst others.
- It provides approximately 1.4 million direct and 7 million indirect jobs.
- **No industrial license** is required for the sector.
- FDI (Foreign Direct Investment) up to 100% permitted on automatic route (through RBI).

Components Of The Scheme

- Identification of technologies through technology innovation portals.
- Promotion of **skilling** in capital goods sector—creation of **qualification packages** for higher skill levels (6 and above).
- Setting up of 4 new advanced **Centres Of Excellence** (CoE) & augmentation of existing CoE.
- Setting up of 4 **Common Engineering Facility Centres** (CEFCs) & augmentation of existing CEFCs.
- Augmentation of existing testing and certification centres.
- Setting up of 10 industry accelerators for technology development.

PM-DevINE Scheme

- A new scheme, **Prime Minister's Development Initiative for North-East (PM-DevINE)** was announced during the Budget 2022-23, with an initial investment of Rs 1500 crore.
- The scheme will **fund infrastructure** in the spirit of **PM Gati Shakti and social development projects** based on felt needs of the northeast.
- It will be **implemented through North-Eastern Council (NEC)** and will not be a substitute for existing central or state schemes.
- While the central ministries may also pitch their candidate projects under the scheme, priority will be given to those proposed by the states.
- It will **enable livelihood activities for youth and women**, filling the gaps in various sectors.

- Some of the identified projects under the scheme are:
 - ✓ One-of-a-kind '**Bamboo Link Roads**' in Mizoram to help transport bamboo from forests.
 - ✓ Dedicated services for management of Paediatric and Adult Hemotolymphoid (head and neck) cancers in North East.
 - ✓ North East Centre for Technology Application & Reach (NECTAR) livelihood improvement project.
 - ✓ Promoting scientific organic agriculture in North East
 - ✓ Construction of Aizawl By-pass on Western Side
 - ✓ Gap funding for Passenger Ropeway system for Pelling to Sanga-Choeling in West Sikkim
 - ✓ Gap funding for Eco-friendly Ropeway (Cable Car) from Dhapper to Bhaleydhunga in South Sikkim etc.

North Eastern Council (NEC)

- NEC is the nodal agency for the economic and social development of the North Eastern Region.
- It is a **statutory body** under Union Home Ministry, founded in 1971. The Union Home Minister is the ex-officio Chairman of NEC.
- The eight North Eastern states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura, are members of the council, with their respective Chief Minister and Governors representing them.

{For details on PM Gati Shakti refer The Recitals -October 2021}

400 Vande Bharat Train Sets Announced

- In Budget 2022-23, Finance Minister recently announced the manufacture of 400 Vande Bharat train sets in the next three years.
- The announcement comes in addition to the current plan of running 75 such trains by the Independence Day in 2023. Two Vande Bharat train sets (**originally called Train 18**) are currently running in the country (Delhi-Varanasi and Delhi-Katra)
- The first Vande Bharat was manufactured by the **Integral Coach Factory (ICF), Chennai**, as part of the 'Make in India' programme.

Vande Bharat trains

- It is an indigenously designed and manufactured semi high speed, self-propelled train set that does not require an engine.
- They are based on a propulsion system called **distributed traction power technology**, by which each car of the train set is powered. This technology is increasingly becoming the norm around the world for passenger operations.
- Distributed power gives the train **higher acceleration and deceleration** compared to locomotive hauled trains, which take a much longer time to reach top speed or to gradually come to a halt.
- Due to faster acceleration and deceleration, it can achieve a maximum speed of 160 kmph, reducing journey time by 25% to 45%.
- It also has an **intelligent braking system** with power regeneration for better energy efficiency thereby making it cost, energy and environment efficient.
- The trains have fully sealed gangways for a dust-free environment, modular bio-vacuum toilets, rotating seats in Executive Class, personalized reading lights, automatic entry/exit doors with sliding footsteps, diffused LED lighting, mini pantry and sensor-based interconnecting doors in each coach.



New Train Sets

- Along with internal upgrades, new train sets will be more energy efficient.
- Railways is planning to make several of these train sets with aluminium instead of steel.
- An aluminium body will make each train set around 40-80 tonnes lighter than the current train sets, which will lead to lower energy consumption as well as better speed potential.

Significance

- The current train sets are being made at Rs 106 crore per train set of 16 cars, at 2018 pricing. The future ones will **cost slightly more**, because of different specifications and inflation.
- This carries a potential investment of Rs 50,000 crore over the next three years along with additional employment generation of 10,000-15,000.
- Pumping in around Rs 50,000 crore into the country's **rolling stock industry**, will give a big boost in the sectors of component manufacturing, supplies etc.

Increase in Bond Yields

- Finance Minister said that the government would borrow more from **market** to meet the gap between its income and expenditure. This led to an **increase in the yield on the 10-year benchmark bond** issued by central government.
- Rising crude prices, inflation risks, and signals of interest rate hikes by the US Federal Reserve have also contributed to the increase in bond yields.

Bond Yields

- Across the world, governments sell bonds to raise money to meet their expenditure. These bonds have a selling price and a fixed coupon rate (or the absolute amount of money that people earn).
- Bond yield is the return an investor gets on that bond or on a particular government security.
- For example, consider a 10-year government bond (called Treasuries in the US, Gilts in Britain and G-Secs or government securities in India) is priced at \$100 and the coupon rate is \$5.
- This means that if person buys this bond from the government for \$100 today, the government will pay the person **\$5 each year and return \$100 to the person at the end of 10 years**.
- In this example, the "yield" or the annual rate of return from the bond is 5%, but this yield can change if the selling price of the bond changes.

Change In Bond Yields

- Let us consider above example. Suppose at the start of second year, if investors feel that the prospects of the overall economy are not good, they might start investing in government bonds, as it is the safest form of investment.
- Due to this, the demand for government bonds will increase, which will increase the price of the bond.
- Consider that the price of the same 10-year bond rises by a dollar to \$101. Since the fixed coupon rate is still \$5, the effective return — on an investment of \$101 — that bondholder will get at the end of the second year will be only \$4. This leads to a yield of 3.96% — a fall from the 5% yield bondholders earned in the first year.
- Thus, bond price is inversely proportional to bond yield. With rise in bond price, the yield decreases.

Interest Rates/Inflation And Bond Yields

- There are many domestic and global developments that have an impact on bond yields. Major factor affecting the yield is the monetary policy of RBI, especially interest rates & inflation.
- Inflation and interest rates are in turn affected by various other factors such as economic growth, sovereign rating, money supply, government borrowing, global liquidity and geopolitical developments.

A fall in interest rates in the economy leads to an increase in bond prices and bond yields fall. Similarly, rising interest rates cause bond prices to fall, and bond yields to rise. ***Thus bond yields are directly proportional to interest rates.***

Equity Markets And Bond yields

- Traditionally, when bond yields go up, investors pull out their investments from stocks and invest that money into bonds, as they are much safer.
- In essence, this means investors consider lending to the Indian government a better alternative than lending to the Indian firms via the stock markets.

Therefore, generally bond yields are inversely proportional to equity returns (returns from stock markets).

- When bond yields decline, returns from equity markets tend to grow, and when bond yields rise, equity market returns tend to fall.
- Also, a rise in bond yields raises the borrowing cost for companies, which in turn reduces the valuations of their stocks.

Bond Yield And Foreign Portfolio Investment (FPI)

- When bond yields rise, the RBI has to offer higher yield to investors. This means borrowing costs will increase at a time when the government plans to borrow money from the market.
- Besides, as government borrowing costs are used as the benchmark for calculating loans to businesses and consumers, any increase in yields will increase the borrowing cost in the overall economy.
- Bond yields play a big role in FPI flow. Traditionally, when bond yields rise in the US, FPIs move out of Indian stock market.
- A higher return on treasury bonds in the US, leads investors to move their funds from risky emerging market investments to the US Treasury, which is the safest investment instrument.

Decline in Forex Reserves

- The RBI reported a decline of \$678 million in the country's forex reserves. The recent decline is primarily due to a **drop in the foreign currency assets (FCA)**, a vital component of the overall reserves.
- India's forex reserves had hit a lifetime high of **\$642.453 billion** in September, 2021.

Foreign Exchange Reserves

- Foreign exchange reserves or forex reserves include assets held by a central bank in foreign currencies as a reserve. These may include



- The reserves in India are managed by RBI for Indian government.
- **Reserve Bank of India Act, 1934** and the **Foreign Exchange Management Act, 1999** set the legal provisions for governing the forex reserves in India.

Significance Of Forex Reserves

- High forex reserves help the government and the central banks in managing external and internal financial issues.
- They help to support and maintain confidence in monetary policy action or any exchange rate intervention to support the domestic currency.

In exchange rate intervention, the RBI sells dollar when the rupee weakens and buys dollar when the rupee strengthens.

- It also helps to limit any vulnerability because of a sudden disruption in foreign capital flows, which could happen during a crisis, and gives the confidence that the country's crucial imports can be supported.
- It also assists the government in meeting its external debt obligations and maintain a reserve for national disasters or emergencies.

Components Of India's Forex Reserves



Foreign Currency Assets

- This is the largest component of the forex reserves consisting of **US dollar and other major non-US global currencies**.
- Additionally, it also comprises investments in US Treasury bonds, bonds of other selected governments, deposits with foreign central and commercial banks.

Gold

- Gold reserve is the gold held by RBI with the intention to serve as a guarantee to redeem promises to pay depositors, note holders (e.g. paper money), or trading peers, or to secure a currency.

Special Drawing Rights (SDRs)

- Special drawing rights (SDR) refer to an international type of monetary reserve currency created by the International Monetary Fund (IMF) in 1969 that operates as a supplement to the existing money reserves of member countries.
- SDRs are allocated by the IMF to its member countries and are backed by the full faith and credit of the member countries' governments.
- The value of the SDR is calculated from a **weighted basket of major currencies**, including the U.S. Dollar, the Euro, Japanese Yen, Chinese Yuan, and British Pound.

{For more about SDR, refer The Recitals – Sept' 2021}

Reserve Tranche Position

- The primary means of financing IMF is through members' quotas. Each member of IMF is assigned a quota, **part of which** is payable in SDRs or specified usable currencies ("reserve assets"), and **part in the member's own currency**.
- The difference between a member's quota and IMF's holdings of its currency is a country's Reserve Tranche Position (RTP).

It is basically an emergency account that IMF members can access at any time without agreeing to conditions or paying a service fee. In other words, a portion of a member country's quota can be withdrawn free of charge at its own discretion.

- The reserve tranches that countries hold with the IMF are considered their facilities of first resort, meaning they will tap into them before seeking formal credit that charges interest.

National Single Window System

- Jammu & Kashmir has become the **first Union Territory** to be onboarded on the National Single Window System (NSWS). Currently, 14 States/UTs are on board NSWS.
- NSWS is linked with **India Industrial Land Bank (IILB)** which hosts 45 industrial parks of J&K. It will help investors to discover available land parcels in J&K.

NSWS

- An investment proposal typically requires a bunch of approvals and clearances across various states and government departments.
- Launched in 2021, NSWS is a **digital platform** that serves as a guide for investors and businesses to identify and to apply for approvals as per their business requirements.
- **Services on the portal** include: know your approval (KYA), common registration form, state registration form, document repository, and e-communication.
- By now, **20 Ministries/Departments** have been integrated on NSWS and around 142 central approvals can be applied through the NSWS portal.
- Thus, the NSWS eliminates the need for investors to visit multiple platforms/offices to gather information and obtain clearances from different stakeholders
- In doing so, it aims to become a one-stop shop for approvals and clearances and help to improve transparency, accountability and responsiveness in the ecosystem. This would not only enable ease of doing business but also ease of living.

The **India Industrial Land Bank (IILB)** is a GIS-based portal - a one-stop repository of all industrial infrastructure-related information – connectivity, infra, natural resources & terrain, plot-level information on vacant plots, line of activity, and contact details. Currently, the IILB has approximately 4000 industrial parks mapped across an area of 5.5 lakh hectare of land, serving as a decision support system for investors scouting for land remotely. The system has been integrated with industry-based GIS systems of 17 states to have details on the portal updated on a real-time basis.

Fintech Open Hackathon

- **NITI Aayog** in association with **PhonePe** has launched the first-ever open-to-all Fintech Open Hackathon that aims to showcase path-breaking solutions for the Fintech ecosystem.
- The Hackathon will provide an opportunity for innovators, digital creators and developers from all over India to think, ideate and code.
- Participants at the hackathon need to use any open-data APIs (Application Programming Interface) along with frameworks such as **Account Aggregator** as a foundation to power the following use cases:
 - ✓ Alternate risk models for lending, insurance or investments with focus on financial inclusion
 - ✓ Innovative products for various demographics and geographies for broader adoption of financial services
 - ✓ Improved visualisation and derived intelligence based on the digital payments data
- Participants can use data sources like PhonePe Pulse, Open Government Data Platform, Setu AA Sandbox or Setu Payments Sandbox, RBI reports on payments to build on their submission.
- By the end of the event, participants will be required to present a working prototype of their hack. Winning teams stand to win cash prizes worth Rs 5 lakhs.

Fintech

- Financial technology (Fintech) is used to describe new technology that seeks to **improve and automate the delivery and use of financial services**.
- When fintech emerged in the 21st Century, the term was initially applied to the technology employed at the **back-end systems** of established financial institutions. Since then, however, there has been a shift to more consumer-oriented services.
- Fintech now includes different sectors and industries such as education, online banking, mobile payment apps, fundraising and non-profit, investment management and even cryptocurrency.

API

- An API is a connection between computers or between computer programs. It is a type of software interface, offering a service to other pieces of software.
- In contrast to a user interface, which connects a computer to a person, an API connects computers or pieces of software to each other.
- It is not intended to be used directly by a person (the end user) other than a computer programmer who is incorporating it into software.

Angadia System

- An FIR has been registered against three Mumbai Police officials for allegedly threatening Angadias and extorting money from them.
- The Angadia system is a **century-old parallel banking system** in the country where traders send cash generally from one state to another through a person called Angadia that acts as a courier. The Angadia charges a nominal fee for it.
- It is predominantly used in the jewellery business with Mumbai – Surat being the most popular route as they are two ends of the diamond trade.
- The Angadia system works completely on trust as large sums, at times in crores, are involved. As Angadias carry large quantities of cash, it makes them targets of robbery.

Legality Of The System

- Although Angadia system is legal, it is suspected that it is also used to transfer unaccounted money.
- Since the business deals in cash and there is no account maintained, it may also be used for transfer of black money like the hawala transaction which is generally used across countries.

Kisan Drones

- Prime Minister has recently launched **100 Kisan Drones** in different cities and towns of the country. He also flagged off "Drone Kisan Yatra" to promote chemical-free farming in India.
- Drones were mostly associated with the defence sector until a few years ago. However, recent policy relaxations and incentives, including proposal in the Union Budget 2022-23, has opened up India's vast agriculture sector for commercial use of drones, or unmanned aerial vehicles.
- For example, a government incentive provides grants that make ownership of farm drones virtually cost-free for state-run institutions.

Kisan Drones

- Kisan drones will have an unmanned tank filled with insecticides and nutrients and are expected to have a high capacity of 5 to 10 kg.
- The drone will spray the same amount of pesticide on about one acre of land in just 15 minutes. This saves time, require less effort and spraying will be done uniformly.
- They will be used to carry vegetables, fruits, fish, etc. to the markets from the farms, with minimal damage, consuming lesser time and resulting in more profits to farmers.
- They will also be promoted for crop assessment and digitization of land records.
- Government has recently banned the import of drones to encourage their manufacturing in India.
- A target has been set for manufacturing 1 lakh Made-in-India drones in the next 2 years. This will generate fresh employment and new opportunities for the youth.

Extension of IFLDP

- **Indian Footwear and Leather Development Programme (IFLDP)** has been approved for continuation with a financial outlay of Rs 1,700 crore.
- IFLDP, earlier known as Indian Footwear Leather and Accessories Development Programme (IFLADP) has been approved for continuation till March 2026, or till further review, whichever is earlier.
- Earlier, IFLADP was announced for three financial years (2017-18 to 2019-20).

IFLDP

- It is a **Central Sector Scheme** that aims at development of infrastructure for the leather sector, address environmental concerns specific to the leather sector, facilitate additional investments, employment generation and increase in production.
- **Sub-schemes** approved under the programme include:



- Development of design studios is a new sub-scheme and it would promote marketing/export linkages, facilitate buyer- seller meets, display designs to international buyers and work as interface for trade fairs.
- Under the IDLS, assistance would be provided to the sectoral units for their modernization/capacity expansion/technology up-gradation.

Impact Of The Programme

- It has a direct benefit towards quality employment generation (especially for women), skill development, decent work, making the industry more environment friendly and prompting sustainable production system.
- Leather clusters located in different parts of the country have benefited in terms of reduction of poverty, gender equality, sector specific skill/education, etc., thus touching many of the SDGs.

Surety Bonds

To boost private sector capital expenditure in infrastructure, the Budget has allowed the use of surety bonds as a substitute for bank guarantee in government procurements.

Need For Surety Bonds

- A contract requires the developer to provide various bonds during the life cycle of a project, which together may account for up to 20% of the total project cost.
- Currently, 100% of the guarantee requirements for infrastructure sector are catered to by banks. These guarantees are an inefficient way of doing business as they block a lot of working capital from a contractor.

Surety Bond

- It is a **legally binding tripartite agreement** signed between the **principal, obligee and the surety**.
- Simply put, the surety is provided by an insurance company on behalf of a principal or contractor to the obligee or government entity awarding the project.
- When a principal breaks a bond's terms, the harmed party can make a claim on the bond to recover losses.
- Surety bonds are a favoured financial instrument in several developed western economies.

Advantages	Issues With Surety Bonds
<ul style="list-style-type: none"> • Since contractors do not have to offer collateral money in surety bonds, it will <u>help to reduce indirect cost for suppliers and work contractors</u> which can help them to participate in other projects at the same time. • It can <u>reduce the initial project cost and improve the overall project viability</u> by reducing the risks due to cost 	<ul style="list-style-type: none"> • According to insurance experts, surety bonds are risky and <u>insurance companies in India are yet to achieve expertise in risk assessment</u> in such business. • There is <u>no clarity on pricing, the options available against defaulting contractors</u>

<p>overrun, project delays and poor contract performance.</p> <ul style="list-style-type: none"> • Surety bonds tend to be <u>in force for the life of the project</u>, while bank guarantees have to be renewed periodically. • More importantly, bank guarantees are <u>unconditional and payable on demand</u>, while surety bonds can be <u>reimbursed like an insurance policy</u> if the claim is valid. • Adoption of surety bonds will <u>result in enhanced participation by contractors</u> in project bids <u>resulting in more efficient price discovery</u>. 	<p>and <u>whether surety bonds will get the required reinsurance support</u>.</p> <ul style="list-style-type: none"> • Thus, the use of surety bonds as a substitute for bank guarantees is likely to take time for implementation by the insurance industry.
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IRDAI Guidelines

- The IRDAI (Surety Insurance Contracts) Guidelines, 2022 will come into effect from April 1, 2022.
- The insurers will be required to have a board-approved underwriting philosophy for surety insurance business.
- Surety Insurance Contracts may be offered to infrastructure projects of government/private in all modes.
- The surety contracts will include advance payment bond, bid bond, contract bonds, customs and court bond, performance bonds and retention money.
- Surety insurance contracts shall be issued only to specific projects and *not clubbed* for multiple projects. Also, the limit of guarantee should not exceed 30% of the contract value.
- Premium charged for all surety Insurance policies underwritten in a financial year, including all instalments due in subsequent years for those policies, should **not exceed 10% of the total gross written premium** of that fiscal, subject to a maximum of **₹500 crore**.
- Further, the contracts should not be issued where the underlying assets or commitment are outside the country.

Ayush Start-up Challenge

- **All India Institute of Ayurveda (AIIA)**, in association with **Startup India**, has launched **Ayush Start-up Challenge** to encourage start-ups and individuals working on innovations in the field of Ayurveda and alternative healing.
- The initiative aims to not just identify promising start-ups and reward them, but also provide them incubation support through guidance and skill development. This will help these start-ups realize their next phase of growth.
 - ✓ Cash prize of Rs. 1 lakh for the winner and Rs. 50,000 for the runner-up.
- Both early-stage start-ups as well as individuals as a group can participate.
- There are three entry categories for participating start-ups – Ayush Food Innovations, Ayush Bio-instrumentation (Hardware solutions) and Ayush IT Solutions (Software solutions).
 - ✓ There will be two winners in each of the 3 categories.

Ayush Market

- It is currently estimated to be around \$10 bn and it is projected to see a 50% increase over the course of the next five years.
- The sector offers massive potential for exponential growth at a time when there is growing global interest in the field of alternative medical practices.

Expansion Of The Ambit Of National Commission Of Women

Prime Minister emphasised the need to broaden the **ambit** of National Commission of Women. He focused on to promote women entrepreneurs in the Country.

Key Point of PM's Speech

- Women participation in growth cycle of India is on rise.
- Strength of self-help group has increased by three times in the past six or seven years.
- Women commissions must ensure the increase women's role in entrepreneurship.

National Commission of Women (NCW)

- The **Committee On Status Of Women In India** recommended the establishment of NCW.
- Formed under the National Commission of women Act 1990, it is a **statutory body** of Government of India, which advises the government on all policy matters affecting women.
- The commission provides financial assistance to NGOs and educational institutions that conduct legal awareness programs to help women become more aware of their rights.
- The commission constitute Chairperson designated by Central Government and five nominated members by Central Government.
 - ✓ At least one member from SC and ST shall be nominated by the Central Government.
- The Chairperson and every member shall hold office for such a period, not exceeding **three years**, as may be specified by the Central Government. The maximum age till Chairperson can remain in office is **65 Years**.
- The NCW **submits its report to Central Government**.

Dilution Of Lokayukta Power In Kerala

- Kerala Cabinet has recommended to the Governor to promulgate an ordinance amending Kerala Lok Ayukta Act, 1999.
- The amendment aims at giving powers to the government to either **accept or reject** the verdict of the Lokayukta, after **giving an opportunity of being heard**.

Concerns Regarding Proposed Amendment

- By this ordinance, the quasi-judicial institution will become **toothless**.
- It will reduce the power of the institution to only **recommendations or sending reports**.

Lokayukta

- **Section 3 of the Lokayuktas Act 2013** states that "Every state shall establish a body to be known as the Lokayukta for the State, if not so established, constituted or appointed by a law made by the State Legislature.
- Given that states have autonomy to frame their own laws, the Lokayukta's powers vary from state to state on various aspects, such as tenure, and need of sanction to prosecute officials.
- It is statutory body and performs function of an **ombudsman**.

The Lokpal and Lokayuktas Act, 2013

- It provides for establishing a Lokpal headed by a Chairperson, who is or has been a **Chief Justice of India**, or is or has been a **judge of Supreme Court**, or an **eminent person** who fulfills eligibility criteria as specified.
- Of its other members, not exceeding eight, **50% are to be judicial members**, provided that not less than

50% belong to the SCs, STs, OBCs, minorities, or are women.

- The term of office for Lokpal Chairman and Members is **5 years or till the age of 70 years.**
- The members are appointed by the **President** on the recommendation of a **Selection Committee**, which comprises Prime Minister as its Chairperson; Speaker of Lok Sabha, Leader of Opposition in Lok Sabha, Chief Justice of India or a Judge nominated by him/her and One eminent jurist.
- **Lokpal jurisdiction:** To inquire into allegations of corruption against anyone who is or has been Prime Minister, or a Minister in the Union government, or a Member of Parliament, as well as officials of the Union government under **Groups A, B, C and D.**
 - ✓ Covers chairpersons, members, officers and directors of any board, corporation, society, trust or autonomous body either established by an **Act of Parliament** or **wholly or partly funded by Centre.**
 - ✓ Covers any society or trust or body that receives **foreign contributions above Rs10 lakh.**
- The Lokpal was appointed in March 2019 and it started functioning since **March 2020** when its rules were framed.
- The Lokpal is at present headed by former Supreme Court **Justice Pinaki Chandra Ghose**

In order to tackle corruption, the institution of the ombudsman should be strengthened both in terms of functional autonomy and availability. Lokayuktas should set up on the line of the Lokpal.

Private Sector Quota Law

Punjab and Haryana High Court has stayed a law that reserves 75% of jobs for people from Haryana in private establishment across the state.

Key Points Of Law

- The law provides for 75% reservation in private sector jobs to those having a resident certificate (domicile).
- The law is applicable for ten years.
- Jobs with a gross monthly salary of not more than Rs 30,000 will be up for hiring from among local candidates.
- It aims to create right balance between industries and the economy.

{For complete analysis on Reservation in Private sector, refer The Recitals – Sept’ 2021}

Freebies By Political Parties

The Supreme Court sought responses from Union government and Election Commission of India (ECI) on political parties promising or distributing irrational freebies using public funds.

Background

Political parties promise to offer free electricity/water supply, monthly allowance to unemployed, daily wage worker and women as well gadgets like laptops, smart phones etc. in order to secure the votes of the people.

Arguments Against Freebies	Arguments In Favor Of Freebies
<ul style="list-style-type: none"> • Arbitrary promises of irrational freebies are a violation of the ECI’s mandate for free and fair election. • The Supreme Court has also, in S Subramaniam Balaji vs Government of Tamil Nadu 2013, stated that unrealistic poll promises and freebies are a serious issue that disrupts the free and fair election. • Distributing private goods-services, which are not for public purposes, from public funds clearly violates 	<ul style="list-style-type: none"> • Essential for Fulfilling Expectations: There are expectations from the part of people which are met by such promises of freebies. Moreover, there are also comparative expectations when the people of the adjoining/other states (with different ruling parties) get freebies. • Helps Lesser Developed States: With a larger

constitution Article 14 (equality before law), Article 162 (executive power of a state), Article 266(3)(expenditure from the consolidated Fund of India), and Article 282 (Discretionary grants).

share of the population suffering from poverty, such kind of freebies become need/demand-based and it becomes essential to offer the people such subsidies for their own upliftment.

Way Forward

- **Differentiating Subsidies and Freebies:** There is a need to understand the impacts of freebies from the economic sense and connect it with the taxpayers money. It is also essential to distinguish between subsidy and freebies as subsidies are the justified and specifically targeted benefits that arise out of demands
- **Better Policy Reach:** The economic policies or development models that the parties plan to adopt have to be very clearly stated and implemented effectively
- **Judicious Demand-Based Freebies:** The judicious and sensible offering of freebies or subsidies that can accommodate all the people in the states' budget do not do much harm and can be leveraged.
- **Awareness:** People should realize the wrong they do in selling their votes for freebies.

Digital Sansad App

- The Lok Sabha secretariat has launched a new app called Digital Sansad.
- It will make it easier for people as well as the lawmakers to follow proceedings in Parliament.
- **Live broadcast** of the proceedings of both the Houses of Parliament, information about the **day-to-day business** of the Houses, **discussion on the budget since 1947, House discussions from 12th Lok Sabha to 17th Lok Sabha** along with the letter to be laid on the Table of the House are also available on the app.
- In addition, it will also help members of parliament access services such as checking **personal updates** like status of their notices, House bulletins, etc.
- As MPs are barred from using laptops inside the House, the app comes handy for parliamentary information for MPs during a debate in the House.
- In future, the MPs can log in for attendance, give questions for the Question Hour or submit notices for debates or adjournment motions.

Section 498 (A) Misuse

Supreme Court has highlighted the growing misuse of **section 498A of IPC** with the rising clash in marriages. It is observed by the Court that there is increased use of provision such as section 498A IPC as an instrument against the husband and his relatives.

Section 498 (A)

- Section 498 (A) of IPC 1860 was passed by the Indian Parliament in **1983**.
- It is a **criminal law**. It is defined that if husband or the relative of the husband of a woman, subjected such woman **towards cruelty**, then they would be punished with imprisonment for term which might extend to 3 years and may be liable for fine.
- The fact that Section 498-A is a **cognizable and non-bailable offence** has lent it a place of one of progressive rescue for **violence against woman**. However, it is important to stop the misuse of procedure of law and use this provision to shield and not as weapon.

Acts of Domestic Violence

Physical violence

Sexual violence

Emotional (psychological) abuse

Controlling behaviors

How Section 498A is Misused

- **Against Husband & Relatives:** With the rise in the rate of education, financial security, and modernization, the more independent and the radical feminists have made Section 498A of IPC as a weapon in their hands than a shield.
 - ✓ Police often visit the office premises of men in order to shame them and jeopardize their job situation. Police also pick up relatives of men who are not even named in the complaint, they are illegally detained by police and forced to give their statements.
 - ✓ Judges grant interim bail and then keep on extending the bail for every 5 or 7 days and thus the man is neither arrested nor free but keeps on attending court dates without any reason
- **Blackmail Attempts:** In most cases the Section 498A complaint is generally followed by the demand of a huge amount of money to settle the case outside the court.
- **Degradation of Marriage:** Women have begun misusing Section 498 of IPC as a tool for their vengeance or to get out of wedlock.
- **Malimath Committee Report, 2003:** Similar views were also expressed by the Committee report on reforms in the criminal justice system. It noted that the "general complaint" of Section 498A to be a subject to gross misuse.

Television Content Regulation

Information and broadcasting Ministry (I&B) **cancelled broadcast license** of Malayalam- language news channel through an order. The order mentioned that **Home Ministry** denied security clearance to the channel.

Background

Union Government amended the Cable Television Network Rules, 1994. The amendment brings in a statutory mechanism in the form of **Cable Television Networks (Amendment) Rules, 2021** for three tier redressal of grievances /complaints of citizens

- A viewer can successively approach the channel, then a self-regulatory body of the industry, and finally the I&B Ministry, which can issue a show cause notice to the channel, and then refer the issue to an Inter-Ministerial Committee (IMC).
- For content on OTT platforms too, there is a similar structure.

Power of I&B

- In Feb' 2021, the **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021** extended its regulatory powers over internet content, Over the top platform ("OTT") etc.
- **Films Related: Central Board of Film Certification (CBFC)** has power to withhold a rating unless the filmmaker agrees to its suggestion. While it isn't the CBFC's mandate to censor a film
- **TV channels related:** The Ministry also has the **Electronic Media Monitoring Cell** that tracks channels for any violations of the programming and advertising codes mentioned in the **Cable TV Network Rules,1994**.
- **Print Media and Website Related:** The Ministry acts on the recommendation of **Press Council of India**, the government can suspend its advertising to a publication.

Freedom of speech and expression is not absolute. It is important to have proper implementation of rules and regulation on contents creation. The content on any of these platforms has to follow the free speech rules of the country. Article 19(1) of the Constitution, while protecting freedom of speech, also lists certain "reasonable restrictions" including content related to:

security of state

Friendly relationship with foreign states

Public order

Decency

Morality etc

Do Other Agencies Play a Role

- There is **no direct involvement**, as the powers to regulate content rest only with the I&B Ministry. However, the Ministry relies on **inputs from other ministries, as well as intelligence agencies**.
- For Example: In the recent case, the license was revoked because Home Ministry had denied it security clearance, which is essential as part of the policy.
- There is also a new mechanism the I&B Ministry adopts: It has used emergency powers it has under the new IT Rules to block certain **YouTube channels and social media accounts** based on inputs from intelligence agencies. The recourse available to anyone whose channel or account has been banned would be to go to the courts.

Central Media Accreditation Guidelines-2022

- Recently, the Central government has released the Central Media Accreditation Guidelines-2022.
- Applications for accreditation are vetted by a **Central Press Accreditation Committee** headed by **DG, PIB**.
- At present, there are 2,457 PIB-accredited journalists in the country.

Provisions Under Guidelines

A. Provisions to Withdraw/Suspend Accreditation:

- If a journalist acts in a manner prejudicial to the country's security, sovereignty and integrity, friendly relations with foreign States, public order or is charged with a serious cognisable offence.
- If actions are prejudicial to decency, or morality, or in relation to contempt of court, defamation or incitement to an offence.
- Accredited media persons have been prohibited from using the words "Accredited to the government of India" on public/social media profile, visiting cards, letter heads or on any other form or any published work.

B. Provisions for Granting Accreditation:

- Accreditation is only available for journalists living in Delhi NCR region. There are multiple categories. A journalist needs to have a minimum five years' professional experience as a full-time working journalist or a cameraperson in a news organisation, or a minimum of 15 years as a freelancer to become eligible.
- Veteran journalists, with over 30 years of experience, and who are older than 65 years of age, too are eligible.
- A newspaper needs to have a minimum daily circulation of 10,000, and news agencies must have at least 100 subscribers. Similar rules apply for foreign news organisations and foreign journalists.
- Journalists working with digital news platforms are also eligible, provided the website has a minimum of 10 lakh unique visitors per month.
- No accreditation will be granted to freelance journalists working for foreign news media organisations.

C. Central Media Accreditation Committee (CMAC):

- The Government shall constitute a Committee called the CMAC. The Committee will be chaired by the Principal Director General, PIB and composed of up to 25 members nominated by the government to discharge the functions laid down under these guidelines.
- The CMAC would function for a period of **two years** from the date of its first meeting and shall meet once in a quarter or more frequently, if necessary

The guidelines leave it to the **discretion of government nominated officials** to assess what is defamatory or prejudicial to the sovereignty or integrity of India while deciding on whether a journalist's accreditation should be suspended or withdrawn

Press Council of India

- It is statutory organization formed in 1966.
- It is operated under the Press Council Act 1978

Anti-Conversion Bill 2022

Haryana Cabinet approved the draft of Haryana Prevention of Unlawful Conversion of Religious Bill 2022. It is aimed to prohibit religious conversion that are forceful or allurements or by any fraudulent.

Provision Of The Bill

- The bill provides for greater punishment for above mentioned conversions in respect of minors, women, Schedule caste and Schedule tribe.
- Every individual converting from one religion to another has to submit to the prescribed authority a declaration that the conversion affected through was not by any fake means.
- The burden of proof that conversion is not being through above mentioned means is on the accused.

Existing Laws on Anti Conversion

There is no central law on conversion. However, many states like Uttar Pradesh, Arunachal Pradesh, Karnataka, Uttarakhand, Himachal Pradesh, Gujarat, Madhya Pradesh, Orissa Chhattisgarh have anti conversion laws.

{For more on religious conversion refer topic "Karnataka Passes Anti-Conversion Bill" in The Recitals – Dec' 2021}

Fundamental Duties

Supreme Court has issued a notice to the Centre and states to respond to a petition **to enforce** the Fundamental Duties of citizens, including patriotism and unity of the nation, **through comprehensive, well-defined laws.**

Fundamental Duties

- Fundamental Duties were incorporated by **44th Constitutional Amendment Act** in the year **1976** on the recommendation of **Swaran Singh Committee**.
- There were 10 in number. In 2002 one more Fundamental duty was added through 86th Constitutional amendment Act.
- Unlike fundamental rights, fundamental duties are **not enforceable (non-justiciable)** in Courts.
- It is intended to be reminder to every citizen to observe certain basic norm.
- The characteristic of Fundamental Duty is of two types - moral and civic.

Laws To Give Effect To Fundamental Duties

- **Prevention of Insult to National Honour Act (1971)** prevents disrespect to the constitution of India, the National Flag and the National Anthem.
- **Wildlife Protection Act and Forest Conservation Act 1980.**
- **Right to Education Act 2009** specifies the duties and responsibilities of parents in providing free and compulsory education.

Need to Legally Enforce Fundamental Duties

- In erstwhile Soviet Union Constitution, the rights and duties were placed on the **same footing**.
- There is a pressing need to enforce and implement at least some of the fundamental duties. For instance, to uphold and protect sovereignty, unity and integrity of India, to defend the country and render national service when called upon to do so and to disseminate a sense of nationalism and to promote the spirit of patriotism to uphold the unity of India.
- These fundamental duties assume significance after the **emergence of China** as a superpower.

Supreme Court's Previous Stand on Fundamental Duties

**Ranganath
Mishra
judgment
2003**

- SC held that fundamental duties should not only be enforced by legal sanctions but also by social sanctions.

**AIIMS
Students
Union v.
AIIMS 2001**

- SC held that fundamental duties are equally important like fundamental rights.
- Though fundamental duties are not enforceable like fundamental rights they cannot be overlooked as duties in Part IV A.

Rights and Duties are correlative and the violation of one lead to the violation of the other. It is important to maintain a healthy balance between legal enforcement of Fundamental duties and liberties of citizens.

First Information Report

First Information Report (FIR) is the **written** document prepared by the Police after verifying the facts of the complaint.

Key Point of First Information Service

- The term FIR is **not defined** in the Indian Penal Code (IPC), Code of Criminal Procedure (CrPC), 1973, or in any other law. It is defined in **Police regulations and rules** as Information recorded under section **154 of CrPC**.
- Section 154 (Information in **cognizable cases**) says that "every information relating to the commission of a cognizable offence, if given on to an officer in charge of a police station shall reduce to writing by him or under his direction".
- A copy of the information as recorded shall be given forthwith, free of cost to the informant.

Important Element of an FIR: There are three important elements of an FIR

- The information must relate to the commission of a cognizable offence.
- It should be given in writing or orally to the head of the Police station.
- It must be signed by the informant and the key points should be recorded in a daily diary.

Cognizable Offence

A cognizable offence is one in which the police may arrest a person without warrant. Police is authorised to start investigation into a cognizable case on their own and do not require any order from the Court to do so.

What If The Police Refuse To Register An FIR

- Under Section 154(3) CrPC, if any person is aggrieved by the refusal on the part of the officer in charge of a police station to register an FIR, she can send the complaint to the Superintendent of Police/DCP concerned.
- Who, if satisfied that such information discloses the commission of a cognizable offence, will either investigate the case, or direct an investigation by a subordinate police officer.
- If no FIR is registered, the aggrieved persons can file a complaint under Section 156(3) CrPC before a concerned court which, if satisfied that a cognizable offence is made out from the complaint, will direct the police to register an FIR and conduct an investigation.

Zero FIR

- If a police station receives a complaint regarding alleged offence that has been committed in the jurisdiction of another police station, then it registers Zero FIR and transfers it to the concerned police station for further investigation.
- No regular FIR number is given. After receiving Zero FIR, the concerned police station registers a fresh FIR and starts the investigation.

Legislation for Refugees

NHRC had a discussion on Protection of the basic human rights of refugees and asylum seekers in India

Highlight of Discussion

- Refugees and asylum seekers are entitled to the rights charted in Article 14 (Right to Equality), Article 20 (Protection with respect to conviction of offenses), and Article 21 (Right to Life) of the Constitution.
 - ✓ Article 21 encompasses the **right of non-refoulement**, the principle under international law which states that a person fleeing persecution from his own country should not be forced to return to his own country.
- NHRC has drafted model law on asylum and refugees a decade ago but was never implemented by Government.

Need of Refugees Law

- The influx of refugees in India is huge and India is considered a country that has always taken refugees. E.g Tibetan Refugees, refugees from Afghanistan so it is logical to make legislation to deal with it.
- Due to absence of law, intermixing of refugees and migrant has created haphazard situation.
- India requires long term practical solution to shift from charitable approach to a rights-based approach by enacting a national refugee law.
- A national refugee law will streamline refugee status determining procedures.
- It will guarantee refugees with basic human rights.

Concerns Regarding Refugees in India

- India has not signed the **1951 Refugee Convention** which leads to legal insecurity of refugees' status and difficulty to access in terms of refugee rights.
- Due to the absence of specific laws, refugees and asylum seekers are regulated under the **Foreigners Act, 1946**. As a result, these people are treated similar to tourist, illegal immigrants, and economic immigrants.
- Absence of uniform law leads to unequal treatment towards refugee groups. This is reflected in how refugees from Tibet are well received compared to refugees from Myanmar in India.
- Incoming refugees are treated based on their national origin and political considerations, questioning the uniformity of rights and privileges granted to refugee communities as per the international human rights conventions and UN treaties.

National Human Right Commission

- It is statutory body established in 1993.
- It has four members with a chairman who has to be a retired Chief Justice of India.

Laws for Refugees and Asylum seekers would give legal sanctity and uniformity, ensuring the protection of Human rights.

Refugee	Asylum Seeker	Migrant
Refugee is a person who has fled his / her country due to risk of serious human right violations and persecution there. E.g Rohingya Refugees	An asylum-seeker is a person who has left their country and is seeking protection from persecution and serious human rights violations in another country. E.g Dalia Lama in 1959 An asylum seeker is someone who is seeking international protection but whose claim for refugee status has not yet been determined.	Migrants are people staying outside their country of origin who are not refugees or asylum seekers. Migration can be legal or illegal. Illegal migration is bunched with Refugees. E.g Bangladesh migrants

Supreme Court Stand on Refugee

- In the absence of refugee law in India, SC has interpreted the word "person" in the Article 21 of the Constitution in an unprecedented judicial tradition.

- According to the judicial interpretation of the SC, the term “person” also includes non-citizens.
- In cases of **Khudiram Chakma v. State of Arunachal Pradesh**, and **National Human Rights Commission v. State of Arunachal Pradesh**, the SC held that “all the refugees living in India have the right to life and the personal liberty” as enshrined in Article 21 of the Constitution of India.
- The ‘state is obligated to protect the life and freedom of each, be a citizen or otherwise, and it cannot permit individual or group of individuals to threaten the refugees, to leave.

Importance of Caste Data

SC upheld the 27% quota for OBC in the All-India quota seats for the NEET and ruled that reservation for backward classes were not an exception but an extension of the principle of equity under Article 15(1) of the constitution.

Background

Reservation system has been introduced to do away with historical injustice. Reservation and quota system in India was introduced by during British period. The first socio-economic caste census (SECC) in India was conducted in 1931 along with census. The 2nd and latest SECC was conducted in 2011 was conducted.

Need of SECC

- **Lack of data on OBC:** Even though data concerning the Scheduled Castes and Scheduled Tribes have been included in the Census, there is no similar data on OBCs.
- SECC provides statistical justification for **caste based affirmative actions**.
- Legal imperative to have quantifiable data as per the judgment of the SC in Indira Swahney Case and M. Nagaraj Case.
 - ✓ In the Indra Sawhney case, the Supreme Court held that the States must conclude the “backwardness” of a particular class of people only after proper assessment and objective evaluation. It held that such a conclusion must be subject to periodic review by a permanent body of experts.
 - ✓ The National Commission for Backward Classes Act, 1993 provides under Section 11 that the Central government may every 10 years revise lists with a view to exclude those classes which have ceased to be backward and include new backward classes. This exercise has not been done to date
- It will enable independent research and help in identifying poor households and devising positive actions.

Concerns Regarding SECC

- Calls for caste data in Census: Last year, many calls were made for the inclusion of caste data (including that of the OBCs) in the 2021 Census, and the matter reached the Supreme Court.
- However, the government took the stand that the 2011 SECC was “flawed” and is “not usable”.
- The government did not add caste data in this census due to ‘practical difficulties’.
- Reliability of data is a concern. It may compromise the integrity of census data.
- Differences with regard to objective of census and SECC. In the former data are considered confidential and in the later data are open for use by government departments.

{For more on Caste Census refer The Recitals – Sept’ 2021}

Suggestions For Improving The System Of Reservation

- Socio-economic mapping on continuous basis and a dynamic reservation system so that the most disadvantaged section could get benefit of reservation system.
- Capping the benefit of reservation for privileged section within the backward classes.
- The focus should be on education system at grass root level to empower weaker section of the society.

A careful and reliable exercise of SECC will be an important step for uplifting the most backward classes from its shadow of caste and class politics. It will also help in bridging the current divide that has been created due to misuse or the perceived misuse of reservation.

PM Care Schemes for Children

Centre Government has extended the PM Cares for Children Scheme till 28th February 2022. The scheme was launched in May 2021 to support the children who lost both parents or surviving parent(s), legal guardian/adoptive parents or single adoptive parent to Covid 19.

Features of Scheme

- The scheme offers a corpus of Rs. **10 Lakh** to each of these children from PM CARES fund.
- This corpus will be used to **give monthly stipend from 18 years of age** for the next five years and on reaching the age of 23 years, he or she will get the corpus amount as one lump-sum for personal and professional use.
- The education expenses of younger children are supported by way of admission to Kendriya Vidyalayas and private schools up to higher secondary level.
- These children are also supported during their higher education through either a scholarship equivalent to the tuition fees or educational loans where the interest on the loan will be paid by the PM-CARES fund
- All children will be enrolled as a beneficiary under **Ayushman Bharat Scheme** with a health insurance cover of Rs. 5 lakh. The premium amount will be paid by PM-CARES till a child turns 18.

PM-CARES Fund

- It is set up by to deal with any kind of emergency or distress situation posed by Covid – 19 pandemics.
- The fund is a **public charitable trust** with the Prime Minister as its chairman. Other members include Defence Minister, Home Minister and Finance Minister.
- Contribution to PM- CARES Fund Qualifies as CSR (Corporate Social Responsibility) expenditure.

Summoning of State Assembly

- State Assembly of West Bengal was summoned post-midnight. The Governor returned the recommendation of the Chief Minister to summon the State Assembly.
- The Governor mentioned that he is returning the recommendation to summon assembly because the Council of Minister was not consulted, and he is to act on aid and advice of Council of Minister, not the Chief Minister alone.

Procedure To Summon State Assembly

There are two provisions in the Constitution that deal with Governor's power to summon, prorogue and dissolve an assembly

- **Article 174** of the constitution mentions that Governor of the State will summon, dissolve and prorogue the legislative State assembly. The provision also puts on the Governor the responsibility of ensuring that the House is summoned at least once every six months.
- **Article 163** of the Indian Constitution says that the Governor acts on the aid and advice of the Council of minister. So, when the Governor summons the House under Article 174, this is not of his or her own will but on the aid and advice of the Cabinet.
- In conclusion, Governor does not possess any discretionary power to summon the state assembly except when Chief Minister has lost the support of the House.

Supreme Court on Governor's Discretionary Powers

- **Supreme Court in 2016 in landmark constitutional Bench ruling** looked into the constitutional crisis in Arunachal Pradesh after the Governor had imposed President's Rule in the state. It said that in normal circumstances the Governor can summon assembly only on the aid and advice of council of ministers.
- **Nabam Rebia case:** Governor can summon, prorogue and dissolve the House, only on the aid and advice of the council of ministers. Court also clarified that if the governor had reasons to believe that the chief minister and her or his council of ministers have lost the confidence of the House, a floor test could be ordered

INTERNATIONAL AFFAIRS

11th India–Oman Joint Military Cooperation Committee Meeting

- The 11th India–Oman **Joint Military Cooperation Committee (JMCC)** Meeting on bilateral defence cooperation was held in New Delhi
- The JMCC is the apex body between the Defence Ministries of India and Oman to comprehensively review & guide all aspects of bilateral defence cooperation.

Importance of Oman

Defence & Security

- Defence cooperation has emerged as a key pillar for robust India-Oman **strategic partnership**. Diplomatic relations were established in 1955 and the relationship was upgraded to Strategic partnership in 2008.
- Defence exchanges are guided by a Framework MOU which was recently renewed in 2021.
 - Oman is the **only country in the Gulf region** with which all three services of the Indian armed forces conduct regular bilateral exercises and staff talks.
 - Oman also provides critical **operational support to Indian naval deployments** in the Arabian sea for anti-piracy missions.
- Bilateral **training cooperation** between the two sides is also robust. Oman forces regularly subscribe to training courses in India both at professional as well as higher command level.
- Oman also actively participates in the **Indian Ocean Naval Symposium (IONS)**.

Economic & Commercial Relations

- Institutional mechanisms like Joint Commission Meeting (JCM) and Joint Business Council (JBC) oversee economic cooperation. India is among Oman's top trading partners.
- For Oman, India was the 3rd largest (after UAE and China) source for its imports and 3rd largest market (after UAE and Saudi Arabia) for its non-oil exports. While India's exports to Oman were valued at USD 2.26 billion, India's imports from Oman amounted USD 3.67 billion in 2019-2020.
- India-Oman Joint Investment Fund (OIJIF), a JV between State Bank of India and State General Reserve Fund (SGRF) of Oman, a special purpose vehicle to invest in India, has been operational.

Strategic Importance of Oman for India

- In order to *expand its footprint in the Indian Ocean region*, India has secured access to the key **Port of Duqm** in Oman for military use and logistical support.
- This was one of the key takeaways of PM Modi's visit to Oman in February 2018. Following this pact, the services of Duqm port and dry dock will be available for maintenance of Indian military vessels.
- This is part of **India's maritime strategy to counter Chinese influence** and activities in the region.

Importance of Duqm port

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



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

Indian Activities At Duqm Port

Defence activities

- In recent years, India had deployed an attack submarine to this port. A **Shishumar-class** submarine entered Duqm along with naval ship INS Mumbai and two P-8I long-range maritime patrol aircraft.
- The naval units were on a month-long deployment with the aim of enhancing surveillance and cooperation.

Economic activities

- The Port of Duqm also has a special economic zone, where about \$1.8 billion investments are being made by some Indian companies.
- The Adani group had signed an MoU with Duqm port authorities in recent years.
- In the context of strategic oil reserves near Duqm, India had extended an invitation to Oman to participate in building strategic oil reserves in India.

India, UAE Ink Comprehensive Trade Pact

Recently, Prime Minister Modi and Crown Prince of Abu Dhabi Sheikh Mohammed bin Zayed Al Nahyan held a Virtual Summit. During the summit, both the leaders issued a Joint Vision Statement.

The Joint Vision Statement

- **“Advancing India and UAE Comprehensive Strategic Partnership: New Frontiers, New Milestone”**.
- The Statement establishes a roadmap for a future-oriented partnership between India and UAE and identifies focus areas and outcomes.
- The shared objective is to promote new trade, investment and innovation dynamic in diverse sectors, including economy, energy, climate action, emerging technologies, skills and education, food security, healthcare and defence & security.

Key Highlight Of Virtual Summit

CEPA signed

- The major highlight of the summit was the signing and exchange of the India-UAE Comprehensive Economic Partnership Agreement (CEPA).

MOUs signed/ agreed

- MOU on **Food Security Corridor Initiative**
- MOU between India's **Gift City** and Abu Dhabi **Global Market** on cooperation in financial projects and services.
- Two other MOUs - one on cooperation in **Climate Action** and the other on **Education** have also been agreed

Other key takeaways

- A JOINT commitment to fight extremism and terrorism; Enhancing maritime cooperation; Promote e-payment solutions; Set up an IIT in UAE; A joint Hydrogen Task Force.

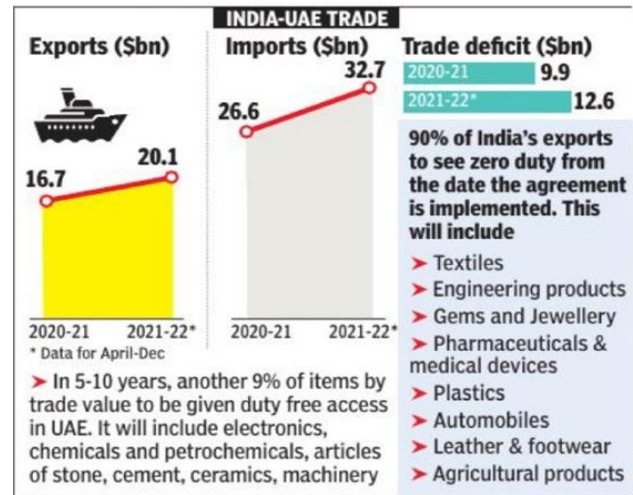
About CEPA Between India and UAE

- In September 2021, India and the UAE started formal negotiations for a mutually-beneficial CEPA.
- CEPA will allow **duty-free export** of food products, textiles, gems & jewellery and pharma while giving easier access to Indian workers in high skill sectors to Emirates.

- It is expected that the CEPA will lead to increase in bilateral trade from the current **USD 60 bn to USD 100 bn in next 5 years**.
- The Agreement will provide significant benefits to Indian and UAE businesses, including enhanced market access and reduced tariffs.

Benefits Of This Agreement

- The deal with UAE, **India's third-largest trading partner** after China and US, signals the government returning to signing free trade agreements (FTAs).
- This is against the background that the government is seeking to push exports and movement of Indian professionals.
- While strengthening the bilateral ties, the agreement also signalled the strategic intent and also taps a possible gateway for exports to other countries in the region.
- CEPA will expedite work on a dedicated investment zone for UAE companies and joint ventures with a focus on **setting up a food corridor** and **establishment of a dedicated India Mart in Jebel Ali Free Zone**.
- CEPA is expected to create opportunities for Indian investors in establishing specialised industrial advanced technology zones in Abu Dhabi.



[For detailed discussion on India-UAE bilateral relationship, please refer the topic **"India-UAE Negotiations for CEPA"** from The Recitals - Sept' 2021.]

Russia Goes To War With Ukraine

Russian President Vladimir Putin declared war on Ukraine. As per Russian President, the military action announced by Russia will seek to **demilitarize Ukraine** and came in response to threats from Ukraine.

India's Stand On This Crisis

After Russia attacked Ukraine

India expressed regret but stopped short of condemnation of Russia's attack on Ukraine. The experts believe that **expressing regret is an upgrade from India's earlier stand**.

- During the initial phase, before the actual attack, India had expressed concern over the issue but never criticized Russia.

Indian PM Modi appealed for an immediate cessation of violence in his phone call to Russian President Putin. He expressed his long-standing conviction that the differences between Russia and NATO group can only be resolved through honest and sincere dialogue.

India's stand at UN

During the recent UNSC vote, **India abstained from a vote** to discuss the Russian military threat to Ukraine.

During an emergency meeting at the UN on this issue, India called for urgent de-escalation of tensions and expressed deep concern over the developments.

Russia had welcomed India's balanced, principled and independent approach after India's statement at UNSC.

India at Quad

At the recent Quad meeting in Australia, India did not publicly expressed concern about Russia's military build-up.

Australia, Japan came out more explicitly on the American side during the Quad meeting.

India's Stand Is Criticised By Western Countries

- The West views India's stand as condoning Russia's actions and applying double standards.
- As per them, India raises the issue of "territorial integrity and sovereignty" when it comes to China. However, it chose to remain neutral on the Ukrainian issue.

Reasons for India's Diplomatic Dilemma

i) Strategic Partnership with US

- India-US relations have been on an upswing over the years, regardless of the administration in Washington.
- After the landmark civilian nuclear deal of 2006, the two countries signed an agreement in 2016 that makes India a 'Major Defence Partner' of US. US has also supported India's bid of permanent membership of UNSC.
- Many American platforms have been used for reconnaissance and surveillance along the India-China border. Winter clothing for 50,000 troops has been sourced from these western strategic partners.

ii) Time Tested Relation With Russia

- Russia has for long been among India's major suppliers of military hardware. India pushed forward with the S-400 missile defence system deal with Moscow, despite pressure from Washington to back out.
- India-Russia cooperation extends to critical areas like nuclear energy. Russia has co-started manufacturing the reactor for the 6th unit of Kudankulam nuclear power plant in Tamil Nadu.
- Moscow has been supportive of India's efforts to be included in Nuclear Suppliers Group.

iii) China Factor

- India is worried about the Russia-China axis too. India is also conscious that the hostility between the West and Russia is likely to push Moscow further in the direction of Beijing.
- The Sino-Russian quasi-alliance has been possible due to



- India's relation with the Beijing is at an abysmal low since the Galwan clash of June 2020. India can't afford to alienate Russia particularly when Indian and Chinese troops remain in a border stand-off.

iv) Indians in Ukraine

- Another concern for New Delhi is presence of Indian community in Ukraine, mostly medical students. As per government estimates, about 18,000 Indian nationals are still in Ukraine.
- Only about 4,000 students have been able to leave in the last few weeks.
- Government of India has launched a 'multi-pronged' initiative named '**Operation Ganga**'.
 - ✓ A dedicated Twitter handle 'OpGanga Helpline' to assist Indian evacuation from Ukraine has also been announced.
 - ✓ Indian evacuation flights are operating from neighbouring countries like Romania and Hungary

[For detailed discussion on this topic, refer the topic "**Russia-Ukraine conflict**" from January 2022 Recitals]

India And France Announce Blue Economy Roadmap

External Affairs Minister S Jaishankar, on his three-day visit to France, held talks with his French counterpart.

Key Highlights Of The Meeting

Blue Economy Roadmap Announced

- Both sides adopted the “**India-France Roadmap on the Blue Economy and Ocean Governance**”.
- This roadmap aims to enhance partnership in the field of blue economy by way of **institutional, economic, infrastructural and scientific cooperation**.

Facilitating People-to-People Contact

- The two Ministers also agreed to continue and enhance their cooperation in the field of sports and agreed to soon conclude a **Joint Declaration of Intent** in the Area of Sports.

Indo-French Call for an “Indo-Pacific Parks Partnership”

- The two Ministers agreed to jointly launch the Indo-French call for an “Indo-Pacific Parks Partnership” during the **EU Ministerial Forum on Cooperation in the Indo-Pacific**.
- This partnership aims to build capacities in the Indo-Pacific region, in terms of sustainable management of protected areas, by gathering and sharing the experiences and expertise that exist in the Region among key Indo-Pacific public & private natural park managers.

Key Highlights of India-France Roadmap on Blue Economy and Ocean Governance

There will be four pillars of the partnership:

institutional

economic

infrastructures

scientific and
academic

Institutional Pillar: Forging A Common Vision Of Ocean Governance Based On The Rule Of Law

- NITI Aayog in India, and the Ambassador for Poles and Maritime Affairs in France will be nodal points for ensuring activities mentioned under this roadmap.
- Both sides will work under the frameworks set by the international laws and convention and they will consult each other in multilateral forums.

Economic Pillar: Making The Blue Economy A Source Of Sustainable Growth

- The “Campus mondial de la mer” in France has proposed to make India the Guest of Honour of the **Sea Tech Week** in Brest from 26 to 30 September 2022.
- o This will be an opportunity to boost industrial partnerships and blue economy innovations.
- o Both sides will establish a programme to support the sustainable fisheries sector in India.

Infrastructure Pillar: Cooperating On Sustainable And Resilient Coastal And Waterways Infrastructure

- India is looking to develop its **ports**, with a focus on sustainable infrastructure, including **eco- fishing ports**. In this regard, both sides will encourage sharing of knowledge and methodologies.
- In addition, they will cooperate on developing **domestic waterways**, which is one of India’s priorities in the field of infrastructure development.

Scientific And Academic Pillar: Better Knowledge Of The Ocean To Innovate And Protect

- Collaboration between operational ocean forecasting centres in India (eg. INCOIS) and France (e.g IFREMER) is envisaged.
- Both sides will remain fully committed to the Knowledge Summit, organised periodically by France and India to foster bilateral scientific cooperation.
- In order to encourage scientific partnerships in marine sciences, from 2022 onwards, France will grant five student mobility scholarships in this field.

EU Ministerial Forum for Cooperation in the Indo-Pacific

External Affairs Minister, Dr S. Jaishankar, participated in EU Ministerial Forum on Cooperation in the Indo-Pacific. It was **organised by France** in its capacity as chair of the council of the Union. **China was not invited for the meeting.**

About The Ministerial Forum for Cooperation in Indo-Pacific

- This forum provides an opportunity to showcase the European Union strategy for the region and develop tangible projects in this regard.
- The forum brings together Foreign Ministers of EU Member States and some 30 countries in the Indo-Pacific region along with other stakeholders of the region.

Objective

- To demonstrate the strength of the links between EU countries and those of the Indo-Pacific and to strengthen them even further
- To Promote European cooperation model, based on multilateralism and the rule of law, implementing the principles of sustainability, openness and reciprocity.

EU's stake in Indo-Pacific

- Indo-Pacific region is of increasing strategic importance to the EU and its Member States.
- **Growing Significance of the region:**
 - ✓ **Economic weight** - it will soon account for 60% of global wealth.
 - ✓ **Demographic significance** - three fifths of the world's population.
 - ✓ **Strategic significance** - Increasing presence of the region in current affairs and future geopolitical balances make it an essential space for Europeans.
- There are considerable economic exchanges between Europe and Indo-Pacific, which contribute to the prosperity of EU.
- Through its Member States' outermost regions in the Indian Ocean and overseas territories in the Pacific, the EU considers itself as a part of this region.

EU Strategy for Cooperation in the Indo-Pacific

- It was endorsed by European Council in October 2021. This Strategy includes 7 priority areas for action:
 - Sustainable and inclusive prosperity; Green transition; Ocean governance; Digital governance and partnerships; Connectivity; Security & defence and Human security.

IVFRT Scheme

- The Government has approved the continuation of the **Immigration Visa Foreigners Registration Tracking (IVFRT) Scheme** beyond March 31, 2021 for a period of five years from April 1, 2021 to March 31, 2026 with a financial outlay of Rs.1,364.88 crore.
- Core objective of IVFRT is modernization and up-gradation of Immigration and Visa services.
- The project has a global outreach and seeks to interlink and optimize functions relating to **immigration, visa issuance, registration of foreigners and tracking of their movements** in India
- It covers 192 Indian Missions across the globe, 108 Immigration Check Posts (ICPs) in India, 12 Foreigners Regional Registration Officers (FRROs) and offices and more than 700 Foreigners Registration Officers (FROs), Superintendents of Police (SPs)/Deputy Commissioners of Police (DCPs) across the country.
- After the commencement of IVFRT, the number of Visa and OCI cards issued increased from 44.43 lakh in 2014 to 64.59 lakh in 2019 at a Compounded Annual Growth Rate (CAGR) of 7.7%.
- Average visa processing time of 15 to 30 days (during pre-IVFRT period) has been reduced to a maximum of 72 hours in e-visas, with 95% of e-visas issued within 24 hours.
- International traffic to & from India grew from 3.71 crore to 7.5 crore during last 10 years at a CAGR of 7.2%.

SUMMITS AND ORGANISATIONS

4th Quad Foreign Ministers' Meeting

- The 4th Quad Foreign Ministers' meeting was held in Melbourne. It was hosted by Australia.
- This was the third in-person meeting of Quad Foreign Ministers. Ministers last met virtually in February 2021.

Key Highlights Of The Joint Statement

- Support for **international law, peace, and security in the maritime domain.**
- **Veiled reference to China's actions:** Reaffirmed the commitment of free and open Indo-Pacific.
- **Emphasized ASEAN unity and centrality** and the ASEAN-led architecture in Indo-Pacific region. For this, leaders expressed their support for ASEAN partners to advance the practical implementation of ASEAN's Outlook on the Indo-Pacific.
- **COVID-19 pandemic** - Together, the Quad members have *pledged to donate more than 1.3 billion vaccine doses* globally. The delivery of first batch of Quad-supported vaccines is expected in first half of this year.
 - ✓ Quad expressed their satisfaction with the Quad Vaccine Partnership's rapid progress in expanding vaccine production at the Biological E Ltd facility in India. It aims to deliver at least 1 billion vaccines by the end of 2022.
- **Counter All Forms Of Terrorism And Violent Extremism:** It called on all countries to ensure that territory under their control is not used to launch terror attacks and to expeditiously bring to justice the perpetrators of such attacks. Quad reiterated its condemnation of terrorist attacks in India, including 26/11 Mumbai and Pathankot attacks.
- **Ensure Resilient Cyber Security**
 - ✓ Quad decided to assist partners across Indo-Pacific to address the growing threat of ransomware. It will do so by strengthening capacity building to ensure resilient cyber security and to counter cybercrime.
 - ✓ It will also build the capacity of regional countries to implement UN Voluntary Framework for Responsible State Behaviour in Cyberspace.
- **5G Technology:** QUAD is pursuing work on 5G technology and vendor diversification to maintain a diverse, open and interoperable telecommunication ecosystem through collaboration with like-minded partners
- **Indo-Pacific Clean Energy Supply Chain Forum** - Australia has proposed to host an Indo-Pacific Clean Energy Supply Chain Forum in mid-2022. This reflects the Quad leaders' commitment to cooperate to establish responsible and resilient clean-energy supply chains.
- **Increasing People-To-People Ties** - Quad is exploring a track 1.5 dialogue between its respective strategic thinkers.
- **On Myanmar-** Quad expressed grave concern about the crisis in Myanmar. It extended its support for ASEAN efforts to seek a solution in Myanmar and called on the military regime to urgently implement ASEAN's Five-Point Consensus.

ASEAN five-point consensus states that there shall be an immediate cessation of violence in Myanmar and all parties shall exercise utmost restraint; constructive dialogue among all parties concerned shall commence to seek a peaceful solution in the interests of the people.



About: Quad

- The grouping of **four democracies –India, Australia, US and Japan–** is known as the quadrilateral security dialogue or quad.
- The aim of this grouping is to ensure a **free and open international order based on the rule of law in the Indo- Pacific.**
- The group's primary objectives include:

Maritime security,

Addressing the risks of climate change,

Creating an ecosystem for investment in the region

Boosting technological innovation.

Combating the Covid-19 crisis, especially vis-à-vis vaccine diplomacy,

Evolution

- Following the Indian Ocean tsunami, India, Japan, Australia, and the US created an informal alliance to collaborate on disaster relief efforts.
- Quad as a formal group was first mooted by Japanese Prime Minister Shinzo Abe in 2007.
 - However, **due to Chinese resistance and reluctance shown by India**, it could not move ahead.
- Later, during the 2017 ASEAN Summits, all four former members re-joined negotiations to revive the quadrilateral alliance.
- The Quad was upgraded to the ministerial level in September 2019.

Naval Exercise

- In November 2020, the navies of Australia, India, Japan and United States held their biggest naval drills, known as Malabar exercise.
- It was the first time since 2007 that all members of Quad participated in a joint military drill.

First-ever summit of QUAD leaders

- In March 2021, the first-ever summit of QUAD leaders took place **virtually**.
- It was participated by PMs/Presidents of all member countries. The summit was hosted by US.

[Also refer the topic “**1st in-person Quad summit**” from The Recitals – Sept’ 2021]

India to host IOC session in 2023

India will host the **2023 International Olympic Committee's (IOC) session in Mumbai** after successfully bidding for it at the 139th IOC session. This will be the first time India will host the session after **1983**.

Significance

- India received a historic **99% of the votes in favour of its bid** from the delegates participating in the process. 75 members endorsed India's candidature in the session held in Beijing. This also reflects India's growing stature in international arena.
- Acceptance of India's candidature reflects a significant development for India's Olympic aspirations. This will herald the start of a new era for Indian sport.
- Getting to host the session also means India is already front-runners to host the 2030 Youth Olympics and from here on, the effort to pitch for a Summer Olympics – possibly 2036 – will get a boost.
- The allotment of the Olympic session will once again make India a crucial and an exciting destination to nurture and grow the Olympic movement.

About International Olympic Committee (IOC)

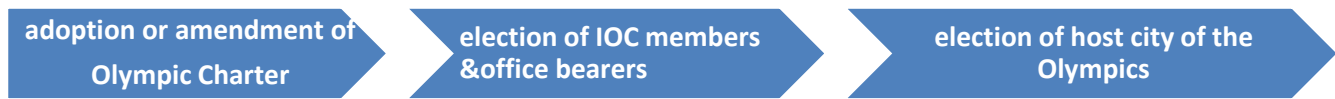
- In 1892, Pierre de Coubertin of France declared his intention to spearhead a movement to revive the ancient Greek Olympics.
- His efforts led to the establishment of IOC in June 1894 as a not-for-profit independent international organisation. It is **based in Lausanne, Switzerland, the Olympic Capital**.
- The IOC is the guardian of Olympic Games and the leader of Olympic Movement.
- The vision of the International Olympic Committee is to Build a Better World through Sport.

Roles & Responsibilities

- IOC is the authority responsible for organising the modern (Summer, Winter, and Youth) Olympic Games.
- It is the governing body of the National Olympic Committees (NOCs).

IOC Session

- An IOC session is the annual meeting of the members of the IOC. It comprises 101 voting members and 45 honorary members. **All IOC Session decisions are final.**
- It discusses and decides on the key activities of the global Olympics movement including:



Other Addition powers of the Session are:

- To elect the President, vice-presidents and all other members of IOC Executive Board.
- To elect the city in which an ordinary Session is held, the President having the authority to determine the city in which an extraordinary Session is held
- To approve the annual report and financial statements of the IOC
- To appoint the independent auditor of the IOC
- To decide on the awarding or withdrawal by the IOC of full recognition to or from NOCs, associations of NOCs, International Sports Federations (Ifs), associations of IFs and other organisations
- To expel IOC members and to withdraw the status of Honorary President, honorary members and honour members
- To adopt or amend the Athletes' Rights and Responsibilities Declaration upon recommendation of the Athletes' Commission and to promote respect for this Declaration within the Olympic Movement
- To resolve and decide upon all other matters assigned to it by law or by the Olympic Charter.

2nd ASEAN Digital Ministers Meeting

- The 2nd ASEAN Digital Ministers (ADGMIN) meeting with India was held on a virtual platform.
- The meeting discussed and deliberated various matters relevant to strengthening regional digital cooperation in the spirit of digital inclusion and integration.
- The Ministers meeting **approved the India-ASEAN Digital Work Plan 2022**. The workplan includes system for combating the use of stolen and counterfeit mobile handsets, WiFi Access network interface for nationwide public internet, the capacity building and knowledge sharing in emerging areas in the field of ICT (5G, IoT, advanced satellite communication, cyber forensics).
- The ADGMIN is an annual meeting of Telecom Ministers of **10 ASEAN countries and dialogue partner countries** - Australia, Canada, China, EU, India, Japan, Republic of Korea, New Zealand, Russia, UK and US.

Preparations For India's G20 Presidency

- The Union Cabinet approved the setting up of a G20 Secretariat and its reporting structures.
- This Secretariat will be responsible for implementation of overall policy decisions and arrangements needed for steering India's upcoming G20 Presidency.
- As per practice, a G20 Secretariat is being established to handle work relating to substantive / knowledge / content, technical, media, security and logistical aspects of India's G20 Presidency.
- It will be manned by officers and staff from the Ministry of External Affairs, Ministry of Finance, and other relevant line Ministries / Departments and domain knowledge experts.
- The Secretariat will be functional till February 2024
- India will hold the Presidency of G20 from 1 December 2022 to 30 November 2023, culminating with the G20 Summit in India in 2023.
- India in December 2021 joined the **G20 Troika** which consists of Indonesia, Italy, and India - the current, previous and incoming G20 Presidencies, respectively.

DEFENSE AND SECURITY

Centre Extends Police Modernisation Scheme

- The Union government, in 2017, had approved implementation of **umbrella scheme** of Modernisation of Police Forces (MPF). Initially, it was launched for three years' period from 2017-18 to 2019-20.
- Now, the government has approved extension of umbrella scheme of MPF for next five years (up to 2025-26) with a financial outlay of Rs 26,275 crore.
- 'Police' and 'law and order' fall within the domain of State as per **Entry 2 of List II of the VIIIth Schedule**. However, States have not been able to fully modernize and equip their police forces up to the desired level due to financial constraints.
- In this context, Ministry of Home Affairs (MHA) has been supplementing the efforts and resources of the States, from time to time, by implementing the MPF Scheme since **1969-70**.

Objectives Of The Scheme

- To meet the identified deficiencies in various aspects of police administration.
- To reduce the dependence of State Governments on Army and Central Armed Police Forces to control internal security and law and order situation by way of equipping the state police forces adequately and imparting the required training.

Key Highlights

- The scheme includes security-related expenditure in J&K, northeastern states and Maoist-affected areas for raising **new battalions**, developing **high-tech forensic laboratories** and other **investigation tools**. In other words, it has all relevant sub-schemes that contribute to the modernisation and improvement.
- Provision has been made under the scheme for internal security, law and order, and adoption of modern technology by the police.
- Assistance will be given to states for narcotics control and strengthening the criminal justice system by developing a robust forensic set-up in the country.
- The umbrella scheme comprises **two verticals and 17 sub-schemes**.



Vertical I: Modernisation of Police Forces (MPF) of States & UTs	3 Central Sector Sub Schemes	2 State Sector Sub Schemes
	<ul style="list-style-type: none"> • Crime and Criminal Tracking Networks and System (CCTNS) • Projects under Inter-State Police Wireless • Implementation of ePrisons. 	<ul style="list-style-type: none"> • Assistance to States for Modernization of Police • Assistance to States for Special Projects /programmes for upgrading <u>Police infrastructure</u> [Forensic Laboratories & Institutes and equipment].
Vertical II: Security Related Expenditure (SRE) for Jammu & Kashmir(J&K) /North East (NE) / Left Wing Extremism (LWE)	7 Central Sector Sub Schemes	5 State Sector Sub Schemes
	<ul style="list-style-type: none"> ▪ Assistance to Central Agencies & others for LWE Management ▪ Civic Action Plan (CAP) for LWE areas ▪ Media plan ▪ Special Central Assistance (SCA) to 	<ul style="list-style-type: none"> ▪ SRE (J&K) – Police ▪ SRE (NE) ▪ SRE(LWE) ▪ Special Infrastructure Scheme (SIS) along with construction of

	<p>35 worst LWE affected districts</p> <ul style="list-style-type: none"> ▪ SRE (LWE) (Central Sector) ▪ SRE (J&K): Relief & Rehabilitation ▪ SRE (J&K): Security Environment. 	<p>250 fortified Police Stations in LWE affected States.</p> <ul style="list-style-type: none"> ▪ Reimbursement to States for administration of Central Acts & Regulations.
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National Policy and Action Plan

- In order to holistically address the “**LWE problem**” in an effective manner, Government, in 2015, formulated National Policy and Action Plan.
- Under this plan, govt adopted **multi-pronged strategy** in the areas of security, development, ensuring rights & entitlement of local communities etc.
- The multi-pronged strategy primarily includes development and security aspects of affected districts.

Projects related to development

- Include infrastructure, roads, cell-phone connectivity, bridges and schools.

Security-related measures

- Include assistance to LWE affected States by providing CAPF Battalions, helicopters, UAVs, funds for modernisation of State Police forces, training assistance, sharing of intelligence etc.

Raising Day of Indian Coast Guard

Indian Coast Guard (ICG) celebrated its **46th Raising Day** on February 1.

About Indian Coast Guard (ICG)

- ICG is a government organisation formally established by the **Coast Guard Act, 1978**.
- It operates under the **Ministry of Defence**.
- The operation of Indian Coast Guard is limited to **Indian coastal waters**.
 - After Indian Navy, which protects India's interest in high seas, ICG provides a second layer of maritime security by protecting Indian coastal waters.



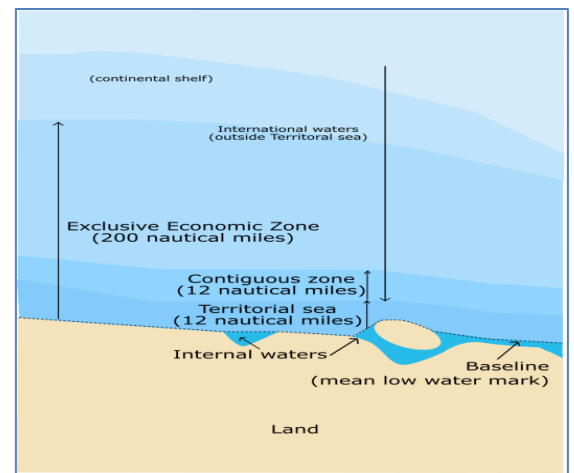
Background

- ICG came into existence after **Committee under KF Rustamji** submitted its report on the Indian government's shortcomings in combating **smuggling and other illegal maritime activities**.
- The report strongly recommended the setting up of a 'Coast Guard' for securing India's EEZ and marine resources.
- In 1977, the Indian Coast Guard came into existence on **1 February**, after the Union Cabinet approved the establishment of the force.

Duties

- The mission of the ICG is offshore security, marine safety and coastal security. It has also been given the task of securing India's **Exclusive Economic Zone (EEZ)**.
- For this, it has been entrusted with following duties:
 - ✓ Safety and protection of **artificial islands, offshore terminals and other installations**.
 - ✓ Protection and assistance to **fishermen and mariners** at sea.
 - ✓ Preservation & protection of **marine ecology & environment**, including pollution control.

- ✓ Assistance to Department of Customs and other authorities in **anti-smuggling operations**.
- ✓ Law enforcement in **territorial as well as international waters (outside territorial seas)**.
- ✓ **Scientific data collection** and support.
- ✓ National defence during hostilities (under the operational control of the Indian Navy).



Achievements of Coast Guard

- From a modest beginning with just seven surface platforms in 1978, the ICG has grown into a formidable force with 158 ships and 70 aircraft in its inventory.
- It is likely to achieve targeted force levels of **200 surface platforms and 80 aircraft by 2025**.
- The ICG is the **4th largest coast guard in the world**.

Performance Of Duties

1 Saving lives

- It has saved over 1200 lives at sea in the last year and more than 11000 since its inception.
- It has also rescued approximately 13000 personnel to date during various 'Aid to Civil Authority' operations such as assistance provided to civil authorities during floods, cyclones and other natural calamities.

2 Prevention of smuggling through maritime routes

- In the last one year, it has seized drugs and contraband worth nearly Rs 4,000 crore. Around Rs 12,000 crore of drugs and contraband have been seized by the ICG since its operation.
- ICG has, so far, apprehended more than 13000 crew and over 1,500 boats involved in illegal activities in EEZ.

3 Combating transnational maritime crimes

- It is also collaborating with the littoral countries to combat transnational maritime crimes and enhance maritime safety in its area of responsibility.

4 Ocean Peacekeeping

- In line with PM Modi's vision of 'SAGAR' – Security and Growth for all in the Region, ICG has nurtured professional relationship across oceans and established ties with countries in Indian Ocean Region (IOR).

5 First Responder

- ICG has successfully averted major ecological disasters and emerged as the 'First Responder' in the region by undertaking major fire-fighting and Pollution response operations off the Sri Lanka coast.
- The most recent being 'Sagar Aaraksha-II' onboard carrier MV X-Press Pearl.

6 Establishing robust coastal security

- ICG also conducted **National Maritime Search & Rescue Board** meeting to harmonise the maritime and civil aviation search & rescue mechanism.
- It is also working in close coordination with Central and State agencies to put in place a robust coastal security mechanism.

- The ICG's reach was demonstrated during the flag hoisting on 100 inhabited and uninhabited far-flung islands, as part of the 'Azadi ka Amrit Mahotsav' celebration on August 15, 2021.

Exercises

Eastern Bridge VI	<ul style="list-style-type: none"> • Recently, Indian Air Force and Royal Air Force of Oman conducted bilateral exercise at the <u>Jodhpur air force station</u>. • The exercise named Eastern Bridge VI is in its sixth edition. • Exercise Eastern Bridge V was held in October 2019 at the Air Force Base Masirah, Oman.
Milan 2022	<ul style="list-style-type: none"> • Indian Navy launched its massive multilateral naval exercise, MILAN. The naval exercise will see the participation of 42 nations including Russia. • Theme of MILAN 2022 exercise is '<i>Camaraderie Cohesion Collaboration</i>' • The exercise and its participation of several South-East Asian navies along with those of the QUAD members is a significant event in the Indo-Pacific amid rising aggression from China. • The MILAN exercise is a biennial event that had been first started in 1995 with the participation of just four other nations -- Indonesia, Singapore, Sri Lanka and Thailand. Today it is one of the largest naval exercises in the world.
Dharma Guardian 2022	<ul style="list-style-type: none"> • India and Japan conducted the annual joint military exercise "Dharma Guardian 2022" in Belgaum, Karnataka. • This exercise with Japan is crucial and significant in terms of security challenges faced by both nations in the backdrop of current global situation. • The annual exercise has been taking place since 2018.

GEOGRAPHY AND ENVIRONMENT

India's First Geological Park

Recently, the approval for first geological park was given by Geological Survey of India, under Ministry of Mining. The park will be built at **Lamheta village** on the banks of Narmada River in Jabalpur district of Madhya Pradesh.

About Geo Park

- It is a unified area that advances the protection and use of geological heritage in a sustainable way and promotes the economic well-being of the people who live there.
- It promotes awareness of geological hazards, including volcanoes, earthquakes and tsunamis and many help prepare disaster mitigation strategies with local communities.
- It embodies records of past climate changes and are indicators of current climate changes.

The term geological heritage (or 'geo-heritage') can be applied to natural geological or geomorphological features possessing aesthetic, intrinsic or scientific and educational value, and that provide unique insight into geological processes affecting the formation or evolution of the Earth.

Why Will Park Be Built In Lamheta

- From geological point of view, Lamheta of Jabalpur is one of the most significant places in the world.
- Several dinosaur fossils had been found in the Narmada valley, particularly in the Bhedaghat-Lameta Ghat area of Jabalpur.
- In 1828, the first dinosaur fossil was collected from the Lameta Bed by William Sleeman.
- UNESCO has also recognised Lamheta as geo heritage site.

India Ranks 3rd Globally In Forest Area Gain

The Department of Economic Affairs said in annual Economic Survey that India ranks 3rd globally in **average annual net gain in forest area** from 2010-2020. Much of India's increase in forest cover from 2011-21 is attributed to enhancement in **very dense forest cover**, which rose by approximately 20% during the period.

Other Findings

- India added an average of 2,66,000 hectares of forest area every year during the period of 2010-2020.
- India's total forest cover was 7,13,789 sq km in 2021, reflecting an increase of 3.14% over 2011 even as it remained the tenth-largest country by forest area in the world.
- Forests covered 24% of India's total geographical area accounting for 2% of the world's total forest area in 2020.
- The top 10 countries account for 66% of the world's forest area. Of these Brazil (59%), Peru (57%), Democratic Republic of Congo (56%) and Russia (50%) have half or more of their total geographical area under forests.
- Amongst states, Madhya Pradesh had the most extensive forest cover in India in 2021, followed by Arunachal Pradesh, Chhattisgarh, Odisha, and Maharashtra.
- Mizoram, Arunachal Pradesh, Meghalaya, Manipur and Nagaland were the top five states in terms of the highest per cent of forest cover.

Two More Ramsar Sites Announced

- Two new Ramsar sites **Khijadiya wildlife sanctuary** and **Bakhira wildlife sanctuary** were announced on the occasion of World Wetlands Day.

- On the occasion, "**National Wetland Decadal Change Atlas**" was prepared by Space Applications Center (SAC - one of the major centers of ISRO). The original Atlas was released by SAC in 2011 and has over the years been used extensively by all the State Governments

Khijadiya wildlife sanctuary	<ul style="list-style-type: none"> It is a fresh water sanctuary which is located near the gulf of Kutch, Gujarat. The sanctuary is a coastal wetland with rich avifaunal diversity. It provides a safe habitat to endangered and vulnerable species like endangered Pallas's fish eagle, vulnerable common pochard, dalmatian pelican and common crane etc
Bakhira wildlife sanctuary	<ul style="list-style-type: none"> It is fresh water marsh in the Sant Kabir Nagar district, Uttar Pradesh. It offers a safe wintering and staging ground for a large number of species of Central Asian Flyway. It provides habitat for Egyptian vulture, greater spotted eagle, common pochard, woolly-naked stork etc.

About World wetland day

- It is observed on 2nd February since 1997 to create awareness about the need for conservation of wetlands.
- United Nations General Assembly adopted resolution 75/317 for World Wetlands Day on August 30, 2021 to give official recognition.

Wetlands	Ramsar Sites	Montreux Record
<ul style="list-style-type: none"> India has a total of 7,57,060 wetlands, covering 1.6 crore hectares or 4.5% of India's area. In India, wetlands are regulated under the Wetlands (Conservation and Management) Rules, 2017 State-wise distribution of wetlands: Gujarat is at the top (17.56% of total geographical area of the state or 22.7% of total wetlands areas of the country). It is followed by Andhra Pradesh, Uttar Pradesh, and West Bengal 	<ul style="list-style-type: none"> India has a network of 49 Ramsar sites, the highest in South Asia, covering 10,93,636 hectares. The countries with the most Ramsar Sites are UK (175) and Mexico (142). Bolivia has the largest area with 148,000 sq km under the Convention protection 	Currently, two wetlands of India are in Montreux record : Keoladeo National Park (Rajasthan) and Loktak Lake (Manipur). Chilka Lake (Odisha) was placed in the record but was later removed from it.

Montreux Record is a register of wetland sites on the List of Wetlands of International Importance where changes in ecological character have occurred, are occurring, or are likely to occur as a result of technological developments, pollution or other human interference. It is maintained as part of the Ramsar List.

{For more on wetland and Ramsar Site refer The Recitals – Dec' 2021}

Sanctuary Tag For Golden Langur Habitat Opposed

Recently, the neighbours of a **golden langur habitat** in western Assam have **opposed** a move by the State government to upgrade it to a wildlife sanctuary.

Why Villagers Are Opposing This Move?

- The villagers have been protecting and conserving the flora and fauna of **Kakoijana Reserve Forest** (one of the better-known homes of golden langur) for more than 25 years.
- Assam Forest Department had issued a preliminary notification for converting 19.85 sq. km. patch of forest into **Kajoijana Bamuni Hill Wildlife Sanctuary**.

- The villagers demanded that the “conventional idea of wildlife sanctuary” be dropped and the reserve forest be converted into a community forest resource using Forest Rights Act, 2006.
- Because once the area was designated as wildlife sanctuaries, it will highly restrict all human activity in wildlife sanctuaries. The hunting and poaching of animals are strictly banned as well as the trees and plants cannot be cut down for agriculture or any other application.
- The villagers pointed out that the conservation efforts of the locals had helped to restore the forest canopy from less than 5% to more than 70%, and golden langur population from less than 100 to more than 600 over almost three decades

Reserve Forests	Community Forest Resource
They are the most restricted forests and are constituted by State Government on any forest land or wasteland which is the property of Government. In reserved forests, local people are prohibited, unless specifically allowed by a Forest Officer in the course of settlement.	According to Section 2(a) of Forest Rights Act , it is the customary common forest land within the <i>traditional or customary boundaries of the village or seasonal use of landscape</i> in the case of pastoral communities, including reserved forests, protected forests and protected areas such as sanctuaries and national parks to which the community had traditional access.

About Golden Langurs

- They live in moist evergreen and tropical deciduous forests, as well as in some riverine areas and savannas in Assam and Bhutan.
- Listed as **Endangered** in IUCN red list & Schedule I in Wildlife Protection Act 1972.
- It is listed as among the world’s 25 most endangered primates.
- The major threat is the rapid loss of this habitat due to deforestation.

India’s First OECM Site

On the occasion of World Wetlands Day, the **Aravalli Biodiversity Park** was declared India’s first “**Other Effective area-based Conservation Measures**” (OECM) site.

About OECM site

- OECM is a conservation designation for areas that are achieving the **effective in-situ conservation** of biodiversity **but are outside of protected areas** like national parks and sanctuaries.
- The OECM tag is given by the **International Union for Conservation of Nature (IUCN)**.
- The OECM tag does not bring any legal, financial or management implications, but designates the area as a biodiversity hotspot on the international map.
- The OECM areas were defined at the Convention on Biological Diversity that was held in 2018.

About Aravalli Biodiversity Park

- Spread across 390 acres in Gurgaon (Haryana), it has semi-arid vegetation.
- The park was transformed into a city forest from a 40-year-old mining site through the efforts of citizens, ecologists and scientists along with the help of the urban local body.
- The proposal to make Aravallis as the OECM was made by **National Biodiversity Authority**.

Loss of Ice in South Col Glacier

Mount Everest’s South Col Glacier has shrunk dramatically in the last three decades.

Highlights Of The Study

- The South Col formation may already have lost around 55 metres (180 feet) of thickness in the last 25 years.
- Carbon dating showed the top layer of ice was around 2,000 years old, suggesting that the glacier was thinning more than 80 times faster than the time it took to form.
- It may disappear entirely by mid of this century.

About South Col Glacier

- It is a sharp-edged col between Mount Everest and Lhotse.
- It is typically swept by high winds, which leaves it free of significant snow accumulation.
- It is around 7,900 metres above sea level and a kilometre below the peak of world's highest mountain.
- It was first reached by Lambert, Aubert, and Flory of Edouard Wyss-Dunant's Swiss Mount Everest Expedition on 12 May 1952. The Expedition failed to reach the summit.

Concerns	Significance Of Glaciers
As the glaciers shrink, hundreds of lakes have formed in the foothills of Himalayan mountains that could burst and unleash floods.	<ul style="list-style-type: none">• Source of water for around two billion people living across mountains and river valleys below.• Feed world's 10 most important river systems as well as help in supplying billions of people with food and energy.

National Adaptation Fund For Climate Change (NAFCC)

- Economic Survey 2021-22 noted that "Of the 30 sanctioned projects under NAFCC, two have closed down while 28 are still going on much beyond the initial target time".
- Grants released under NAFCC fell from Rs 115.36 crore in 2017-18 to Rs 42.94 crore in 2020-21, and Rs 27.76 crore (till December 2021) in the current year.

About NAFCC

- It is a **Central Sector Scheme** which was set up in the year 2015-16.
- The overall aim of NAFCC is to support concrete adaptation activities which mitigate the adverse effects of climate change. The activities under this scheme are implemented in a **project mode**.
- The projects related to adaptation in sectors such as agriculture, animal husbandry, water, forestry, tourism etc. are eligible for funding under NAFCC.
- **NABARD** is the National Implementing Entity (NIE).

Objectives

- Preparing and updating climate scenario, assessing vulnerability and climate impact assessment.
- Capacity building of various stakeholders on climate change adaptation and project cycle management and developing knowledge network
- Mainstreaming the approaches/ learnings from project/programme implementation through knowledge Management.

Coastal Vulnerability Assessment Index

The Indian National Centre for Ocean Information Services (INCOIS) has carried out coastal vulnerability assessment for the entire Indian coast at state level. Coastal vulnerability is a spatial concept that identifies **people and places** that are most susceptible to disturbances resulting from coastal hazards such as coastal storms, sea level rise and erosion etc.

About The Assessment Index

- INCOIS has brought out an Atlas comprising 156 maps on 1:1,00,000 scales to prepare a Coastal Vulnerability Index (CVI).
- These maps will determine the coastal risks due to **future sea-level rise** based on the physical and geological parameters for the Indian coast.
- The CVI uses the relative risk that **physical changes** will occur as sea-level rises are **quantified** based on **parameters** like:

Tidal range, Wave height, Coastal slope, Coastal elevation, Shoreline change rate, Geomorphology, Historical rate of relative sea-level change.

- Coastal vulnerability assessments can be useful information for coastal disaster management and building resilient coastal communities.

About INCOIS

- Located in Hyderabad, INCOIS is an autonomous organisation established in 1999, under the **Ministry of Earth Sciences**. It is a unit of the Earth System Science Organisation (ESSO), New Delhi.
- It is mandated to provide the best possible **ocean information** and advisory services to society, industry, government agencies and the scientific community through sustained ocean observations and constant improvements through systematic and focussed research.

Marine Heatwave

According to a recent study, marine heatwaves have been on the rise in waters around India.

Findings Of The Study

- The **western Indian Ocean** region experienced the greatest increase in marine heatwaves at a rate of about **1.5 events per decade**, followed by **northern Bay of Bengal** at a rate of **0.5 events per decade**.
- Marine heatwaves in the western Indian Ocean and Bay of Bengal aggravated the drying conditions over the central Indian subcontinent.
- There has been a significant increase in rainfall over South Peninsular India in response to the heat wave over North Bay of Bengal.
- From 1982 to 2018, a total of 66 incidents occurred in the western Indian Ocean, while 94 incidents occurred in the Bay of Bengal.
- This is the first time that a study has demonstrated a close **link** between **marine heatwaves and atmospheric circulation and rainfall**.

About Marine Heatwave

- Marine heatwaves are periods of extremely high temperatures in the ocean.
- A marine heatwave is defined, when seawater temperatures exceed a seasonally-varying threshold (usually the 90th percentile) for at least 5 consecutive days.
- Such heat waves are caused by an increase in heat content of oceans, especially in upper layers.
- Worldwide, they are one of the major results of human-induced global warming.

Impacts Of Marine Heatwaves

- These events are linked to **coral bleaching, seagrass destruction, and loss of kelp forests**. These can also increase the risk of **ocean deoxygenation and acidification**.
- They can cause economic losses through impacts on fisheries and aquaculture.

- They may alter habitat of some species, such as spiny sea urchins from south-eastern Australia, which are spreading south into Tasmania.

Local management agencies should raise awareness among all stakeholders and implement forecasting systems to help achieve a coordinated response. National and sub-national governments should design and implement measures to protect communities and build regional ocean resilience.

Kaziranga Become Net Carbon Emitter

According to the latest research, Kaziranga national park is releasing more carbon than it is absorbing.

How Kaziranga National Park Become Net Emitter

- The soil of Kaziranga is home to a large population of **bacteria** that release carbon dioxide as they breathe, which adds to the carbon dioxide being emanated by other organisms.
- The **photosynthetic activity of trees during monsoon decreases** due to increased cloud cover. Hence, the ability of the forest to absorb carbon dioxide also decreases.
 - ✓ The situation remains the same during the post-monsoon and winter months, making the forest a net carbon emitter.
- There is a decreasing trend in the rainfall coming from the **transpired water** in the pre-monsoon months which are responsible for the highest carbon absorption.
 - ✓ Transpiration is a process that involves loss of water vapour through the **stomata of plants**.
 - ✓ Stomatal openings are necessary to admit carbon dioxide to the leaf interior and to allow oxygen to escape during photosynthesis
- As the planet warms further, the ability of the park to absorb carbon would further decrease.

About Kaziranga National Park

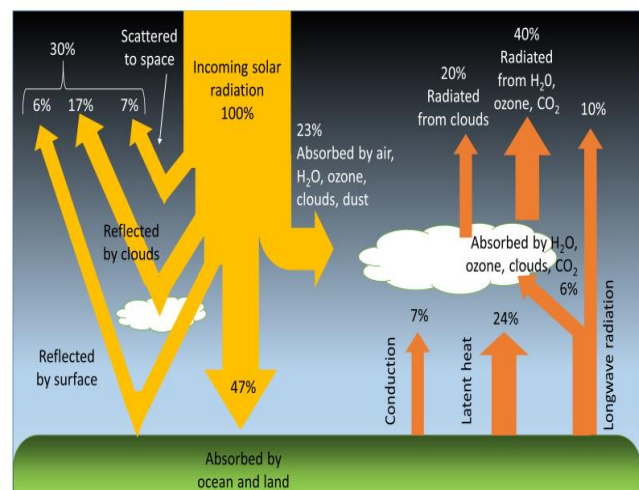
- It is spread across the floodplains of the Brahmaputra River, in the state of Assam.
- It has been declared as **national park in 1974** and was a **UNESCO world heritage site in 1985**.
- It has been also declared as a **tiger reserve in 2007**.
- It also recognized as an Important Bird Area by **BirdLife International**.
- It is inhabited by the world's largest population of one-horned rhinoceroses, as well as many mammals, including tigers, elephants, panthers and bears, and thousands of birds.
- **Pobitora Wildlife Sanctuary** has the **highest density** of one-horned rhinos in the world and second highest **number of Rhinos** in Assam after Kaziranga National Park

Himalayas Is Warming Increasingly

Studies have shown that water vapor exhibits a positive radiative effect at the top of the atmosphere, leading to an increase in overall warming in high altitude Himalayas.

Key Findings of The Study

- It highlights the importance of **Precipitable Water Vapour (PWV) and aerosol** radiative effects in the climate-sensitive Himalayan region.
- It shows the atmospheric radiative effect due to **PWV is about 3-4 times higher compared to aerosols**, resulting in atmospheric heating rates rising.
- Radiative effect is the change in energy flux in the atmosphere caused by natural or anthropogenic factors of climate change as measured by watts/metre²



Significance of The Study

- This work will provide a comprehensive investigation of the **combined impact** of aerosols and water vapour on the radiation budget.
- Due to the **large variability of PWV**, contribution of mixing processes and a range of heterogeneous chemical reactions, it is difficult to accurately measure the climate impact of PWVs.
- Moreover, aerosol-cloud-precipitation interactions over Himalayan region are poorly understood, apparently due to a lack of proper observational data.

Electric Vehicles Can Lower Emissions Of VOC

- A recent study has predicted that India can slash emissions of volatile organic molecules (VOC) by 76% in the next eight years.
- India can achieve this target by swapping all two- and three-wheelers with electric vehicles and all diesel-fuelled ones with Compressed Natural Gas (CNG).

About VOCs

- VOCs are carbon-containing chemicals released by petrol and diesel vehicles.
- They impact air quality and human health.
- However, VOCs can have a natural origin, too. Plants emit these chemicals to attract pollinators, defend themselves from pests and predators and adapt to environmental stress.

Concerns of VOCs

- VOCs can irritate the eyes, nose and throat, damage body organs and cause cancer.
- VOCs can also trigger the formation of PM 2.5.
- VOCs can drive the formation of other dangerous pollutants. For instance, they react with sunlight and nitrogen dioxide to form ground-level ozone.

Why India Needs to Adopt Electric Vehicles

- India is home to 14 out of the top 20 most polluted cities globally.
- In 2019 ~1.67 million deaths were linked to air pollution & the country lost 1.36% of its GDP.
- Gases escaping out of a vehicle's exhaust account for 65-80 % of an automobile's emission.

Challenges With Electric Vehicles

- Electric vehicles production is a capital-intensive sector that requires long-term planning, but uncertainty in government policies concerning electric vehicle production discourages investment in the industry.
- India is technically lacking in the production of electronics that form the backbone of the electric vehicle industry, such as batteries, semiconductors, controllers, etc.
- The lack of associated infrastructure is also a big issue.

Way Forward

- In India, the fuel cost for an EV is approximately 80 paisa per kilometre. Contrast this with the cost is Rs 7-8 per kilometre to operate a petrol-based vehicle. Technology transfer and joint ventures have to be encouraged to ensure indigenization of technology. Long-term investments are required. Policy consistency is equally crucial.
- Technology risks such as **liability issues** around **battery swapping**, unstable battery technology, recycling of batteries and infrastructure requirements need to be assessed in detail.

One Ocean Summit

The Prime Minister of India addressed **UN-backed One Ocean Summit**.

About The Summit

- It was organised by France in Brest in cooperation with United Nations & World Bank.

- The objective is to mobilise the international community to take tangible action towards preserving and supporting healthy and sustainable ocean ecosystems.
- Commitments will be made towards combating illegal fishing, decarbonising shipping, reducing plastic pollution, improve governance of high seas & coordinating international scientific research.

India's Stand At The Summit

- India has always been a maritime civilization and our ancient scriptures and literature talk about the gifts of the oceans.
- India supports the French initiative of a High Ambition Coalition on **Biodiversity Beyond National Jurisdiction (BBNJ)**.
 - ✓ "BBNJ Treaty", also known as "Treaty of the High Seas", is an international agreement on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, currently under negotiation at UN.
- India will be happy to join France in launching a global initiative on single-use plastics.
- India is hoping for a legally binding international treaty this year regarding sustainable ocean ecosystems.
- Recently India also undertook a nationwide awareness campaign to clean plastic and other waste from coastal areas.

Erra Matti Dibbalu

Citizens in Visakhapatnam are working together to **preserve** the geological marvel of Erra Matti Dibbalu.

About Erra Matti Dibbalu

- These are rare red sand dunes, located between Visakhapatnam and Bheemunipatnam in Andhra Pradesh.
- Comprises a mixture of sand (40-50%), silt and clay (another 50%) with oxidation imparting the unique red colour
- These dunes are formed around 12,000 years ago due to **sea-land interaction**.
- The width of the dunes, which runs for 5 kilometres along the coast, varies from 200 metres to 2 kilometres.
- It is listed among the 34 notified **National Geological Heritage Monument Sites** of India in 2014.

Significance

- Sand dunes are a reminder of the million years of geological processes.
- They are the result of the combined effect of numerous factors including global climate change, sea level rise, monsoonal variability and serve as valuable paleo-environment indicator.

Extended Producer Responsibility

Union Environment Ministry announced **Plastic Waste Management (Amendment) Rules, 2022** which notified **extended producer responsibility (EPR)** guidelines for plastic packaging waste to strengthen **circular economy of plastic packaging waste**.

About New Guideline

- They have been issued as part of the government's efforts to **eliminate single-use plastics**.
- They contain specifications for reuse, recycling, use of recycled plastic content, and end-of-life disposal.
- Producers, importers, brand owners, plastic waste processors have to register on a centralised portal of **Central Pollution Control Board** immediately.
- It shall be applicable to both **pre-consumer and post-consumer** plastic packaging waste.
- After recycling the mandated percentage of plastic, a company would have to submit a **certificate** to the relevant authority and if more than the mandated amount is recycled, it could be sold to other companies.
- Environmental compensation will be levied based upon polluter pays principle, with respect to non-fulfilment of EPR targets by producers, importers and brand owners
- State Pollution Control Board (SPCBs) or Pollution Control Committees (PCCs) have been tasked to submit an annual report on EPR portal with respect to the state/Union Territory to the CPCB.

- Permitted thickness of plastic bags will be increased to **120 microns from December 31, 2022**.
- The new rules classify plastics into four categories-
 - ✓ **Category 1:** rigid plastic packaging
 - ✓ **Category 2:** flexible plastic packaging of single layer or multilayer
 - ✓ **Category 3:** Multi-layered plastic packaging;
 - ✓ **Category 4:** plastic sheet or like used for packaging as well as carry bags of compostable plastics
- The implementation of EPR will be done through a customized online platform which will act as digital backbone of the system.

{For more about Plastic Waste Management Rules refer The Recitals Oct' 2021}

Green Hydrogen/ Green Ammonia Policy

Ministry of Power has notified **Green Hydrogen/Green Ammonia Policy** for production of Green Hydrogen or Green Ammonia using renewable sources of energy.

Provisions Of The Policy

- Green Hydrogen/Ammonia manufacturer can buy **renewable energy from power exchange** anywhere or install renewable energy capacity on their own or through another developer.
- Under the policy, the government is offering to set up manufacturing zones for production, connectivity to the ISTS grid (Inter-State Transmission System) on priority basis. Manufacturers will be allowed waiver of **inter-state transmission fee** for a period of 25 years for projects started before 30 June 2025.
 - ✓ This means that a green hydrogen producer will be able to set up a solar power plant in Rajasthan to supply renewable energy to a green hydrogen plant in Assam and would not be required to pay any inter-state transmission charges.
 - ✓ Besides, producers will be allowed to set up bunkers near ports for storage of green ammonia for export by shipping.
 - ✓ The land for the storage for this purpose shall be provided by the respective Port Authorities at applicable charges.
- Open access will be granted within 15 days of receipt of application.
- Manufacturer can bank his **unconsumed renewable power**, up to **30 days**, with distribution company and take it back when required.
- Distribution licensees can also purchase and supply renewable energy to manufacturers in their states at subsidized prices, which will cover only the **cost of purchase, wheeling charges and a small margin as determined by the state commission**.
- The benefit of Renewable Purchase Obligation (RPO) for consumption of renewable energy will be incentivized to manufacturer and distribution licensee.
- To ensure ease of doing business, a **single portal** will be set up by Ministry of New and Renewable Energy (MNRE) to carry out all the activities including statutory clearances
- Production target has also been raised five times from 1 million tonnes (m) to 5 mt by 2030. In October, 2021 it was announced that India is targeting initially around 1 million tonnes annual green hydrogen production by 2030.

Significance

- The implementation of this Policy will provide clean fuel to the common people of the country.
- This will reduce dependence on fossil fuel and also reduce crude oil imports.
- It will also help the country to emerge as an export Hub for Green Hydrogen and Green Ammonia. India has the potential to bring down the cost of green hydrogen by using low-cost renewable generating plants and cost-curtailement experience gained through solar and wind reverse auctions.

Rising Threat Of Wildfires

- A new report, “Spreading like Wildfire: The Rising Threat of Extraordinary Landscape Fires” suggests wildfire risk will rise in this century.
- Report is released by the United Nation Environment Programme (UNEP) and GRID-Arendal.

Key Findings Of The Report

- The report assesses the current global occurrences of wildfires and impacts on lives, livelihoods, values and infrastructure, and how these are likely to change in the future.
- Climate change and land-use change are projected to make wildfires more frequent and intense, with a global increase of extreme fires of up to 14% by 2030, 30% by the end of 2050 and 50% by the end of the century.
- No single nation has solved the problem of dealing with wildfires and even developed countries like Australia struggle to deal with the impacts of wildfires.
- Wildfires are made worse by climate change through increased drought, high air temperatures, low relative humidity, lightning, and strong winds resulting in hotter, drier, and longer fire seasons.
- Climate change is made worse by wildfires, mostly by ravaging sensitive and carbon-rich ecosystems like peatlands and rainforests.
- Currently, direct responses to wildfires receive over half of related expenditure, with less than 1% allocated for planning and prevention.

Recommendations In the Report

- Report outlines nine recommendations: Recognising and responding to the impact of climate change on the prevalence and behaviour of wildfires, improving fuel management and wildfire monitoring, supporting and integrating Indigenous, traditional, and contemporary fire management practices into policy, and strengthening international and regional cooperation on wildfires.
- Governments are urged to adopt a so-called "Fire Ready Formula", which calls for two thirds of spending to be devoted to planning, prevention, preparedness and recovery and one third for response.
- Need a combination of data and science-based monitoring systems with indigenous knowledge.

Recently, UNEP has released its **Annual Frontiers Report** named “Noise, Blazes and Mismatches”.

- The Frontiers report identifies and offers solutions to **three environmental issues: urban noise pollution, wildfires and phenological shifts** that merit attention and action from governments and the public at large to address the triple planetary crisis of climate change, pollution and biodiversity loss.
- Phenology is the timing of recurring life cycle stages, driven by environmental forces, and how species interacting within an ecosystem respond to changing conditions.

Riverbed Sand Mining

- Environment clearance issued to as many as 60 mining areas has paved the way for legal mining of bajri (riverbed sand) in Rajasthan.
- The Supreme Court had banned the sand mining activities four years ago in riverbeds until a scientific replenishment study was completed.

About Riverbed Sand Mining

- Sand mining is the extraction of sand, mainly through an open pit but sometimes mined from beaches and inland dunes or dredged from ocean and river beds.

Impact of Mining

- Excessive sand mining can alter river bed, force the river to change course, erode banks & lead to flooding.
- It leads to deepening of rivers and estuaries, and the enlargement of river mouths and coastal inlets.
- It may also lead to saline-water intrusion from the nearby sea.
- Increased riverbed and bank erosion increases suspended solids in the water at the excavation site and downstream.

- Sand mining transforms the riverbeds into large and deep pits; as a result, the groundwater table drops leaving the drinking water wells on the embankments of these rivers dry.
- Massive sand mining erodes river deltas, exposing coastal communities to severe land loss, and worsening the effects of climate change-induced sea level rise.

Step Taken To Tackle Sand Mining

- The Mines and Minerals (Development and Regulation) Act, 1957 empowers the State Governments to regulate the grant of mineral concessions in respect of minor minerals and make rules for the purposes connected therewith.
- The Ministry of Environment, Forest and Climate Change has released the **Sustainable Sand Mining Management Guidelines, 2016**.
- Several states have formed their own rules to regulate sand mining.
- **M-sand** is widely used as a substitute for river sand, which is a form of artificial sand, manufactured by crushing mainly rocks or granite.

Razzaza Lake

- It is seeing a significant decline in water levels and it has been also hit by pollution and high levels of salinity.
- It is also known as Lake Milh, is located in Iraq.
- It's the second largest lake in Iraq.
- It is part of a wide valley that includes the lakes of Habbaniyah, Tharthar and Bahr al-Najaf.
- The lake was constructed as a measure to control **floods in the Euphrates** and to be used as huge reservoir for irrigation purposes.
- Iraqis and tourists frequented the lake as a recreational spot to cool down during Iraq's hot summers.

New Notification on Bricks Kilns

Union Ministry of Environment, Forest and Climate Change (MoEF&CC) came up with stringent standards for brick kilns.

Salient Features of the Notification








- Standard for PM emission - 250 mg per normal cubic meter (mg/Nm³).
- In case of kilns located within 10 km radius of non-attainment cities, the existing brick kilns will be converted to either zig-zag technology or vertical shaft or use of PNG as fuel in brick making within a period of one year and two years for other areas
 - ✓ Non-attainment cities: These are those that have fallen short of the National Ambient Air Quality Standards (NAAQS) for over five years.
- All brick kilns will use approved fuels such as PNG, coal, firewood and/or agricultural residues. Use of pet coke, tyres, plastic, hazardous waste will not be allowed in brick kilns
- Brick kilns will have to build a permanent facility for port holes and platforms as per the norms prescribed by the Central Pollution Control Board (CPCB).
- Brick kilns should follow the **fugitive dust emission control guidelines** prescribed by the respective State Pollution Control Boards (SPCBs).
- Brick kiln owners shall ensure that the roads used for transportation of raw materials or bricks are paved.

Species in News

Koala



- The Australian government declared it as Endangered.
- The koala has suffered greatly in recent years due to habitat loss, disease and most of all, bushfires and hunting for their fur.
- They are an arboreal herbivorous marsupial native to Australia.

	<ul style="list-style-type: none"> They are listed as Vulnerable in IUCN Red List Status.
Indian gaur 	<ul style="list-style-type: none"> Indian gaur also known as Indian bison is one of the largest extant bovines, native to South and Southeast Asia. They are found in evergreen forests or semi-evergreen and deciduous forests. Listed as Vulnerable in IUCN red list and in Schedule I of Wild Life Protection Act, 1972. It is the State Animal of Goa and Bihar.
Crimson Butterfly Rose 	<ul style="list-style-type: none"> It is a large butterfly with a mix of black, white and crimson colours on its wings and body. It is known to migrate along the coast, inland and crosses the sea often. This species found in India, Sri Lanka, Myanmar, and Bangladesh. It is listed as the Least Concern in IUCN Red List and in Schedule I of Wildlife (Protection) Act, 1972.
Cyrtodactylus exercitus 	<ul style="list-style-type: none"> Researchers have discovered a new species of gecko belonging to the family of Cyrtodactylus exercitus from Meghalaya. The name was given to honour the Indian army for its service to the nation, (in Latin, exercitus means army). The English name of the species was given as Indian army's bent-toed gecko. New gecko species is strictly nocturnal species. India is now home to 40 species of the bent-toed gecko with the northeast accounting for 16 of them.
Colorado Blue Columbines 	<ul style="list-style-type: none"> It is a species of flowering plant, native to the Rocky Mountains, USA. It is a herbaceous perennial plant often found at elevations of 2,100 to 3,700 m. It is used as an ornamental plant in gardens.
Scomberoides pelagicus 	<ul style="list-style-type: none"> A new carangid (Vatta) species identified from the Indian coast. It belongs to the 'queen fish' group and is named scomberoides pelagicus. Locally known as pola vatta. There are over 60 species of carangids (family of ray-finned fish) in the Indian seas. The newly-described one is the fifth queen fish from the Indian waters.
Neuroterus Valhalla 	<ul style="list-style-type: none"> Researchers have discovered a wasp species called Neuroterus Valhalla. The scientists are yet to find the male member of the species. The species are spread in the US and Mexico. The wasp is about a millimeter long and is does not sting.
New genus of a parasitic Flowering plant 	<ul style="list-style-type: none"> It has been discovered from the Nicobar group of islands. The genus Septemeranthus grows on the plant species Horsfieldia glabra (Blume) Warb. It has a distinct vegetative morphology, inflorescence architecture and floral characters. It is endemic only to the Nicobar group of islands. They play an important role as they provide food for frugivorous birds.

Negative Ions In Wearables

The **Nuclear Safety and Radiation Protection Authority (ANVS)**, Netherlands has issued a statement which has identified **various negative ion wearable products** with **more radioactivity** than is legally permitted.

About Negative Ions

- These are molecules that **float in air or atmosphere** and have an **electric charge**.
- They are created when sunlight, radiation, air or water **break down oxygen**.
- Negative ions are believed to **create positive vibes** and elevate the mood. They show various **mental and physical health benefits**, such as stress reduction, breathing, better sleep etc.
- These ions also affect pollutants making them negatively charged and collecting them on the surfaces.

What is Negative Ion Technology?

- Negative ion technology embeds negative ions in personalized products and is currently being advertised as a means of maintaining health, balancing energy and improving wellness.
- This technology is used in some silicone wristbands, quantum or scalar-energy pendants, jewellery, etc.
- The minerals that generate these negative ions often include naturally occurring radioactive materials such as uranium and thorium.

Concerns

- The radiation detected in some of these products exceeds background levels.
- The products were found to contain radioactive material and therefore continuously emit ionizing radiation, to which the wearer is exposed.
- Prolonged wearing of products can pose health risks that include tissue and DNA damage.
- Exposure can also cause severe harmful effects such as: Skin burns, Acute radiation sickness that causes cancer and hairfall, temporary reduction in WBC, Possible chromosomal damage, Reduction in resistance to infection.

Efforts To Counter These Concerns

- The International Atomic Energy Agency (IAEA) released a specific safety guide titled "Radiation Safety for Consumer Products" (2016).
- The IAEA confirms the minimum use of radiation or radioactive substances in toys and personal jewellery or decorations.
- India has provisions in the **Atomic Energy (Radiation Protection) Rules, 2004** which are IAEA compliant.

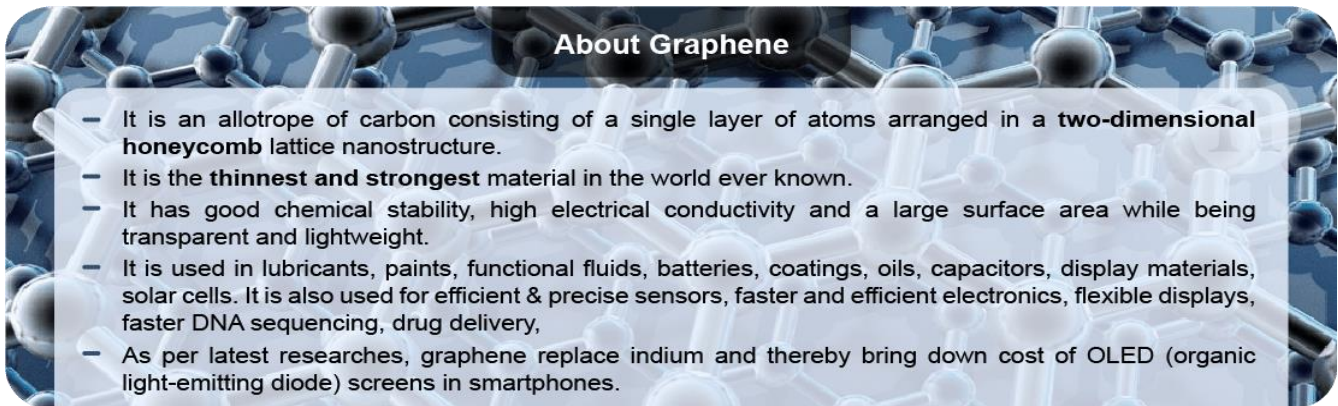
Country's First Graphene Innovation Centre

The state-run **Digital University Kerala (DUK)** along with **CMET Trichur**, & Tata Steel Limited set India's first graphene R&D incubation centre in Trichur (Kerala).

About The Centre

- The Ministry of Electronics and IT has given approval for Rs 86.41 crore-project. Of the 86.41-crore, Union Government would provide Rs 49.18 crore and private business houses Rs 11.48 crore. The state government would provide the basic infrastructure for the project. The Centre would help attract investors to develop graphene products.

- The centre aims to be an anchor point to promote start-ups, commercial research & to bridge the gap between **Graphene academic research** and **industrial application**.
- The centre will also develop the **skilled manpower** by anchoring Ph.D. and master students through Digital University, with an applied research focus in the areas of electronics product design, sensors, and energy applications.



dApps

- **Decentralised applications** or **dApps** are programmes that allow people to interact with one another without the need for third parties. For example, BitTorrent, Tor, and Popcorn Time are applications that run on computers that are part of a P2P network, whereby multiple participants are consuming content, feeding or seeding content, or simultaneously performing both functions.
- They give the personal freedom to interact with a peer without being held accountable for it.
- They exist and run on a **blockchain network** or peer-to-peer (P2P) network of computers. DApps use **smart contracts** to complete the transaction between two anonymous parties
- These smart contracts are **open-source pieces of code** created by a decentralized authority, and no individual authority controls them.
- dApps can be developed for a variety of purposes including gaming, finance, and social media.
- dApps are advantageous because, rather than relying on the competence and trustworthiness of **third parties**, they enforce contracts and agreements using solid code and a layer of computers.
- Drawbacks include the potential inability to scale, challenges in developing a user interface, and difficulties in making code modifications.

Ultra-long-period Magnetar

- Scientists have detected an incredibly dense star and suspect it might be a type of exotic astrophysical object whose existence has been only hypothesised until now.
- It was spotted using Murchison Widefield Array telescope in outback Western Australia.
- It may be the first known example of what is called an ultra-long period magnetar.
 - ✓ A magnetar with a very long pulsation period is known as an ultra-long period magnetar.
 - ✓ For roughly 30 to 60 seconds, every 18.18 minutes, it pulses brightly, one of the most luminous objects in the low-frequency radio sky.
- It is located at about 4,000 light-years away.
- Objects turning on and off in the Universe aren't new to astronomers. Astronomers call such objects as "transients".

Magnetar

- A magnetar is a type of **neutron star** believed to have an extremely **powerful magnetic field**.
- The magnetic-field decay, powers the emission of high-energy electromagnetic radiation (particularly X-rays and gamma rays).

Neutron Stars

- Once the core of the star has completely burned to iron, energy production stops and the **core rapidly collapses**, squeezing electrons and protons together to form neutrons and neutrinos.
- It is the collapsed core of massive supergiant star with total mass of 10 to 25 solar masses. These stars are the smallest and densest known class of stellar objects.

Second Earth Trojan Asteroid - 2020 XL5

- Astronomers have confirmed the existence of a second Earth Trojan.
- Trojan asteroids are those asteroids that **share a common orbit with a planet** in solar system.
- They can do so because they tend to be present at one of the stable Lagrange Points in the Earth-Sun system.
- The trojan was detected in 2020 and is named **2020 XL5**.
- The asteroid was discovered by **Pan-STARRS S1 telescope survey (Hawaii)** and is estimated to be about 1.18 km wide.
- It is a near-earth asteroid (NEO) that is expected to stay in orbit for the next 4,000 years before deviating away.
- First known Earth Trojan asteroid was **2010 TK7**, just about 0.3 km wide, and discovered in 2010.
- Both earth trojans have been discovered in the L4 point. It is the 4th Earth – sun Lagrange point.

- NASA reports the presence of Jupiter, Neptune and Mars trojans. In 2010, they reported an Earth trojan as well.
- The Jupiter asteroids can be found in what are referred to as “**swarms**” that lead and follow the planet Jupiter along its orbit around the Sun. ‘Lucy’ will reach the first swarm of these asteroids

A Lagrange point is a location in space where the combined gravitational forces of two large bodies, such as **Earth and sun** or **Earth and moon**, equal the centrifugal force felt by a much smaller third body. The interaction of the forces creates a point of equilibrium where a spacecraft may be "parked" to make observations

{For more on asteroids refer, The Recitals -Oct’ 2021}

Kavach

Union Finance Minister announced in the budget, that as a part of Atmanirbhar Bharat, 2,000 km of rail network will be brought under the world-class technology ‘Kavach’.

About Kavach

- It is an anti-collision device (ACD) network.
- It is a Made-in-India technology designed to help Indian Railways achieve goal of **zero accidents**.
- Kavach implementation will bring train movement to a halt automatically when it notices another train on the same line within a prescribed distance.
- The technology uses microprocessors, global positioning system and radio communication. The anti – collision devices are mounted on the trains. The devices receive inputs from the satellite. They communicate with each other through modems.

Chandrayaan-3

India is planning to execute the Chandrayaan-3 mission in August 2022.

About Chandrayaan-3

- It is the third Moon mission of ISRO to explore the **unchartered south pole** of the celestial body.
- It will be a mission repeat of Chandrayaan-2 but will only **include a lander and rover** similar to that of Chandrayaan-2.
- It will communicate to earth via an orbiter from Chandrayaan 2. It will not have its own orbiter.
- The subsequent failure of the **Vikram lander** of **Chandrayaan-2** led to the pursuit of another mission to demonstrate the **landing capabilities** needed for the **Lunar Polar Exploration Mission** proposed in partnership with Japan for 2024

{For more about Chandrayaan 2, Refer The Recitals June 2021}

India Inks Interim Agreement With SKAO

India inked an interim agreement to confirm its commitment to work on the mega science project **Square Kilometre Array Observatory (SKAO)**.

About This Agreement

- It will be valid for one year.
- India was represented by TIFR – National Centre for Radio Astrophysics (NCRA).
- This move will facilitate India to make its first monetary contribution towards the construction phase of SKA.

About Square Kilometre Array Observatory (SKAO)

- Started in 1990s, and headquartered in **UK**, SKA is an **intergovernmental radio telescope project**.
- At the moment, organisations from ten countries are a part of the SKAO. These include Australia, Canada, China, India, Italy, New Zealand, South Africa, Sweden, Netherlands and UK.
- Proposed to be the **largest radio telescope in the world**, it will be located in **Africa and Australia**.
- The telescope will operate across a **wide range of frequencies**. Its size will make it **50 times more sensitive** as compared to any other radio instrument. It will require very high-performance central computing engines as well as long-haul links.
- If it is built as planned, it would be able to survey the sky about ten thousand times faster than before.
- **Objectives of SKA**
 - To study the gravitational waves in order to test the theories proposed by Albert Einstein.
 - Studying the universe and its evolution, the origin and evolution of cosmic magnetism.
 - Dark energy and evolution of galaxies.
 - The SKAO also hopes to look for signs of life in outer space, while mapping hundreds of millions of galaxies. SKAO is likely to be operational by the end of this decade.
- India is a participating country in the setting up of world's largest radio telescope. However, it is yet to receive central government's approval to become a Member Country.
- It would explore the possibility of detecting technologically-active civilizations elsewhere in our galaxy and understanding where gravitational waves come from.

Param Pravega

Indian Institute of Science (IISc), Bengaluru has commissioned one of the most powerful **supercomputers**, called “**Param Pravega**” in India.

About Supercomputer Param Pravega

- It is part of High-Performance Computing class of systems.
- It has been designed by Centre for Development of Advanced Computing (**C-DAC**).
- A majority of the components used to build this system have been manufactured and assembled within India.
- It has a supercomputing capacity of **3.3 petaflops** (measure of a computer’s processing speed; 1 petaflop equals a quadrillion or 1,015 operations per second).
- The supercomputer has been commissioned in the institution under National Supercomputing Mission (NSM).

Significance

- It will help faculty members and students in carrying major R&D activities.
- It will help them in developing platforms for genomics and drug discovery, establishing flood warning & prediction systems, studying urban environmental issues, as well as optimising telecom networks.

About National Supercomputing Mission (NSM)

- The mission was announced in 2015 to connect national academic and R&D institutions with a grid of more than 70 high-performance computing facilities.
- The NSM is jointly operated by Department of Science and Technology (DST) and Ministry of Electronics and Information Technology (MeitY), and is implemented by **C-DAC and IISc**.
- Under NSM, 10 supercomputer systems have been established so far in India with a cumulative computing power of 17 petaflops.

Top 500 List Of Most Powerful Supercomputers In The World

- Japanese supercomputer **Fugaku** (442 petaflops) and **IBM’s Summit** (148.8 petaflops) are the two most powerful supercomputers in the world
- Chinese **Sunway TaihuLight** is number 4 on the list (93 petaflops)

India’s Super Computers

- PARAM-Siddhi AI (6.5 petaflops), has been ranked 63rd.
- Pratyush, used for weather forecasting at Indian Institute of Tropical Meteorology, is ranked 78th.
- Mihir (146th)

ATLAS

The **Asteroid Terrestrial-impact Last Alert System (ATLAS)** has become first survey capable of searching entire dark sky for **near-Earth objects**, every 24 hours.

About ATLAS

- It is essential for tracking of asteroids and debris that could be on a collision course with Earth.
- It now comprises of **four telescopes**.
- It began as an array of just two telescopes in Hawaii (became fully operational in 2017), but has now expanded to include two more telescopes in the Southern Hemisphere giving it a full view of the sky.
- It is operated from the Institute of Astronomy at the University of Hawaii.

- So far, ATLAS system has discovered more than 700 **Near-Earth Asteroids (NEA)** & 66 comets.
- The University of Hawai'i ATLAS is funded through a grant from the Near-Earth Object Observations Program administered by NASA's Planetary Defense Coordination Office (PDCO).

{For more on asteroids, refer Mission Lucy in The Recitals – Oct' 2021}

New Record In Creating Energy From Nuclear Fusion

Scientists in United Kingdom have achieved a new milestone in producing nuclear fusion energy.

About new record

- A team at the **Joint European Torus (JET) facility** near Oxford generated 59 mega-joules of sustained energy during an experiment in December, more than doubling a 1997 record.
- The energy was produced in a machine called a **tokamak**, a doughnut-shaped apparatus.
- A tokamak is a machine that confines a **plasma using magnetic fields** in a donut shape that scientists call a **torus**.
- Deuterium and tritium, which are isotopes of hydrogen, were heated to temperatures 10 times hotter than the centre of the sun to create plasma

About Nuclear Fusion

- Nuclear fusion is the process by which two or more atomic nuclei join together, or “fuse,” to form a single heavier nucleus.
- During this process, matter is not conserved because some of the mass of the fusing nuclei is converted to energy, which is released.
- Every star in the universe, including the sun, is alive due to nuclear fusion.
- On Earth, it is achieved by combining two isotopes of Hydrogen i.e deuterium and tritium.
- A kg of fusion fuel contains about 10 million times as much energy as a kg of coal, oil or gas.

Limitation	Advantages
<ul style="list-style-type: none"> • To fuse two atoms together, high levels of heat are required. It requires almost as much energy to create nuclear fusion as the energy it creates. • Creating the infrastructure for nuclear fusion is expensive. • Using nuclear fusion can have unpredictable consequences. The fact is that we don't really know much about this form of energy creation. 	<ul style="list-style-type: none"> • Nuclear fusion energy represents a long-term, sustainable, economic and safe energy source for electricity generation. • Fusion fuels are widely available and nearly inexhaustible, while the amount of long-lived radioactive waste and greenhouse gases produced through fusion are minimal

Geomagnetic Storm

Starlink's 40 satellites were hit by geomagnetic storm that originated from the Sun. Starlink is a SpaceX project to build a **broadband network** with a cluster of orbiting spacecraft.

About Geomagnetic Storm

- **Solar storms** are **magnetic plasma** ejected at great speed from the solar surface. They occur during the release of magnetic energy associated with **sunspots ('dark' regions on the Sun that are cooler than surrounding photosphere)** and can last for few minutes or hours.
- A **geomagnetic storm** is a major disturbance of **Earth's magnetosphere** that occurs when there is a very efficient exchange of energy from the solar wind into the space environment surrounding Earth. These

storms result from **variations in the solar wind** that produces major changes in the currents, plasmas and fields in Earth's magnetosphere.

Effect on Earth

- Not all solar flares reach Earth, but solar flares/storms, Solar Energetic Particles (SEPs), high-speed solar winds, and Coronal Mass Ejections (CMEs) that come close can impact space weather in near-Earth space and the upper atmosphere
- Solar storms can hit operations of space-dependent services like global positioning systems (GPS), radio & satellite communications, aircraft flights and power grids.
- Geomagnetic storms interfere with high-frequency radio communications and GPS navigation systems.
- Coronal Mass Ejections (CMEs), with ejectiles loaded with matter travelling at millions of miles an hour, can potentially create disturbances in the magnetosphere, the protective shield surrounding the Earth.
- Astronauts on spacewalks face health risks from possible exposure to solar radiation outside the Earth's protective atmosphere.

Predicting Solar Storms

- Solar physicists and other scientists use computer models to predict solar storms and solar activities in general.
- Current models are capable of predicting a storm's time of arrival and its speed. But the storm's structure or orientation still cannot be predicted.

ISRO Decommissioned INSAT-4B

- ISRO has successfully decommissioned its communication satellite Insat-4B after over 14 years of service.
- INSAT-4B has undergone **post mission disposal (PMD)** at the end of its life followed by decommissioning to comply with the UN and **INTER Agency Space Debris Coordination Committee (IADC)** recommended space debris mitigation guidelines.
- As per IADC space debris mitigation guidelines, at its end-of-life, a geosynchronous equatorial orbit (**GEO**) **object** should be raised to a **nearly circular orbit** well above the GEO belt to prevent its orbit from coming back into the GEO protected region within **100 years of re-orbiting**.

About INSAT-4B

- ▶ Insat-4B was part of the Indian National Satellite System (INSS) series of multipurpose geostationary satellites launched by ISRO.
- ▶ The 3,025 kg Insat-4B was launched in 2007 by Arianespace's Ariane 5 rocket.
- ▶ The satellite's mission life was 12 years.
- ▶ It was launched to fulfil India's telecommunication, broadcasting, meteorology requirements as well as for search & rescue operation.

Radio Frequency Identification (RFID)

Indian Army has implemented the RFID tagging of its ammunition stock for safe and better management.

About RFID

- RFID tagging is an ID system that uses for identification and tracking purposes.
- It uses radio waves to communicate between two objects: a reader and a tag.
- RFID communication is similar to two-way radio communication in the sense that information is transmitted or received via a **radio wave at a specific frequency**.

Significance Of This Step

- This effort will make the storage and use of ammunition by the soldiers safer and will provide greater satisfaction to the field army.

- The implementation will increase efficiency in all technical activities carried out in ammunition depots and reduce the cost of carrying inventory.
- Implementation of RFID solutions for ammunition asset visibility will lead to a major leap forward in ammunition management and tracking capability.

Tool to Find Habitable Planets

Astronomers from Indian Institute of Astrophysics (IIA) have developed a new approach by which they can identify potentially habitable planets with a high probability.

About New Method

- The **AI-based method**, named **Multi-Stage Memetic Binary Tree Anomaly Identifier (MSMBTAI)**, is based on a novel multi-stage memetic algorithm (MSMA).
- MSMA uses the generic notion of a **meme**, which is an idea or knowledge that gets transferred from one person to another by imitation.
- The algorithm can act as a quick screening tool for evaluating habitability perspectives from observed properties.
- The method is based on the postulate that **Earth is an anomaly**. Earth being the only habitable planet among various planets is known as an anomaly.
- The study identified a few planets which exhibit similar anomalous characteristics as Earth via the proposed technique, which shows reasonably good results.
- According to the study, there are **60 potentially habitable planets** out of about 5,000 confirmed.

MUSE & HelioSwarm

NASA has selected two science missions namely **Multi-slit Solar Explorer (MUSE)** and **HelioSwarm** to help improve our understanding of the dynamics of Sun, the Sun-Earth connection, and the constantly changing space environment.

MUSE Mission	<ul style="list-style-type: none"> • The primary goal of the MUSE mission is to investigate the causes of coronal heating and instability, such as flares and coronal mass ejections. • It will help the scientists in understanding the <u>driving forces of Sun's corona heating</u> & the eruptions in that outermost region that are at the foundation of space weather • It will obtain high-resolution images of the evolution of solar flare ribbons in a field of view focused on a large, active region on the Sun.
HelioSwarm Mission	<ul style="list-style-type: none"> • It is a constellation or "swarm" of nine spacecraft • It will capture the first multiscale in-space measurements of <u>fluctuations in the magnetic field and motions of the solar wind known</u> as solar wind turbulence. • The technical innovation of HelioSwarm's small satellites operating together as a constellation provides the unique ability to investigate turbulence and its evolution in the solar wind.

CoEs In Carbon Capture and Utilization

Currently, two **National Centres of Excellence (NCoEs) in Carbon Capture and Utilization (CCU)** are being established in India.

- The two centers are being set up with support from Department of Science & Technology.
- First center will be (NCoE-CCU) at IIT Bombay.
- The second will be National Centre in Carbon Capture and Utilization (NCCCU) at Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bengaluru.

Significance

- These CoEs will facilitate capturing & mapping of current R&D
- It will also help in innovation activities in the domain.
- It also develops networks of researchers, industries and stakeholders with coordination and synergy between partnering groups and organizations.
- The Center will act as a multidisciplinary, long-term research, design development, collaborative and capacity-building hubs for cutting edge research and application-oriented initiatives.

EOS-04 Mission

- ISRO successfully placed its earth observation satellite EOS-4 and two small satellites (INSPIRESat-1 and INS-2TD) into the intended orbit by the PSLV-C52 rocket.
- This launch was the 54th flight of the Polar Satellite Launch Vehicle (PSLV) rocket, and the 23rd of its most powerful XL-version that has six strap-on boosters.

About EOS-04

- It is a radar imaging satellite capable of providing high-quality images under **all weather conditions**. It will be placed in a **sun synchronous polar orbit**.
- It can be used to capture images for agriculture, forestry, flood mapping, soil moisture and hydrology. The satellite has a mission life of **10 years**.
- It will complement the data from Resourcesat, Cartosat and RISAT-2B series of satellites that are already in orbit.
- In fact, it would replace the **RISAT-1** (launched in 2012) which has been non-functional for the last few years. RISATs use **synthetic aperture radars** to produce high-resolution images. One big advantage that **radar imaging has over optical instruments** is that it is unaffected by weather, cloud, fog, or the lack of sunlight.
- The first of these newly named satellites, **EOS-01, launched in November 2020**, is in orbit right now. **EOS-02, a micro-satellite** to be flown on a new launch vehicle called **SSLV** (Small Satellite Launch Vehicle) is yet to be launched, while launch of EOS-03 had ended in a failure in August, 2021.

INSPIRESat-1	<ul style="list-style-type: none">• It is part of a constellation of satellites planned under the International Space Program in Research and Education (INSPIRE) involving the Small-spacecraft Systems and Payload Centre (SSPACE) at IIST, University of Colorado (US), Nanyang Technological University (NTU), Singapore, and National Central University (NCU), Taiwan.• Two scientific payloads on INSPIRESat-1, with a mass of 8.1 kg and mission life of one year, are aimed at improving the understanding of ionosphere (part of Earth's upper atmosphere) dynamics and the sun's coronal heating processes
INS-2TD	<ul style="list-style-type: none">• It is a Technology Demonstrator (TD) for the first India-Bhutan joint satellite that is scheduled to be launched in March, 2022.• The two countries had signed a space agreement last year, and its first outcome would be the launch of BhutanSat, or INS-2B, on a PSLV rocket• The thermal imaging cameras of the INS-2TD are meant for earth observation purposes, like assessment of land and water surface temperature, and identification of forest and tree cover.

How many satellites does India have in space?

- **53 operational satellites:** Of which **21 are earth observation** & another **21 are communication-based**.
- Eight are navigation satellites, while the remaining three are science satellites.

Fairbank's Disease

- This disease also known as Multiple Epiphyseal Dysplasia (MED).
- It is a **rare genetic disorder** that affects the growing ends of bones.
- Bones usually elongate by a process that involves the **depositing of cartilage at the ends** of the bones, called **ossification**.
- This cartilage then mineralizes and hardens to become bone. In MED, this process is defective
- Symptoms are joint pain in the hips and knees, early-onset arthritis, a waddling walk, and mild short stature as adults.
- Most people are diagnosed during childhood, but mild cases may not be diagnosed until adulthood.
- MED patient usually requires management of pain and orthopedic procedures.

Acromegaly is a hormonal disorder that leads to the abnormal growth of hands, feet and face.

This disorder is mainly caused due to the excessive production of the Growth Hormone (GH) produced by the **Pituitary gland**

Lassa Fever

Lassa fever has been detected in UK. The cases are linked to travel to West African countries.

About Lassa Fever

- It is a viral haemorrhagic fever that is primarily transmitted to humans via contact with *Matomys* rats. It is found in West Africa and was first discovered in 1969 in Lassa, Nigeria.
- The death rate associated with this disease is low, at around **1%**. But the death rate is higher for certain individuals, such as pregnant women in their 3rd trimester.
- A person can become infected if they come in contact with items of food that is contaminated with the **urine or faeces of an infected rat** (zoonotic disease).
- It can also be spread, **though rarely**, if a person comes in contact with a sick person's infected bodily fluids or through mucous membranes such as the eyes, nose or the mouth

Origami Metamaterials

Researchers from **IIT Madras** have developed a material called Origami metamaterials.

About Origami Metamaterial

- These are made by joining **panels** along their edges to form '**creases**' about which the structure locally 'folds'. These combine the Japanese art of **paper folding (origami)** and the existing material of choice and fold it to obtain desired properties.
- When a material is **crushed or stretched** along a particular direction, it undergoes a modification in the **perpendicular, or lateral direction**.
- **Poisson ratio**: The ratio between the **deformation along the force** and the **deformation in a direction lateral to the force**. The Poisson ratio can be positive or negative.
- In order to be useful, materials need to maintain a constant Poisson ratio when they crumble under pressure. However, they are prone not to do so, and the Poisson ratio varies as they deform. New developed origami metamaterials show a **constant value of Poisson Ratio** when subjected to stress.
- It can crumple rather than tear & also take the impact and absorb the shock.

About Metamaterial

- A metamaterial is any material that is engineered to possess a property not found in naturally occurring materials.
- They are made up of a combination of several elements made from **composite materials** such as metal and plastic.

- They are typically arranged in a repeating pattern, on a scale that is smaller than the **wavelength of the event** they affect.
- It derives their properties **not** from the properties of the base materials, but from their newly **designed structures**.
- Apart from their artificial origin, metamaterials are characterized because they have **unusual electromagnetic properties**, coming from their structure and arrangement and not from their composition.
- This is similar to what happens with graphite, diamond and graphene, since they are all made of carbon, but due to their structure, they have very different properties.
- One of the properties that can vary the metamaterials can be, for example, that the material has a **negative refractive index** making them of great importance in optics and electromagnetism applications.
- Other Potential Applications include medical devices, remote aerospace operations, sensor detectors, solar power management, crowd control, radomes, antenna lenses, and even earthquake protection.

Doxxing

Meta's oversight board has suggested Facebook and Instagram to make strict doxxing rules.

About Doxxing

Doxxing is publishing **others' personal information** on the internet with a **malicious intent** that can reveal the person's real identity.

Why Need For Regulation

- It is used to shame or punish people who would rather stay anonymous, because of their controversial beliefs or other types of non-mainstream activity.
- It can lead to harassment, cyber-attacks, emotional distress and stalking etc.

Stem Cell Transplant Can Cure HIV

Researchers reported that the patient got cured of HIV after receiving a stem cell transplant.

About New Approach

- Researchers use umbilical cord blood, because it contains stem cells.
- It is taken from a donor who was **naturally resistant** to the virus that causes AIDS.
- The new approach may make the treatment available to more people without the need for antiretroviral therapy.
- However, researchers said that the method is too risky to be suitable for most people diagnosed with HIV.

About Stem Cell Transplant

- A stem cell transplant is also called a **bone marrow transplant** or, more specifically, a **hematopoietic stem cell transplant**.
- It is a medical treatment that replaces your bone marrow with healthy cells.
- The replacement cells can either come from your own body or from a donor.
- Transplantation can be used to treat certain types of cancer, such as leukemia, myeloma, and lymphoma, and other blood and immune system diseases that affect the bone marrow.

Why HIV Is Difficult To Cure

- HIV maintains a permanent presence in the human body because soon after an infection, the virus binds its genetic code into long-lived **immune cells** that will enter a resting state.
- Anti-retroviral only work on replicating cells, so HIV can remain under the radar (unnoticed) of such medications in resting cells for long periods, sometimes even years.
- Absent in any HIV treatment, such cells could restart their engines at any time and repopulate the body with huge amounts of virus.

About Stem Cells

- These are special cells that can make copies of themselves and change into many **different kinds of cells** that the body needs.
- There are several kinds of stem cells & are found in different parts of the body at different times.
- Bone marrow is soft, spongy tissue in the body that contains **hematopoietic stem cells**
 - ✓ Cancer and cancer treatment can damage the hematopoietic stem cells
 - ✓ Hematopoietic stem cells are stem cells that turn into blood cells.

What Are Three Main Types of Stem Cell

Embryonic Stem Cells

- They supply **new cells for an embryo** as it grows and develops into a baby.
- These stem cells are said to be **pluripotent**, which means they can change into any cell in the body.

Adult Stem Cells

- They supply **new cells** as an **organism grows and to replace cells that get damaged**.
- Adult stem cells are said to be **multipotent**, which means they can only change into some cells in the body, not any cell,
- Eg: Blood (or 'haematopoietic') stem cells can only replace the various types of cells in the blood.

Induced Pluripotent Stem Cells

- 'Induced' means that they are made in the lab by taking **normal adult cells**, like skin or blood cells, and reprogramming them to become stem cells.
- Just like embryonic stem cells, they are pluripotent so they can develop into any cell type.

Indian Neutrino Observatory (INO)

Tamil Nadu government refused permission for the construction of Indian Neutrino Observatory (INO) at Bodi West Hills (near Kerala-Tamilnadu border) in Theni district.

Why Tamil Nadu Opposing This?

Government said that, if the project will implement, it will affect the flora and fauna of the Periyar Tiger Reserve and Mathikettan Shola National Park in the Western Ghats.

About INO Project

- It is an effort aimed at building a world-class underground laboratory to study fundamental issues in science.
- It is jointly funded by the Department of Atomic Energy (DAE) and the Department of Science and Technology (DST).
- The primary goal of the laboratory is the **study of neutrinos** from various natural and laboratory sources using an **iron calorimeter (ICAL) detector**.

About Neutrinos

- Neutrinos are the **2nd** most abundant particles in the world, after photons.
- It is a subatomic particle that is very similar to an electron, but has **no electrical charge** and a very small mass, which might even be zero. It interacts very weakly with other matter particles
- It is created by various radioactive decays, during a supernova, by cosmic rays striking atoms etc.

Synthetic Biology

- A draft foresight paper on **synthetic biology** is released by **Department of Biotechnology**
- Paper has stressed the need for a national policy that can consolidate India's stand on the issue.

About Synthetic Biology

- The term 'synthetic biology' was first used by **Barbara Hobomin in 1980**, to describe bacteria that had been genetically engineered using recombinant DNA technology.
- It refers to the science of using genetic sequencing, editing, and modification to create **unnatural** organisms or organic molecules that can function in living systems.
- It enables scientists to design and synthesise new sequences of DNA from scratch.

Applications

- It has applications in various fields from developing synthetic organisms for **vaccination** to creating natural products in a lab such as **vanillin**.
- In the pharmaceutical industry it can be used to make natural compounds such as artemisinin used for the treatment of malaria and Car T cell therapy for cancer treatment.
- It is starting to be used in the fashion industry as well. Some companies are exploring the possibility of dyeing jeans without producing hazardous waste.
- Some companies are using it to deliver fixed nitrogen to plants instead of using fertilisers, engineering microbes to create **food additives** or **brew proteins**.
 - ✓ For e.g, Modified rice to produce beta-carotene (a nutrient usually associated with carrots), that prevents Vitamin A deficiency.

Obstructive Sleep Apnea (OSA)

According to report, the Veteran singer Bappi Lahiri died due to obstructive sleep apnea.

About OSA

- OSA is a disorder caused by the **repetitive collapse** of the upper airway during sleep.
- It is the most common sleep-related breathing disorder.
- It occurs when the muscles supporting the soft tissues in throat, such as tongue and soft palate, relax.
- It causes episodes of **decreased oxygen supply** to the brain and other parts of the body.
- OSA is most common among older males, but it can affect anyone, including children.
- The treatment for OSA involves using a device that uses positive pressure to keep your airway open while you sleep.
- Another option is a mouthpiece to thrust your lower jaw forward during sleep. In some cases, surgery might be an option too.

First Quadruple Asteroid

Researchers have made the first sighting of a quadruple asteroid system, an asteroid Elektra with **three moons** orbiting around it.

About Elektra

- Elektra is located in the solar system's main asteroid belt between Mars and Jupiter.
- It was first discovered by Litchfield Observatory astronomer Christian Peters in 1873.
- Elektra has an effective diameter of 199 km.
- 1st moon of Elektra was discovered in 2003 by using Keck II telescope at Mauna Kea Observatory. Designated as S/2003 (130) 1 or S1.
- 2nd moon was discovered in 2014, using SPHERE facility on ESO's Very Large Telescope. Designated as S/2014 (130) 1 or S2.

Third Moon of Elektra

- Astronomers have now discovered the third moon and designated as S/2014 (130) 2 or S3.
- It is smaller than the other two moons with a diameter of just 1.6 kilometres.
- It has an orbital period of 0.679 days.

Active Galactic Nuclei

Scientists represent of new observations about active galactic nuclei (AGN).

About The New Observation

- It was done by using European Southern Observatory's (ESO) Very Large Telescope in Chile's Atacama Desert.
- This model holds that all AGN are basically the same but some appear from the vantage point of Earth to have different properties.
- Some look **intensely bright** because the position of their **ring-like cloud** does not obscure the gas plummeting into the black hole from our viewing angle.
- Others look dark because the cloud blocks our view of what is truly happening.
- **Messier 77's** AGN is one of the dark ones, but the new observations indicate that it actually possesses the same qualities as the bright ones.

About Active Galactic Nuclei

- These are active supermassive black holes that emit bright jets and winds, and shape their galaxies. Much of the energy output of AGNs is of a non-thermal (non-stellar) type of emission
- Many AGN emits strong X-rays, radio and ultraviolet radiation, as well as optical radiation.
- AGN can vary in luminosity on short (hours or days) timescales.
- Quasars are the most luminous AGN.

{For more on AGN refer "Merger of 3 Super Massive Blackholes" topic of The Recitals -August 2021}

Fast Radio Bursts

The Astronomers of National Center of Radio Astrophysics and the University of California have used the **Giant Meter wave Radio Telescope (GMRT)** to map the distribution of **atomic hydrogen gas** from the host galaxy of a Fast Radio Burst (FRB) for the first time.

Key Findings Of The Study

- The study indicates that the **FRB host galaxy** has undergone a recent **merger** and that FRB progenitor is most likely a massive star formed due to the merger event.
- This is the first case of direct evidence for a recent merger in an FRB host, a major step towards understanding the progenitors of FRBs
- The first surprise during this observation was the amount of atomic hydrogen in the FRB galaxy, which was around **10 times more** than that found in similar nearby galaxies.

Fast Radio Bursts

- These are intense bursts of radio emission that have durations of milliseconds, because of which it is difficult to detect them and determine their position in the sky.
- These extraordinary events generate as much energy in a thousandth of a second as the Sun does in a year.
- Locating where these blasts are coming from, and in particular, what galaxies they originate from, is important in determining what kinds of astronomical events trigger such intense flashes of energy.

About GMRT

- GMRT is an array of thirty fully steerable parabolic radio telescopes of 45-meter diameter.
- It is operated by the National Center for Radio Astrophysics of the Tata Institute of Fundamental Research (NCRA-TIFR).
- GMRT is an indigenous project. Its design is based on the 'SMART' concept - Stretch Mesh Attached to Rope Trusses

Alcyoneus Galaxy

Astronomers found the largest galaxy named Alcyoneus Galaxy, not in visible light, but via radio astronomy.

About Alcyoneus Galaxy

- It is located around 3 billion light-years away in the Lynx constellation.
- This galaxy was discovered using the Wide-field Infrared Survey Explorer (**WISE**) telescope and the Low-Frequency Array (**LOFAR**) radio telescope network.
- Currently, it is the **largest galaxy discovered**, with a width of around 16 million light-years.
- The black hole which is present in the center of this galaxy is around 400 million times the sun's mass.
- Due to its large size some scientist says that, it might provide insights about the cosmic web.

Quantum Key Distribution Link

A joint team of scientists from DRDO and IIT Delhi, for the first time in the country successfully demonstrated Quantum Key Distribution link (between Prayagraj and Vindhyachal in Uttar Pradesh, a distance of more than 100 kilometres).

About Quantum Key Distribution

- Also called Quantum Cryptography, it is a mechanism to develop secure communication.
- It implements a cryptographic protocol comprising of components of quantum physics.
- It enables two parties in producing a shared random secret key known only to them.
- It involves sending encrypted data as **classical bits** over networks, while the keys to decrypt the information are encoded and transmitted in a quantum state using **qubits**.

Significance

- It is one of the safest ways of connecting two places with high levels of code and quantum cryptography that cannot be decrypted or broken by an external entity.
- If a hacker tries to crack the message in quantum communication, it changes its form in such a manner that would alert the sender and would cause the message to be altered or deleted.

Karakattam

- Kerala Nattukala Kshema Sabha (KNKS), an outfit that works for the promotion of local art forms in the state, has demanded that Karakattam (also known as Kumbakkali) be recognised as the agricultural art form of Kerala.
- Karakattam is a form of folk dance performed at festivals, conferences, roadshows and primarily at Mariamman festivals.
- Karakattam performances are characterised by a lot of swaying movements. Three tiers of flower arrangements of different colours sit on top of a container filled with either water, rice, or soil. All of this is balanced on the head of a Karakattam dancer while he or she dances.
- Other highlights include *blowing fire, inserting needles into eyes, and keeping balance while holding a bottle parallel to the ground on the performer's back*.
- It is one of the many creative traditions that owe their existence to Mariamman, the rain goddess.
- Although it has links with the rain goddess, the form is about more than just worship—it is also about reversing the caste dominance.
- Even though Karakattam is mostly famous in Tamil Nadu, it's performed in different parts of Kerala as well. While the dance form is not dying, it has undergone radical change and adaptation in recent years.

Sant Ravidas

- Sant Ravidas Jayanti is observed on **Magh Purnima**. This year marks the 645th birth anniversary of Sant Ravidas.
- Born in **1377 C.E. in Varanasi**, UP, Guru Ravidas was an Indian mystic, poet, social reformer and spiritual guru.
- Also known by Raidas, Rohidas and Ruhidas - his devotional songs and verses created a lasting impact upon the **Bhakti Movement**.
- He was among the first people to oppose the Indian caste system through his poems and teachings based on spirituality and spread the message of equality.
- Around 41 poems accredited to Ravidas were included in **Adi Granth** (sacred scripture of Sikhism).
- Guru Ravidas is considered the founder of the Ravidasia religion. He was also known as the spiritual guide of Meera Bai, who is an eminent personality in the sphere of Hindu spiritualism.

Ramanujacharya

- Prime Minister recently inaugurated the **Statue of Equality**, a gigantic statue of Ramanujacharya, on the outskirts of Hyderabad.
- Born in 1017 in Sriperumbudur in Tamil Nadu, Ramanujacharya is respected as a Vedic philosopher and social reformer.
- Ramanuja revived the **Bhakti movement** and his preachings inspired other Bhakti schools of thought. He is considered to be the inspiration for poets like Annamacharya, Bhakt Ramdas, Thyagaraja, Kabir, and Meerabai.
- He went on to write 9 scriptures known as the **navaratnas**, and composed numerous commentaries on Vedic scriptures.
- Ramanuja is also credited with establishing the correct procedures for rituals performed in temples throughout India, the most famous being Tirumala and Srirangam.

Reasons for calling it the Statue of Equality

- He travelled across India for several decades, propagating his ideas of social equality and universal brotherhood. From the time he was a young philosopher, Ramanuja appealed for the protection of nature and its resources like air, water, and soil.
- He encouraged temples to allow everyone irrespective of caste or position in society at a time when people of many castes were not allowed to enter into temples.
- He embraced the socially marginalised and asked royal courts to treat them as equals.
- He took education to those who were deprived of it. His greatest contribution is the propagation of the concept of **vasudhaiva kutumbakam**, which translates as “All the universe is one family”.
- He spoke of universal salvation through devotion to God, compassion, humility, equality, and mutual respect, which is known as **Sri Vaishnavam Sampradaya**.
- Ramanujacharya liberated millions from social, cultural, gender, educational, and economic discrimination with the foundational conviction that every human is equal regardless of nationality, gender, race, caste, or creed.

Devayatnam

- Archaeological Survey of India (ASI) of Ministry of Culture recently organised a two-day international conference ‘**Devayatnam – An odyssey of Indian temple architecture**’.
- Devayatnam, the house of god is not only a place to worship and perform rituals but also a centre for education, fine arts, music, science & technology, rituals & traditions or every activity shaping the society.
- The conference aims to deliberate upon the philosophical, religious, social, economic, technical, scientific, art and architectural aspects of temple.
- It also intends to start a dialogue on the evolution and development of the various styles of temple architecture.
- In India, there are **3 main kinds of temple architecture**: Nagara or the Northern Style, Dravida or the Southern style, and Vesara or the Mixed styles.
- These architectures highlight India’s rich history, culture, and heritage and are an integral part of Indian life and its ecosystem.
- Construction of temples started with beginning of human settlements & evolved through ages.
- Temple construction was practiced as a pious act not only in the subcontinent but the idea also travelled to the nearest neighbourhood such as south-east and east Asia.
- Approximately 10 of India’s 40 UNESCO World Heritage Inscriptions are Hindu temples in different architectural styles, patterns and symmetry.