GS Connect

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

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

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

Team KSG

S. No.	1	2	3	4	5	6	7	8	9	10	11
GS – I	Culture-Art Forms, Literature and Architecture from ancient to modern times.	Indian history significant events, person alities, issues and the Freedom Struggle	Post independence issues, National boundary and disputes	Indian society features, issues, globalization and diversity	Women - issues and developments	Urbanizatio n – problems and remedies	Distribution of industries andresources – India and world	Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc			
GS – II	Indian constitution- Amendments, acts and bills.	Legislative, executive and judicial processes.	Constitutional, non-constitutional, judicial, quasi-judicial, administrative and other types of bodies.	Federal structure and local bodies. Their powers and functions.	Government policies and various governance issues like transparenc, accountability and – governance	Committees and schemes.	Non-government issues, self-help groups and role of civil society	Vulnerable sections of our society and social sector issues and initiatives.	International Relation-India and other countries, various Indian and international agreements, effects of other countries on India and international institutions.		
GS – III	Various measures to boost Indian economy- planning, policies, management.	Government budgeting and issues related to budget.	Agriculture, animal husbandry and transport	Food security- measures to boost food security and food processing. Issues related to land-land reforms	Industries and infrastructure- their growth and investment model	Space and technology, IT space, robotics and computer	Disease, biotechnol- ogy and human welfare	Innovations, intellectual property, Awards, POI and other import ant aspects of S&T	Environment; government initiatives, various judgment, pollution, degradation and conservation efforts	Disaster & Disaster Management	Challenges to internal security, Various Security forces and agencies and their mandate. Cybersecurity; moneylaunderi-ng and its prevention.
GS – IV	Ethical issues related to family society, education, Corruption etc.	Ethics in public and private administration	Issues	Related laws and rules	Governance/e-Governance	Ethics in interna-tional issues	Person alities and their teachings	Other import ant topics			
Mis.											

SCAN THIS QR FOR HIGH-RESOLUTION IMAGES

CONTENTS

POLITY

Office of Governors

News Excerpt

In recent years, the bitterness between states and Governors have been mainly about the selection of the party to form a government, deadline for proving majority to form a government, sitting on Bills, passing negative remarks on the state administration etc. The debate on the role of governor is once again in news with the recent rise in instances of tensions between state government and central government.

Pre-Connect

Role of governor in State

- The governor is the nominal head and the real power lies with the Chief Minister of the state.
- The Governor is constitutional head of the state and is also the key link between the Union and State government.
- Article 163-
  - There shall be a council of Ministers with the chief Minister at the head to aid and advise the Governor in the exercise of his functions, except in so far as he is by or under this constitution required to exercise his functions or any of them in his discretion.
  - If any question arises whether any matter is or is not a matter as respects which the Governor is by or under this Constitution required to act in his discretion, the decision of the Governor in his discretion shall be final, and the validity of anything done by the Governor shall not be called in question on the ground that he ought or ought not to have acted in his discretion.
  - The question whether any, and if so what, advice was tendered by Ministers to the Governor shall not be inquired into in any court.
- The discretionary power of the Governor is wider than that of the President as the governor enjoys both the constitutional as well as situational discretionary power unlike the President who enjoys only situationary discretion.

> #### Constitutional provisions regarding the Governor
> - Article153 (Presence of Governor)
> - Article 154 (Executive power)
> - Article155 (Appointment of Governor)
> - Article 156 (Term of office of Governor)-
> - Article 157 (Qualifications for appointment as Governor)
> - Article 158 (Conditions of Governor office)
> - Article 159 (Oath)
> - Article 161 (Pardoning Power of Governor)

Constitutional discretionary powers

- **Article 167-** The Governor can seek information from the chief minister about state administrative and legislative matters
- **Article 200-** The Governor can reserve a Bill for President's consideration
- **Article 356-** The Governor can recommend the President to impose President's rule on the failure of constitutional machinery
- The Governor is not bound to act on the aid and advice of CM and council of ministers while performing his duties as the administrator of a neighboring union territory (in case of additional charge).
- **Sixth schedule-** The Governor may determine the amount payable to an autonomous Tribal District Council as royalty from mineral exploration licenses by the governments of Sixth Schedule areas (Assam, Meghalaya, Tripura, and Mizoram)

Situational discretionary powers

- **During Hung Assembly-** The Governor can appoint chief minister when no party has a clear-cut majority
- **No-confidence motion-** The Governor can dismiss the council of ministers when it cannot prove the confidence of the state legislative assembly
- **Appointment of caretaker government-** The Governor can appoint the care taker government for a temporary period until a regular government is elected or formed.
- **Special provisions with respect to States-**Under Article 371, the President may provide special responsibility for the Governor to form separate development boards for Vidarbha, Marathwada, Saurashtra and Kutch.

There have been various friction points in the recent past which raises the need for reforms in the present setup to strengthen federalism.

Page 4

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

What reforms have been suggested?

- o **The Administrative Reforms Commission (1968) President's rule-** It recommended that the report of the governor regarding the President's rule has to be objective and also the governor should exercise his own judgment in this regard.
- o **Rajamannar Committee (1971)**
  - **Role of Governor**- It stressed that the Governor of the state should not consider himself as an agent of the centre but play his role as the constitutional head of the State.
- o **Sarkaria Commission recommendations (1983)**
  - ✓ **Hung assembly-** It provided the order of preference the Governor should follow in selecting a CM in such a situation
  - ✓ A post-electoral alliance of parties, with some of the parties in the alliance forming a government and the remaining parties, including independents, supporting the government from outside.
  - ✓ Appointment of Governor- CM should be consulted in the Governor's appointment.
  - ✓ Dismissal of Council-of Ministers the Governor cannot dismiss the Council of ministers when it commands a majority.
- o **S.R. Bommai Judgment (1994)**
  - **President's rule-** The Supreme Court classified the instances of failure of constitutional machinery into four heads- Political crises, Physical breakdown, Internal subversion, Non-compliance with constitutional directions of the Union Executive
  - The verdict allows the Supreme Court to investigate claims of malafide in the Governor's report.
- o **Punchhi Commission recommendations (2007)**
  - The governor should invite the leader of "a pre-poll alliance commanding the largest number" or the "largest single party" to form the government in case no party or pre-poll coalition has a clear majority.

Way Forward

- ✦ **Appointment Procedure**: A committee can be formed for appointment consisting of the Prime Minister, the Home Minister, the Speaker of the Lok Sabha and the Chief Minister of the State concerned.
- ✦ **Non-Partisan Stand:** The priority of governor should be the interests of state along with ensuring the link between the state and the centre in a smooth way.
- ✦ **Coming up with a Code of Conduct:** There is a need to devise a 'Code of Conduct' that should define certain 'norms and principles that should guide the governor's discretion and constitutional mandate.

Conclusion

In the context of the federal structure of the Indian Constitution and to regulate conflicts in federalism, the role of governor is crucial for the successful working of the constitutional democracy. Governor must refrain from aligning with any political ideology. The real power is vested in the hands of council of ministers headed by chief minister and they are representatives of people. The governor is not and should not be projected as an independent power centre and rather should work in coordination.

> **PEPPER IT WITH**
> Veto power, chief minister, council of ministers, hung assembly

Crackdown on Child Marriages

Child marriage ends childhood. It negatively influences children's rights to education, health and protection. These consequences impact not just the girl directly, but also her family and community.

News Excerpt

The Assam government recently launched its crackdown on child marriage.
Supreme Court is set to look into whether the age limit for marriage under the Prohibition of Child Marriage Act overrides Muslim personal law provisions, so long referred to by courts in such cases.

Pre-Connect

What is Child Marriage?

- It refers to any formal marriage or informal union

between a child **under the age of 18** and an adult or another child.

* **The Prohibition of Child Marriage (Amendment) Bill, 2021**, fixes **21 years** as the marriageable age for women.

Why is this concerning?

* There are concerns over the retrospective arrest of men under the **POCSO Act and the Prohibition of Child Marriage Act.** People are worried that the crackdowns will disproportionately affect the poor and the minority communities and will only push the problem under the radar and impede long-term solutions.

Action	Minimum Age
Voting	18
Driving License	18
Signing a contract	18
Criminal liability	18: persons in 16 - 18 year group can be tried as adults for heinous offences
Contesting elections	Lok Sabha: 25; Rajya Sabha: 30; President: 35;
Source: Given in endnote 10: PRS	

Protection of Children from Sexual Offences (POCSO) Act:

➤ The POCSO Act was enacted in 2012. It criminalizes sex between a minor and an adult and defines a child as someone under the age of 18. The law does not recognize a minor's consent as valid.

➤ It is a gender-neutral act and recognizes that boys can also become victims of sexual violence.

➤ It also specifically lays down stringent punishment for exposing children to or using them to create child sexual abuse material.

➤ The Act penalizes storage of pornographic material for commercial purposes with a punishment of up to 3 years, a fine, or both.

➤ The law lays down the procedures for reporting sexual crimes against children. It places the burden of proof on the accused, following **'guilty until proven innocent'** unlike the IPC.

➤ Sexual assault under POCSO is a **non-bailable, cognizable offence** which means that the police can arrest without a warrant.

➤ **Section 19** of the POCSO Act imposes a

➤ "**mandatory reporting obligation**" which requires every person who suspects or has knowledge of a sexual offence being committed against a child must report it to the police or the Special Juvenile Police Unit. Failure to do so will result in imprisonment, a fine, or both.

➤ The mandatory reporting obligations also require doctors to report cases where minor girls seek medical services during pregnancies.

Assam Data:
* **Maternal mortality rate in Assam:** Assam has the highest maternal mortality rate in the nation, with **195 fatalities** per one lakh live births in the years 2018 to 2020.
* **Infant mortality rate in Assam:** With **32 newborn** deaths for every 1,000 live births, Assam has the third highest infant mortality rate, according to the National Family Health Survey-5.
* **Government's aim to address the issue**: The Assam government has declared that its aim is to con front the high maternal mortality and infant mortality rates in the state, which it has linked to early mother hood.

Prohibition of Child Marriage Act 2006

➤ The act says that child marriages are illegal but not void. They are voidable only when the minor partner asks the court to declare the marriage void.

➤ It prescribes 18 and 21 years as the minimum marriageable age for women and men respectively. It punishes child marriage with imprisonment which may extend to 2 years or with a fine which may extend to Rs 1 lakh or both. The punishment also extends to anyone who performs or conducts any child marriage.

Muslim legal age of marriage under personal law:

➤ Under Muslim personal laws, the marriage of a bride who has attained puberty is legal.

➤ The age gap difference provision between Muslim personal law and special legislation prohibiting child marriages or the sexual activity of minors classifying it as a criminal offence.

What is the Central Government's Stand?

o In 1978, the government increased age of marriage to 18 for girls and 21 for men and before that it was 15 years for female and 18 for men since independence.

o Indian Parliament enacted several laws including the **Prohibition of Child Marriage Act, 2006** and **the Protection of Children from Sexual Offences Act, 2012**, to protect the human rights of Children.
o **Beti Bachao Beti Padhao** to address the declining Child Sex Ratio.
o **PM Matru Vandana Yojana (PMMVY)** Providing Cash incentives for improved health and nutrition to pregnant and nursing mothers.
o **Scheme for Adolescent Girls** aims at girls in the age group 11-18, to empower and improve their social status through nutrition, life skills, home skills and vocational training
o **Pradhan Mantri Mahila Shakti Kendra** scheme promotes community participation through the involvement of Student Volunteers for the empowerment of rural women
o **National Crèche Scheme** to provide daycare facilities to children of the age group of 6 months to 6 years of working women who are employed.
o **Rashtriya Mahila Kosh (RMK)** to provide micro-credit to poor women for various livelihood support and income-generating activities at concessional terms
o **Swadhar Greh** provides relief and rehabilitation to destitute women and women in distress.
o **Ujjawala** is a Comprehensive Scheme for the prevention of trafficking and rescue, rehabilitation, reintegration and repatriation of victims of trafficking for commercial sexual exploitation.
o **Working Women Hostels** for ensuring safe accommodation for women working away from their place of residence.
o **One-Stop Centre (OSC) and Women Helpline (WH)** are

Parent/Primary Caregiver Characteristics	Child Characteristics	Contextual & Sociocultural Characteristics
Examples: Age Gender Personality Mental Health Development History Knowledge Beliefs	*Examples:* Behavior Temperament Age Health Skills Gender	*Examples:* Culture Social Network School Work Setting Neighborhood

Parenting

What are the Personal Laws of Other Religions?
✓ **The Hindu Succession Act of 1956** lays out guidelines for property inheritance among Hindus, Buddhists, Jains and Sikhs.
✓ **The Parsi Marriage and Divorce Act of 1936** lays out rules to be followed by the Parsis according to their religious traditions.
✓ **The Hindu Marriage Act of 1955** codified laws related to marriage among Hindus.

Committee/Convention	Recommended age	Rationale/observations
UNICEF (2020)	18 for both male and female	• A person is emotionally, physical and mentally mature to marry at 18.
The United Nations Convention on the Rights of the Child (2016)	18 for both male and female	• Should be equal to the age of majority
Parliamentary Committee (while examining the 2004 Bill, which later became the 2006 Act)	21 for male, 18 for female	• Two different age have been accepted socially as well as culturally in the country; however, it also observed that conflicting definition of child in different legislation may cause confusion, ambiguity, and doubt.
Law Commission of India	18 for both male and female	• There is no scientific reasons for the age be different (2008). • Age of majority grants all citizens the right to choose their governments, the legal age of marriage should also be recognised as such (2018).

being implemented to facilitate access to an integrated range of services including medical aid, police assistance, legal aid/ case management, psychosocial counselling and temporary support services to women affected by violence.

- **Emergency Response Support System** set up under Nirbhaya Fund.
- **Mahila Police Volunteers**, to report the incidences of violence against women.
- **The dowry Prohibition Act, of 1961**, Penalizes Giving & taking.
- **SABLA Scheme**, Providing life Skills and Supplementary nutrition to out-of Schoolgirls
- The national database on Sexual offenders includes the name, addresses, photographs and fingerprint details of those Convicted in Sexual assault Cases.
- National Policy for Women, 2016-Addresses women's issues throughout life-Cycle, issues from education, health, economic participation, decision making, violence, Creation of an enabling environment etc.
- In 2020, **the Jaya Jaitly Committee** was established by the **Ministry of Women & Child Development** which also recommended the same in light of factors like reproductive health, education, etc.
- In 2021, the Central government sought to introduce **the Prevention of Child Marriage (Amendment) Bill 2021**, to increase the manageable age for women across all religions, from **18 to 21 years**.
- As per the **Union Minister for Women and Child Development** this Amendment will apply to all communities in the country and once enacted, will supersede existing marriage and personal laws.

> **What are Juvenile JusticeBoards**
> **About:** Juveniles accused of a crime or detained for a crime are brought before the Juvenile Justice Board (JJB) under the Juvenile Justice (Care and Protection of Children) Act,2015.
> **Aim:** To hold a child culpable for their criminal activity, not through punishment, but counseling the child to understand their actions and persuade them away from criminal activities in the future.
> **Structure:** The JJB consists of judicial magistrate ofthe first class and two social workers, at least oneofwhomshouldbeawoman.
> **Tenure**: The tenure period for members of theboard is 3 years. However, members can also beappointed consecutively for a maximum of twoterms.
> **Powers:** The Bench shall have all the powers conferred by the Code of Criminal Procedure,1973 on a Metropolitan Magistrate or a Judicial Magistrate First Class. The onus of sensitizing and providing training to all the Board Members lies on the State Government.

Way Forward:

- The issue of increasing the age of marriage for women must be supported with other measures that help delay underage marriages such as access to education and improving women's safety.
- The main reasons behind the practice of child marriage can be summed up as social customs, tradition, illiteracy, poverty, low status of women in society, and lack of awareness. These issues cannot only be tackled by legislative interventions.
- More awareness needs to be generated to make more children come forward for their child abuse and their should also be proper training which can enhance of conviction rate.
- The introduction of sex education in schools and educating the children about good touch and bad touch is significant. Their needs to be improved access to **education, skill training and employment opportunities, safety for women and strengthening maternal health services** to reduce maternal and infant mortality rates.
- We need to adopt a comprehensive approach to curb the factors closely related to child marriage, including poverty eradication, better education and public infrastructure facilities for children and raising social awareness on health, nutrition, regressive social norms and inequalities.

> **PEPPER IT WITH**
> The United Nations (UN)Convention on Consent to Marriage (1962), Minimum Age for Marriage and Registration of Marriages (1962)
> The UN Convention on the Elimination of All Forms of Discrimination against Women (1979)
> The Beijing Declaration (1995)

Conclusion:

The government should attempt the visionary and practical solution of the campaign Beti Bachao, Beti Padhao. The efforts of the Union and State Governments, NGOs etc have led to a sharp decline in the instances of child marriages. However, all stakeholders should continue their efforts till this evil practice is eliminated completely.

Law for Treating Juvenile as an Adult

News Excerpt

The National Commission for Protection of Child Rights (NCPCR) has come up with draft guidelines on the preliminary assessment of whether certain minors are to be tried under law as adults in particular cases, under the Juvenile Justice (Care and Protection of Children) Act.

Pre-Connect

Juvenile Justice Act, 2015

- The JJ Act, 2015 replaced the Indian juvenile delinquency law, Juvenile Justice (Care and Protection of Children) Act, 2000. It came into force from 15January 2016.
- It allows for juveniles in conflict with Law in the age group of 16– 18, involved in Heinous Offences, to be tried as adults.
- The Act also sought to create a universally accessible adoption law for India.
- Under **Section 15 of The Juvenile Justice (Care and Protection of Children) Act, 2015, Juvenile Justice Board shall conduct a preliminary assessment to determine whether to try such a child as an adult or a minor.**
- The Act directs that the Board shall consider the mental and physical capacity of the child for committing the alleged offence, the ability to understand the consequences of the offence, and the circumstances in which the offence was committed.

> Aim of the preliminary assessment is not to seek confession from the child nor to reach at a conclusion of any sort.

Why has the NCPCR come up with draft guidelines now?

- On July 13, 2022, the Supreme Court said in a case related to the murder of a Class 2 student in Haryana, allegedly by a 16- year-old, that the task of preliminary assessment under the J J Act is a "delicate task".
- The Supreme Court, which found procedural lapses in the JJB's proceedings. And it left the matter to the board to decide if a psychological evaluation would be relevant at this point of time.
- After the reassessment, the JJB ordered for treating the accused juvenile as an adult.

Key highlights of draft guidelines

The draft relying on already existing provisions in the JJ Act states that the preliminary assessment has to determine four aspects:

- **Mental capacity**: To determine the child's ability to make social decisions and judgments. It also directs assessments pertaining to mental health disorders, substance abuse, and life skills deficits.

- **Physical capacity**: To determine the child's

> **Sec-15 of JJ Act**
> Earlier, all children under the age of 18 were considered minors by the law, but through an amendment in 2015, a provision was added to the JJ Act for trying a child in conflict with the law as an adult.
> Under this, a child in the age group of 16-18 years could be tried as an adult in case of heinous offences. Section 15 (1) of the Act states that the Juvenile Justice Board shall conduct a preliminary assessment to determine whether to try such a child as an adult or a minor.
> **Heinous crime**: If attracts minimum penalty of 7 years imprisonment under any existing law.
> **Serious crime**: If imprisonment between 3 to 7 years is given.
> **Petty crime:** If penalized up to 3 years of imprisonment

'loco motor' abilities and capacities, particularly with regard to gross motor functions such as walking, running, lifting, throwing, such abilities as would be required to engage in most antisocial activities.

- **Ability to understand consequences**: To determine the child's knowledge or understanding of the alleged offence's social, interpersonal and legal consequences.

- **The circumstances of the offence:** Psychosocial vulnerabilities of the child. This is to include life events, any trauma, abuse, and mental health problems, stating that the offence behavior is a cumulative consequence of a lot of other circumstances.

- **Miscellaneous:** Other reports t nehat the Board is to rely on include the **Social Investigation Report, Social Background Report an Individual Care Plan, statements of witnesses** and **interaction with parents, guardians, school staff, peer groups** and **neighbors.**

The procedure:

- Prior to deciding if the child should be tried as an adult, the JJB must conduct a preliminary assessment based on the above criteria.
- The assessment is required to be done within three months from the date of first production of the child before the JJB.
- In this regard, the Supreme Court held that when the JJB does not comprise a practicing professional with a degree in child psychology or child psychiatry, it would have to mandatorily seek the assistance of experts.

What happens when a juvenile is ordered to betreated as an adult?

- ✓ Once the JJ Board decides in favor of treating ajuvenile as an adult, the case is transferred to the children's court.
- ✓ As per Section 19 of the JJ Act, 2015, the children's court can pass a decision on whetherthere is a need for trial of the child as an adult, or otherwise.
- ✓ A children's court has to ensure that the child in conflict with the law is sent to a "place of safety" until he reaches the age of 21 years, and is only then transferred to jail.
- ✓ The court can also order the conditional release of the child after he attains the age of 21 years.
- ✓ Two important protections that do not extend to a child who has been tried as an adult:
- ✓ Protection from disqualification
- ✓ Erasure of conviction record after a reasonable period
- ✓ If the child is tried as an adult, the sentence can go up to life imprisonment, but if the child is tried by the board as a juvenile, the maximumsentence can only be three years in a special home.

"If you want real peace in the world, start with the children." – Mahatma Gandhi

Challenges of trial of Minor as an Adult

- The system of preliminary assessment has become synonymous with psychological assessment and JJBs are not paying attentionto other factors.
- The law has no provision for seeking consent of the child or their guardians before subjecting them to intrusive assessment, nor are the children informed that the assessment could amount to waiving their constitutionally protected right against self-incrimination.
- The effects of being "tough on crime" meanthat there is likely to be longer delays in the court process, longer time spent in pre- incarceration, exposure of juveniles to adult offenders, problems with controlling prison populations, and denial of needed services to juveniles.
- The tendency of a convicted criminal to reoffend, locking children up for years will extend their incarceration well beyond the time needed for them to be rehabilitated.

Way forward

- Specific training in child protection rules should be imparted to district administration as they are not trained or equipped to deal with these specific laws.
- To ensure safety of the Children's, a close coordination is mus for District Administration with all five bodies – CWC, JJ Board, CCI, district child protection units and special juvenile police units.
- The juvenile justice act was initially made and brought into line with the international convention on the subject of the juvenile justice seeking reform of how to treat the youngsters who are in crime in order to reform

Role of Child Rearing Practices

Juvenile delinquency is one of the emerging concerns. In the era of globalization, it has been indicated that the nature of offenses are becoming more violent. Since the widespread of juvenile delinquency has become a social problem, it has become extremely important to study this problem and to evaluate **the influence of parenting styles** as an underlying cause of this behavior.

From this perspective, good parenting is authoritative in which parents keep eyes on their children and try to understand the mindset of their children. **Parents should opt for authoritative rather than authoritarian parenting style.**

We can do better in the communitieseither by diverting the kid completelyfrom being locked up or by supportingthem post-release.

PEPPER IT WITH
- The Protection of Children from Sexual Offences Act (POCSO), 2013
- Child Labor (Protection and Regulation) Act, 2016
- United Nation Convention on the Right of the Child (UNCRC)
- National Commission for Protection of Child Rights, 2005

Page 10
www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

so that they don't waste the rest of their life.

Conclusion

The Juvenile Board through the preliminary assessment report should be sensitive not to violate the basic principles as, **the Principle of Presumption of Innocence**, **Principle of Dignity and Worth, and the Principle of Best Interest**. It is critical to include experienced psychologists in the Juvenile Board to determine the mental capacity and maturity of the CICL. It is the need of the hour for the justice delivery system to consider restorative justice in dealing with juvenile justice.

Doctrine of Basic Structure of the Indian Constitution

News Excerpt

The Vice-President of India sparked a debate over the doctrine of separation of powers by citing the Supreme Court's landmark 1973 Keshavananda Bharati case, which ruled that Parliament has the authority to amend the Constitution but not its basic structure.

Pre-Connect

What is the basic structure doctrine?

- The Doctrine of Basic Structure is a form of judicial review that is used to test the legality of any legislation by the courts.
- The doctrine was evolved by the Supreme Court in the 1973 landmark ruling in **Kesavananda Bharati v State of Kerala**. In a 7-6 verdict, a 13-judge Constitution Bench ruled that the 'basic structure' of the Constitution is inviolable, and could not be amended by Parliament.
- **Article 368** of the Constitution gives the impression that Parliament's amending powers are absolute and encompass all parts of the document. But the Supreme Court has acted as a brake to the **legislative enthusiasm** of Parliament ever since independence.
- With the intention of preserving the original ideals envisioned by the constitution- makers, the apex court pronounced that Parliament could not distort damage or alter the basic features of the Constitution under the pretext of amending it.
- The phrase **'basic structure'** itself cannot be found in the Constitution. The Supreme Court recognized this concept for the first time in the historic Kesavananda Bharati case in 1973.

What are the basic features of the Indian Constitution?

- In the Kesavananda ruling, the Supreme Court cited several aspects of the Constitution that could be identified as "**basic features**" of the document but added that it was not an exhaustive list.
- For example, **judicial review, rule of law, federalism, and democratic republic structure** are identified as basic features.

> **The three rulings**
>
> - Two brothers from the Golak Nath family in Punjab approached the Supreme Court, claiming that their constitutional rights had been violated. The court ruled that Parliament had no right to abrogate or abridge fundamental rights through amendment.
> - The Indira Gandhi-led government nationalized 14 major banks in 1969 and paltry compensation was made payable in bonds that matured after 10 years. This was struck down by the Supreme Court, although it upheld the right of Parliament to nationalize banks and other industries.
> - In 1970, the government abolished Privy Purses, a guaranteed payment to erstwhile rulers, included by the Constituent Assembly at the behest of Sardar Patel. This was also struck down by the Supreme Court.

- In the 2015 ruling where the Supreme Court struck down **the National Judicial Appointments Commission Act** and the related Constitutional Amendment, "**judicial independence**" was identified as a basic feature of the Constitution.
- The five-judge bench struck down the amendment passed with an overwhelming majority by the Parliament (with just one member abstaining) by applying the basic structure doctrine. This, the Vice President referred to as the judiciary undermining the sovereignty of the Parliament**.**

How did it evolve?

- The Kesavananda Bharati case was the culmination of a conflict between the judiciary and the then-Indira Gandhi-led government. In **I.C. Golak Nath v. State of Punjab (1967)**, the Supreme Court held that Parliament could not curtail fundamental rights guaranteed under the Constitution.

www.ksgindia.com

DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- The term 'basic structure' was first used in this case, by lawyer M.K Nambyar. Basing his arguments off a principle expounded by German thinker Dieter Conrad, Mr. Nambyar contended that Parliament had no power to amend the fundamental rights under Part III of the Constitution. It was, however, a few years later that the concept was outlined in a Supreme Court ruling.

- The then government enacted a series of constitutional amendments following successive rulings against it. **The 24th Constitutional (Amendment) Act, 25th Constitutional (Amendment) Act and 29th Constitutional (Amendment) Act** gave Parliament uncontrolled power to alter or even abolishes any fundamental right.

- In 1970, Kesavananda Bharti, the head of a math in Kerala, challenged the Kerala Land Reforms Act related to restrictions on the management of religious property. The case was heard by the largest-ever Constitution Bench of 13 judges.

- The verdict also made it clear that judicial review was only part of a "**system of checks and balances**" to ensure constitutional functionaries do not exceed their limits.

- **Judicial review** is of **paramount importance in a federal Constitution**. Indeed it has been said that the heart and core of a democracy lies in the judicial process.

Criticism of the doctrine

> ### What is the Doctrine of Separation of Powers?
> - **Separation of powers** is the division of the **legislative, executive, and judicial functions of government.**
> - **Article 50** says that states shall take steps to separate the Judiciary from the Executive.
> - The constitutional demarcation precludes the concentration of excessive power by any branch of the government.
> - The Indian Constitution lays down the structure and defines and determines the role and functions of every organ of the State and establishes norms for their inter- relationships and **checks and balances.**

- The legitimacy of the term "basic structure" and the theory underpinning its doctrinal creation is still seen as an abstract idea in certain quarters, since it is missing from the text of the Constitution.

- The Supreme Court has been accused time and again of pronouncing judgments that are often termed as judicial legislation.

- The Basic Structure Doctrine lies in the thought that the doctrine is unsuitable and even destructive to constitutional legitimacy.

- It grants power to the judiciary that allows it to impose its philosophy on a government that is formed democratically leading to **judicial overreach**.

> ### Pepper it with
> NJAC, the 103rd Constitution Amendment Act, Judicial activism-overreach-restraint.

- The Judiciary (Supreme Court), through its judgment, has now become the third decisive chamber of the Parliament. Even if an amendment is passed by Lok Sabha and Rajya Sabha, it is the Supreme Court that takes the final decision to uphold it.

Over the years, the courts have clarified the basic structure, including that of the "**primacy to the opinion of the Chief Justice of India in judicial appointments and transfers in the context of the independence of the judiciary** as a part of the basic structure of the Constitution to secure the rule of law essential for preservation of the democratic system".

Conclusion

As The Vice-president quoted, Democracy sustains and blossoms when the legislature, the judiciary and the executive act in tandem and togetherness to fructify constitutional goals and realize aspirations of the people. Judiciary cannot legislate in as much legislature cannot script a judicial verdict.

Section 6A Citizenship Act

News Excerpt

As Citizenship issue gets more controversial in Assam, a constitution bench of the Apex Court will examine the constitutional validity of Section 6A of the Citizenship Act.

Pre-Connect

Understanding Section 6A of Citizenship Act

- The section was inserted in to the Citizenship Act, 1955, after the tripartite agreement between the

Centre, the Assam government and the All-Assam Students Union was signed in 1985, known *as "Assam Accord"*.

· Under Section 6A of the Act, a special provision for Assam was created under which:

  o A person who entered between **January 1, 1966, and March 25, 1971,** and who are residing in the state, upon being detected as foreigners, will be allowed to register.

  o After registration, such a person will have the same rights and obligations as a citizen of India, but will not be entitled to be included in any electoral roll for a period of 10 years.

  o Foreigners who had entered Assam before January 1, 1966, and been **"ordinarily resident"** in the State, would have all the rights and obligations of Indian citizens including the right to vote.

About the National Register of Citizens (NRC)

  o NRC is the register containing names of Indian citizens.

  o After conducting the Census of 1951, the National Register of Citizens (NRC) was prepared by recording particulars of all the persons enumerated during the 1951 Census.

  o The Citizenship (Registration of Citizens and Issue of National Identity Cards) Rules, 2003 called for the updating of the NRC

  o It has been implemented for the state of Assam starting in 2013–2014.

  o The Government of India announced plans to implement it for the rest of the country in 2021, but it has not yet been implemented.

What was agreed upon in the Assam Accord?

  ➤ Assam saw massive political instability, the breakdown of the state government, the president's rule, and tremendous ethnic bloodshed between 1979 and 1985.

  ➤ The government's elections were boycotted, and violence based on linguistic and tribal identities killed thousands throughout the state.

  ➤ Finally, to deal with the issue, the then-Union government signed the Assam Accord on 15 August 1985, a Memorandum of Settlement (MoS) with the agitation leaders.

As per this accord:

  ➤ Only those foreigners who arrived in Assam between 1951 and 1961 will be granted full citizenship which would include the opportunity to vote.

  ➤ Those migrants who arrived after 1971 will be deported.

  ➤ Immigrants who immigrated between 1961 and 1971 willhave citizenship privilege but will be denied voting rights for 10 years.

What is the current issue?

  ✓ Several petitions in the Supreme Court have been brought in recent years challenging the constitutionality of Section 6A of the Citizenship Act.

  ✓ This is because the new central government rule contradicts Article 6 of the Constitution. Furthermore, it states that the cut-off date for determining citizenship in India is July 19, 1948.

  ✓ Several Assamese organizations, including **Assam SanmilitaMahasangha, Assam Sahitya Sabha**, **Assam Public Works**, and **All Assam Ahom**, have challenged Section 6A of the Act in court, claiming that the section discriminates against migrants in the country.

Why is the Assam Accord so important to the state andits people?

  ✓ The Accord brought stability and closure to the phase of **great violence and anxiety** in Assam.

  ✓ It addressed the apprehensions of the Youth who saw a direct threat to their future from the illegal influx of foreigners into the state.

  ✓ As the moment was led by the students it created a generation of future leaders form Assam who are close to ground realities and sensitive to people needs.

Constitutional Provisions

· Citizenship is listed in the union list; thus it come sunder exclusive jurisdiction of parliament.

· The term 'Citizen' is not defined in the constitution, but Categories of persons who are entitled to citizenship are given in Part-2 (Articles 5-11).

· Article-11 empowers Parliament to make any provision with respect to the acquisition and termination of citizenship and all matters relating to it.

Conclusion:

Though the accord did bring about a change in the political situation, but the problem of illegal immigration continued to threaten the distinctive culture and identity of the North-eastern states. The Supreme court needs to decide on matters related to the Citizenship Amendment Act to provide clarity on pertinent questions regarding citizenship.

Living Will

News excerpt

A five-judge bench of the Apex Court, agreed to significantly ease the procedure for passive euthanasia in the country by altering the existing guidelines for 'living wills', as laid down in its 2018 judgment *in Common Cause vs. Union of India & Anr, which allowed passive euthanasia.*

Pre-Connect

What is Euthanasia?

· It refers to the practice of **an individual deliberately ending their life**, oftentimes to get relief from an incurable condition, or intolerable pain and suffering. Euthanasia, which can be administered only by a physician, can be either 'active' or 'passive.

· Active euthanasia involves an active intervention to end a person's life with substances or external force, such as administering a lethal injection. Passive euthanasia refers to withdrawing life support or treatment that is essential to keep a terminally ill person alive.

· Passive euthanasia was legalized in India by the Supreme Court in 2018, contingent upon the person having a '**living will**' or a written document that specifies what actions should be taken if the person is unable to make their own medical decisions in the future.

· In case a person does not have a living will, members of their family can make a plea before the High Court to seek permission for passive euthanasia.

What is living will?

· It refers to a written document that a person uses to give his explicit instructions in advance about the medical treatment to be administered if he becomes incompetent or is unable to communicate.

Who can make a Living Will?

o An adult with a sound and healthy mind. It should be voluntarily executed and based on informed consent.

o It should be expressed in specific terms in a language "a**bsolutely clear and unambiguous".**

What it should contain?

o The circumstances in which medical treatment should be withheld or withdrawn.

o It should specify that the Will can be revoked any time.

o It should give the name of the "**guardian or close relative**" who will give the go-ahead for starting the procedure of passive euthanasia

o If there is more than one Living Will, the latest one will be valid.

o It should say that the patient has understood the consequences of executing such a document.

o If there is more than one valid Advance Directive, the most recently signed Advance Directive will be considered as the last expression of the patient's wishes and will be implemented.

How to preserve it?

THE CHANGES BROUGHT

	NOW	EARLIER
Living will	An attestation by a notary or a Gazetted officer to be sufficient for a living will	It was necessary that a judicial magistrate attest or countersign a living will
Access to the living will	Living will a part of national health record which can be accessed by Indian hospitals	Living will was kept in the custody of the district court concerned
Primary board to examine patient's condition	Three doctors, including treating physician and two other doctors with five years of experience in the specialty, will comprise the primary board of doctors	Primary board of doctors needs at least four experts from general medicine, cardiology, neurology, nephrology, psychiatry or oncology with overall standing of at least 20 years
Time taken to decide	Primary/secondary board to decide within 48 hours on withdrawal of further treatment	The 2018 judgment did not specify any outer limit on withdrawal of treatment
Secondary board	Hospital must immediately constitute a secondary board of medical experts	The district collector had to constitute the second board of medical experts

✓ The Will shall be attested by two independent witnesses and It should preferably be counter-signed by the Judicial Magistrate First Class (JMFC) who is assigned the jurisdiction by the District Court.

✓ The JMFC shall preserve one hard copy, along with one in the digital format, in his office.

✓ JMFC shall forward a copy of the Will to the Registry of the District Court

✓ JMFC shall inform the immediate family of the executor, if not informed.

✓ A copy will be handed over to an official in the local government or Municipal Corporation or municipality or panchayat concerned. This authority shall nominate a custodian for the Living Will.

> **Countries with Euthanasia:**
> o **Netherland, Luxembourg, Belgium** allows both euthanasia and assisted suicide for anyone who faces "**unbearable suffering**" that has no chance of improvement.
> o **Switzerland** bans euthanasia but allows assisted dying in the presence of a doctor or physician.
> o **Canada** had announced that euthanasia and assisted dying would be allowed for mentally ill patients by March 2023 however, the decision has been widely criticized, and the move may be delayed.
> o **United States** has different laws in different states. Euthanasia is allowed in some states like **Washington, Oregon, and Montana.**

Supreme Court Judgment

o The Supreme Court allowed passive euthanasia in India and the rights of persons, including the terminally ill, to give advance directives to refuse medical treatment permissible.

o A Constitution Bench which recognized **'right to die'** with dignity as a part of fundamental right to life under **Article 21** of Constitution, laid down clear guidelines for **'living will'.**

o The Bench in three simultaneous opinions, upheld that the fundamental right to life and dignity includes right to refuse treatment and die with dignity.

o The Court recognized that a terminally-ill patient or a person in persistent vegetative state can execute an **"advance medical directive"** or a **"living will"** to refuse medical treatment, saying the right to live with dignity also includes **"smoothening"** the process of dying.

Government's take on SC judgment

o The government had opposed the concept of Living Will and the **Medical Power of Attorney** in case of terminally ill patients.

o The government said legalization of '**advance directives'** would amount to waiving off the paramount fundamental right to life enshrined under Article 21 of the Constitution.

o The government was opposing the concept of **'Living Will'** as **a principle of public policy**. It said the State's primary obligation is to sustain life and not legalize a person's wish to die.

o Based on it, the government is already finalizing draft law on passive euthanasia called '**The Management of Patients with Terminal Illness** – **Withdrawal of Medical Life Support Bill'.**

Complications with 'living will'

> **Words of Immanuel Kant**
> The proponent of the principles of ethics which form the basis of medical ethics. He argued that morality can't be based on happiness; moral principles have to be derived from practical reason alone.

↓ There are legal, moral and philosophical implications when its comes to the issue of living will:

↓ **Legal** –Right to Die is not covered under Right to Live under Article 21 and therefore a living will contravene this stand.

↓ **Rights** –This would acknowledge the patient' sautonomy and self-determination to the point of legalizing a wish to die.

↓ **Social** –Misuse of the provision can lead to the abuse and neglect of the elderly. But at the same time it would relieve the close family members, of a terminally ill patient, of the moral burden of making a life-ending decision.

↓ A living will would also rule out the possibility of doubting the life terminating decision as a murder.

Conclusion

Given the varied thoughts, the laws related to living will have to be framed considering the evolution of science & technology and the knowledge of the existing laws prevalent over the globe. It should keep in mind that the right of a dying man is to die with dignity when life is ending and in the case of a terminally ill patient or a person in a persistent vegetative State (PVS), where an independent medical board examine the health of the person to establish the validate a decision there is no hope of recovery, accelerating the process of death for reducing the period of suffering constitutes a right to live with dignity.

> **Pepper IT WITH**
> Arun a Ramchandra Shanbaug versus Union of India 2011
> Gyan Kaur versus the State of Punjab

Chargesheet-Nota Public Document

News excerpt

Recently, the Supreme Court said that the state is not obliged to provide the public free access to charge sheets by uploading them on police or government websites. The Court said that putting up charge sheets for public viewing would violate the rights of the accused, victims, and the investing agency.

Pre-Connect

What is a Charge sheet?

· It refers to a formal police record showing the names of each person brought into custody, the nature of the accusations, and the identity of the accusers. The charge sheet contains majorly 4 parts
  o Information about the accused and the witnesses
  o The charges and specifications
  o The preferring of charges and their referral to a summary
  o For the trial record
· The charge sheet is to be filed within 60 days from the date of arrest of the accused in cases triable by lower courts and 90 days in cases triable by the Court of Sessions.
· No case for grant of bail will be made under **section 167(2) of the CrPC** if the charge sheet is filed before the expiry of 90 days or 60 days, as the case may be, from the date of first remand.
· A charge sheet is distinct from the FIR, which is the core document that describes a crime that has been committed.
· Charge sheet usually refers to one or more FIRs and charges on an individual or organization for the crimes specified in those FIR.
· Once the charge sheet has been submitted to a court of law, prosecution proceedings against the accused begin in the judicial system.

What is the First Information Report?

· F.I.R. means any information recorded by an on-duty officer given by an aggrieved person or any other person either in writing or made orally about the commission of a Cognizable Offence.
· Based on the information provided, an F.I.R. can be registered by the Judicial Magistrate by giving direction to the concerned jurisdictional area of the Police Station.
· Zero F.I.R.: With the help of zero F.I.R., a complaint can be lodged at any police station irrespective of the jurisdiction of the Police Station. It is an amendment that came after Nirbhaya Rape Case.

Why is charge sheet not a Public Document?

➤ Under Section 173 CrPC, a charge sheet is the final report prepared by police officer or investigative agency after completing their investigation of a case.
➤ Charge sheet cannot be made publicly available as it's not a 'public document' under Sections 74 and 76 of the Evidence Act, 1872.

> **Related topics**
> **Default Bail:** It is a sort of a **rap on the knuckles** of the police for not completing the investigation and filing the final report within 90 or 60 days of the first remand of the accused.
> **Cognizable offence**: Cognizable offence means an offence for which, a police officer may, in accordance with the First Schedule or under any other law for the time bell in force, arrest without warrant. Cognizable offences are usually serious in nature.

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

> The Court ruled that a charge sheet filed against an accused in a criminal case is not a public document within the meaning of the Right to Information Act 2005 or the Indian Evidence Act.
> It declared charge sheets to be private documents.
> It has been held that putting up charge sheets for public viewing would violate the rights of the accused, victims and even the investigating agency.

RISING BURDEN OF CANCER IN INDIA

	Incidence		Mortality
2020	13.92 lakh		7,70,230
2021	14.26 lakh		7,89,202
2022	14.61 lakh		8,08,558
2025*	15.59 lakh		

*Source: National Cancer Registry data presented in Parliament, ICMR National Centre for Disease Informatics and Research study; *Estimated*

ESTIMATED INCIDENCE
IN 2020 (PER 100,000)

94.1 Male   103.6 Female

COMMON SITES

- Lung, mouth, prostate, tongue, and stomach (36% of all cancers)
- Breast, cervix, ovary, uterus, lung (53% of all cancers)

> It would also violate the scheme of the Code of Criminal Procedure.
> It impacts in ushering transparency in the criminal justice administration.
> The Supreme Court's order is a wake-up call to all investigating agencies, including the Central Bureau of Investigation, which have often been assaulted by courts for delays in filing a charge sheet or for the poor quality of investigation.
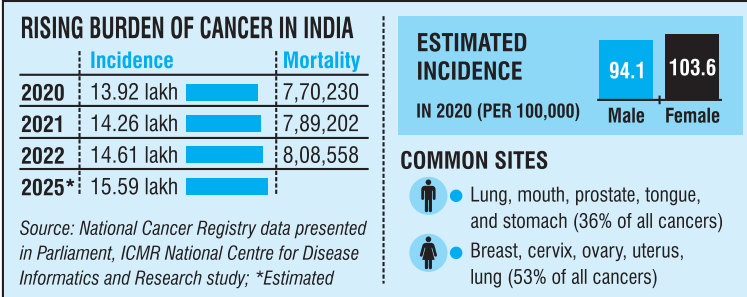
What are the contradictions?

> **Youth bar association of India Vs Union of India (2016)** - The Court directed that the FIR should be on the relevant investigating agency's website within 24 hours of its registration for public perusal and appropriate action.
> **FIR Vs Charge sheet** - The SC differentiated the charge sheet from the FIR stating that the latter had vital information such as a list of prosecution witnesses.

What is the need for the disclosure of charge sheets?

> **Filed after due investigation** - There is a need to disclose the charge sheets as they were filed after due investigation unlike First Information Reports (FIRs) which were based on unsubstantiated allegations.
> **Evaluate the quality of an investigation** - The prospect of critical analysis by a rank outsider has the potential to enhance the soundness of an investigation and prevent biased prosecution against innocents.

Conclusion

Court scrutiny is a good feature in India's criminal justice system that reasonably ensures that false prosecution of an innocent individual is only an aberration and not a rule. A chance for well-meaning members of the public to study a charge sheet, at least in important cases before a trial begins, will only ensure that prospects of loosely framed charge sheets will be fewer in number.

SOCIAL ISSUES

Cancer in India

News Excerpt

According to a recent report by the American Cancer Society, deaths due to cancer have declined by 33% in the United States since 1991. The success of this achievement can be attributed to early detection, lower rates of smoking, and improvements in cancer treatment.

Pre-Connect

- According to WHO, cancer is a leading cause of death worldwide, accounting for nearly **10 million deaths in 2020, or nearly one in six deaths**.
- The most common cancers are breast, lung, colon and rectum and prostate cancers.
- Around one-third of deaths from cancer are due to tobacco use, high body mass index, alcohol consumption, low fruit and vegetable intake, and lack of physical activity.
- Cancer-causing infections, such as human papillomavirus (HPV) and hepatitis, are responsible for approximately 30% of cancer cases in low- and lower-middle-income countries.
- Many cancers can be cured if detected early and treated effectively.

How does a Cancer develop?

- Cancer is a disease in which some of the body's cells grow uncontrollably and spread to other parts of the body.
- Cancer can start almost anywhere in the human body, which is made up of trillions of cells.
- Cancer is a genetic disease—that is, it is caused by changes to genes that control the way our cells function, especially how they grow and divide.
- Genetic changes that cause cancer can happen because:
  - of errors that occur as cells divide.
  - of damage to DNA caused by harmful substances in the environment, such as the chemicals in tobacco smoke and ultraviolet rays from the sun.
  - they were inherited from our parents.
- The body normally eliminates cells with damaged DNA before they turn cancerous. But the body's ability to do so goes down as we age. This is part of the reason why there is a higher risk of cancer later in life.
- Each person's cancer has a unique combination of genetic changes. As the cancer continues to grow, additional changes will occur. Even within the same tumor, different cells may have different genetic changes.
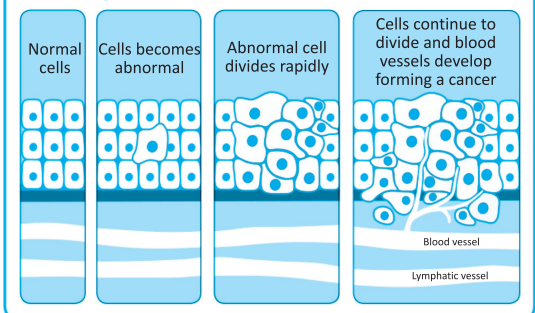
Cancer: A Case of India

- ✓ Deaths due to cancer increased to an estimated 8.08 lakh in 2022 from 7.9 lakh in 2021 and 7.7 lakh in 2020.
- ✓ According to an ICMR study, one in nine Indians will develop cancer during their lifetime. Study further says that, one in 68 men will develop lung cancer and one in 29 women will develop breast cancer.
- ✓ **The incidence of cancer is higher among women — 103.6 per 100,000 in 2020 compared to 94.1 among men**.
- ✓ Among men, the most common cancers were of the lung, mouth, prostate, tongue, and stomach; for women, they were breast, cervix, ovary, uterus, lung.

Key findings of the report

- ❖ The findings in the US, published in CA: A Cancer Journal for Clinicians, record a steep reduction of 65% in the rates of cervical cancer in women in their early 20s between 2012 and 2019, the first cohort to receive the human papillomavirus vaccine (HPV) vaccine.
- ❖ Doctors confirmed that the rates of cervical and smoking-related cancers have gone down in India as well; **however, the incidence of lung and breast cancers has increased.**

Development of cancer

| Normal cells | Cells becomes abnormal | Abnormal cell divides rapidly | Cells continue to divide and blood vessels develop forming a cancer |

Blood vessel

Lymphatic vessel

Metastasis

In some cases, abnormal cancer cells spread to other parts of the body through blood or lymphatic vessels. This is called **metastasis**.

Blood vessel

Lymphatic vessel

www.ksgindia.com

DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias
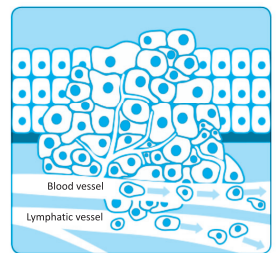
- ✓ The incidence of cervical cancer has dropped in India over the last 50 years from 45 to 10 per 100,000 population. At the same time, there is an increase in rates of breast cancer, especially in urban centres.
- ✓ Rates of cervical cancer have declined because of later marriages, fewer children, better hygiene, and vaccination. And the incidence of breast cancer has gone up because of the same reasons — later age of marriage, having the first child at a later age, not breastfeeding, and a high protein diet.
- ✓ Unfortunately, the survival rate for lung cancer is not very high and it is mostly diagnosed in the late stages.
- ✓ The rates of tobacco-related cancers — oral, oesophageal — cancers are also coming down. This is largely due to tobacco laws that have brought down smoking in public places.
- ✓ Lung cancers, however, remain a cause for concern.
  - o Lung cancer rates are high in Arunachal Pradesh because they light fires indoors in winter.
  - o Lung cancers can be seen in women in Bihar because they have spent years cooking on chullahs.
  - o Experts opine that the impact of polluted air in Delhi can be seen in the upcoming 10 years when it comes to cancer statistics.

Steps Taken by the Indian Government

- Establishment of **Ayushman Bharat Health and Wellness Centres (AB-HWCs)** across the country was announced by the Government of India in February 2018. Screening of three common cancers i.e.-oral, breast and cervical, along with other common Non-Communicable Diseases, is an integral part of service delivery under the AB-HWCs.
- **Treatment of cancer under the Pradhan Mantri Jan Arogya Yojana** (launched in 2018) has been one of the prime focus areas to safeguard the beneficiaries from catastrophic expenditure of cancer treatment.
  - o Chemotherapy and Radiotherapy packages, along with surgical oncology are covered as part of cancer treatment in the empanelled hospitals under the scheme. A total of 435 procedures have been defined for the treatment of cancer.
- Measures have been taken to discourage the use of tobacco products, which is one of the key risk factors of Cancer.

- Significant focus on Oncology in its various aspects has been ensured in the new AIIMS that are being established under the aegis of Pradhan Mantri Swasthya Suraksha Yojana (PMSSY).

- The Central Government is implementing the Strengthening of Tertiary Care of Cancer Scheme in order to enhance the facilities for tertiary care of cancer. 19 State Cancer Institute's (SCIs) and 20 Tertiary Care Cancer Centres (TCCCs) have been approved so far under the said scheme.

- The National Pharmaceutical Pricing Authority (NPPA), under Ministry of Chemicals & Fertilizers, put out list of 390 anti-cancer non-scheduled medicines with MRP reduction up to 87% in 2019.
  - o The average out of pocket expenditure for cancer patients is 2.5 times that for other diseases. This move benefited 22 lakh cancer patients in the country and would result in annual savings of approx. Rs. 800 crores to the consumers.

> ### Landmark Supreme Court Judgment
> - ❖ In 2019, the Army changed its rules allowing SSC women officers to opt for permanent commission who would have otherwise retired after 14 years of service.
> - ❖ However, this was not retrospective, and applied only to the batches of women officers starting their career in the Army in 2020.
> - ❖ With the landmark Supreme Court judgment of February 2020, permanent commission was granted to women officers with retrospective effect.
> - ❖ This opened the doors for their further growth and promotions in the Army.

- The Government has taken many steps to promote research in Ayurveda to develop treatment of cancer.

What needs to be done?

- ➕ Cervical, breast, and oral cancers account for 34% of cancers in India, so screening for them becomes essential and it has to be more focused in order to achieve mortality gains.
- ➕ **Screening** for the three most common types of cancer — breast, cervical, and oral — has already started through the government's upgraded health and wellness centres. This, coupled with other government programmes, will result in more people reaching hospitals sooner.
- ➕ **80/20 rule** — 80% of patients present to the hospital late, of whom 20% are curable, and 20% of patients present early, of whom 80% are curable. Over the last 10 years, this has become 70/30 — now 30% of patients are presenting early to hospitals.

Page 19

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- There are several programmes of the government that are working independently and in silos. They need to be coordinated so that once a person is screened, they do reach a hospital.
- **More cancer care facilities and upgraded infrastructure:** There are seven pillars of cancer care — prevention, surgery, chemotherapy, radiotherapy, imaging, laboratory diagnostics, and palliation. Each of these pillars must receive due attention to reduce the menace of cancer.
    - o In India, there exists one comprehensive cancer care centre for every 5 crore population which leads to a huge burden on them.
    - o The WHO says there should be 1 radiotherapy machine per million population in developing countries, so for 1.4 billion Indian population we need 1,400 machines, and we have only 700.

Conclusion

Cancer has overtaken cardiac issues as the leading cause of deaths in the US. In India, cardiac issues are still the leading cause followed by cancer. Better screening and treatment centres, and more comprehensive linkages between screening centres and hospitals are essential to reduce cancer mortality in the country.

Women Officers in Army

News Excerpt

For the first time, women officers will be able to command troops in the Indian Army, and be assessed for their leadership skills.

More about the news

- As many as 108 women officers in the Army are set to be cleared for the rank of Colonel (selection grade) by a special selection board, which will make them eligible to command units and troops in their respective arms and services for the first time.
- A total of 244 women officers are being considered for promotion against the vacancies — from the batch of 1992 to 2006 — in arms and services including Engineers, Signals, Army Air Defence, Intelligence Corps, Army Service Corps, Army Ordnance Corps and Electrical and Mechanical Engineers.

Pre-Connect

- An officer in the Army is promoted to the rank of Colonel only after serving between 16 and 18 years, based on certain criteria such as annual confidential reports and various courses.
- Women officers who were inducted into the Army were inducted as Short Service Commission (SSC) officers in 1992 and in the years after did not have the choice to opt for permanent commission. The Judge Advocate General (JAG) and Army Education Corps were exceptions, where a permanent commission was opened for them in 2008.
- For other arms and services, women could not become permanent cadre, and had to retire much before they completed the service period that is mandatory to become a Colonel.
- The Army, being the largest of the three services, has the largest number of women officers at 1,705, followed by 1,640 women officers in the IAF, and 559 in the Navy.
- All major countries including the United States, United Kingdom, Russia, and Israel, allow women in command positions of their national armed forces.

Significance of this development

- ✓ Once promoted to a Colonel, an officer is eligible to command troops directly in the Army, which is an acknowledgment of the leadership qualities of the officer.
- ✓ It is considered a coveted appointment because in no other rank — including higher ranks like Brigadier or Major General — does an officer interact directly with troops on the ground.

KEY TAKEWAYS

■ Proportion of children in govt schools up from 65.6% in 2018 to **72.9%** in 2022

■ Children taking private paid tuituion up from 26.4% in 2018 to **30.5%** in 2022

■ Reading levels down to pre-2012 levels – only

ENROLMENT IN 6-14 AGE GROUP AT A RECORD HIGH:

98.4% children now enrolled in school, up from 97.2% in 2018

20.5% children in Class 3 can read a Class 2 textbook, down from 27.3% in 2018

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- ✓ Despite working at the grassroots level as junior officers, women officers hitherto did not get an opportunity to prove their leadership skills as they were not eligible to command a unit. For a woman officer, this is an empowering move.
- ✓ Women officers in many streams of the Army, including the Army Air Defence, Signals, Engineers, Army Aviation, Electronics and Mechanical Engineers, Army Service Corps, Army Ordnance Corps, and Intelligence Corps will be commanding units.
- ✓ It grants women officers parity with their male counterparts. Earlier, with a limited period career in the force, there were no promotion avenues for women officers to become a Colonel and command a unit like male Army officers.
- ✓ It is not that women officers did not reach the rank of Colonel or beyond in the past, but they were only in two branches — the Judge Advocate General (JAG) branch and the Army Education Corps — where they were granted permanent commission in 2008.
- ✓ However, these were staff appointments; they are more administrative in nature — and not purely command appointments in which an officer commands troops on ground.
- ✓ The Supreme Court's order to grant permanent commission to women Army officers in February 2020 opened the doors for promotion to women officers across all streams of the Army, except pure combat arms.
- ✓ With a longer career in the Army, women officers will be considered for promotions, including to the rank of Colonel and beyond.
- ✓ However, they are still not eligible in core combat arms such as Infantry, Mechanized Infantry and Armored Corps, as the Army is not open to women fighting wars at the borders as foot soldiers. Much of this resistance stems from past instances of male soldiers being taken as prisoners of war and tortured by the enemy.
- ✓ However, the Army has recently decided to open the Corps of Artillery, a combat support arm, to women.

> **Women Officers in Indian Navy and Indian Air Force**
> - ❖ Women officers have been inducted into all branches of the Navy, and they will be eligible for permanent commission in the future.
> - ❖ Women officers can command shore-based units and, as they join the service and become eligible for permanent commission, they would be able to command ships and air squadrons.
> - ❖ The IAF has opened all branches for women officers, including the fighter stream and the new weapon systems branch.
> - ❖ As they are granted permanent commission based on eligibility and vacancies, they will be eligible to command units in the future.

ASER Report 2022

News Excerpt

17th report of the ASER i.e., Annual Status of Education Report was released recently.

Pre-Connect

- This is an annual survey that aims to provide reliable annual estimates of children's schooling status and basic learning levels for each state and rural district in India. ASER has been conducted every year since 2005 in almost all rural districts of India.
- ASER is the largest citizen-led survey in India. It is also the only annual source of information on children's learning outcomes available in India today.
- Unlike most other large-scale learning assessments, ASER is a household-based rather than school-based survey.
- This design enables all children to be included – those who have never been to school or have dropped out, as well as those who are in government schools, private schools, religious schools or anywhere else.
- In 2022, the ASER survey covered 7 lakh children in 19,060 villages across 616 districts in the country.

Highlights of the Report

- ➢ As the pandemic ebbed, school enrolment touched a record high in 2022 — 98.4% children in the 6-14 age group are now in school, up from 97.2% in 2018, when the last full pre-pandemic survey was conducted by Pratham.
- ➢ The proportion of girls not enrolled in schools has also reduced across age groups. For girls aged 11-14, this share dropped from 4.1% in 2018 to 2% in 2022. Back in 2006, the share of out-of-school girls in this age bracket stood at 10.3 per cent.
- ➢ However, there is a drop in learning levels – foundational skills in reading and arithmetic – that has confirmed the worst fears about the pandemic and its impact on children.

➢ In 2022, the basic reading ability of children in Class 3 dipped by 6.8 percentage points (from 27.3% in 2018 to 20.5% in 2022), and that of students in Class 5 came down by 7.6 percentage points (from 50.4% in 2018 to 42.8% in 2022).

➢ There has also been a drop in numeracy levels, though not as steep as for reading skills.

➢ The proportion of children in Class 3 who could do at least subtraction fell from 28.2% in 2018 to 25.9% in 2022, and that of students in Class 5 fell from 27.9% in 2018 to 25.6% in 2022.

➢ Despite these big drops, a comparative analysis of learning outcomes in Karnataka, Chhattisgarh and West Bengal – the only states where Pratham undertook learning outcome surveys in the pandemic year of 2021 – suggests that there has been an attempt to recover lost ground once schools reopened after the pandemic.

1
- **Curriculum**
  - Capacity building curriculum
  - FLN/Competency-based education/STEM
  - 21st century skills

2
- **Content**
  - Content standards
  - Content lifecycle management
  - Content translation & contextualization

3
- **Capacity**
  - Competency framework
  - Training-needs analysis
  - Training & training dissemination

4
- **Community**
  - Volunteering
  - Crowdsourcing
  - Self-sustainability

5
- **Digital**
  - Devices & hardware
  - Connectivity solutions
  - Data, AI & ML

   o In Chhattisgarh, for instance, the proportion of Class 3 children who can read a Class 2 textbook had dropped to an alarming 12.3% in 2021, down from 29.8% in 2018, only to bounce back to 24.2% in 2022. In West Bengal, that number rose from 29.5% in 2021 to 33% in 2022.

   o In the case of maths, the share of children in Class 3 in Chhattisgarh with the ability to solve basic problems fell from 19.3% in 2018 to 9% in 2021, only to rise to 19.6% in 2022. In Karnataka, that number rose from 17.3% in 2021 to 22.2% in 2022 and in West Bengal, from 29.4% in 2021 to 34.2% in 2022.

➢ The survey points to what has been a trend for over a decade now – a small, steady increase in the proportion of children availing private tuitions. Between 2018 and 2022, this proportion increased further – from 26.4% to 30.5%.

➢ The ASER report also highlights another trend that was reflected in other reports such as the government's UDISE+ data that came out last year. ASER 2022 states that nationally, the percentage of children aged 11 to 14 who are enrolled in government schools has risen from 65% in 2018 to 71.7% in 2022.
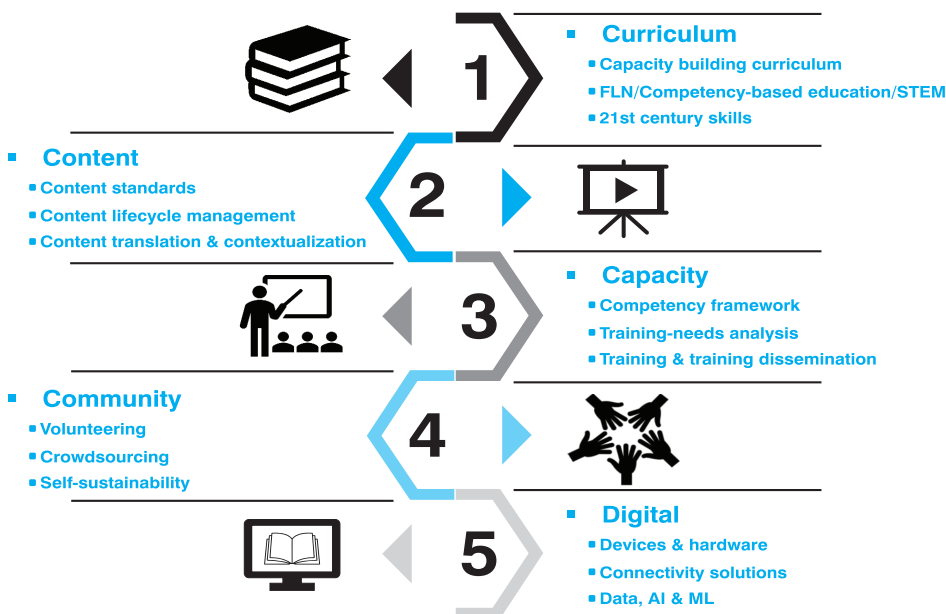
Recent Initiatives

✓ **Samagra Shiksha:** The Centrally sponsored scheme of **Samagra Shiksha** of the Department of School Education and Literacy is an overarching programme for the school education sector extending from pre-school to class XII. The scheme treats school education as a continuum and is **in accordance with Sustainable Development Goal for Education (SDG-4).**

✓ The Samagra Shiksha Scheme has been aligned with the recommendations of the National Education Policy: 2020 (NEP: 2020) and extended from 2021-22 to 2025-26.

✓ **ICT and smart class approvals:** Under the Information & Communication Technology (ICT) component of the Samagra Shiksha Scheme, there is a provision to impart computer literacy and computer-enabled learning to children, by developing and deploying curriculum-based interactive multimedia, digital books, virtual labs etc. across the country. It supports the establishment of smart classrooms, and ICT labs in schools, including support for hardware, educational software and e-content for teaching. It envisages covering all Government/Government-aided schools with classes VI to XII.

✓ Department of School Education & Literacy has launched a Disabilities Screening Checklist for Schools and an Android Mobile App titled as **PRASHAST Mobile App – "Pre Assessment Holistic Screening Tool" for schools** during Shikshak Parv, 2022.

✓ The schedule to RTE Act, 2009 has been amended regarding pupil teacher ratio for special educators in general schools i.e. one special education teacher for every ten pupils with disabilities enrolled at primary level and one special education teacher for every fifteen pupils with disabilities enrolled at upper primary level.

✓ **New India Literacy Programme (NILP):** Keeping in view the recommendations of NEP, 2020 and UNESCO Sustainable Development Goal (SDG) 4.6, a centrally sponsored scheme "New India Literacy Programme" (NILP)has been approved by the Government of India in 2022. The scheme has five components: (i) Foundational Literacy and Numeracy, (ii) Critical Life Skills, (iii) Vocational Skills Development, (iv) Basic Education and (v) Continuing Education.

What Needs to be done?

▪ **Transforming the education sector**: Making education more accessible and inclusive to reducing dropout rates and improving learning outcomes by using more adaptive learning systems and community engagement.

▪ **Connecting the unconnected**: The global pandemic has not only made digital learning central to teaching worldwide, but it has also widened the digital divide, leaving those without devices and internet connections further behind. Thus, improving the digital infrastructure of the schools must be made a priority to improve overall scenario of education sector in India.

▪ **School-to-work transition:** Interventions using digital and hybrid models to upskill students to find a good fit with available and emerging jobs.

▪ **Teachers' capacity Building:** Enhancing teachers' capacity to deliver education in newer formats is essential, as is their buy-in and involvement in creating and providing tech-enabled curricula.

AISHE Report Highlights

❖ According to the latest All India Survey on Higher Education (AISHE) released by the Education Ministry; crucial gains are made in closing the gender gap across different undergraduate programmes that suffered a setback in the pandemic year.

❖ Data show that the number of women for every 100 men enrolled across different Bachelor's programmes dropped in the academic year 2020-21.
   o For instance, a year after the gender gap in BCom closed in 2019 — there were as many women as there were male students — the AISHE report for 2020-2021 showed that this gain was lost in the subsequent year that was marred by large-scale disruptions due to the pandemic.

❖ According to the latest survey, the total student enrollment in higher education went up from 3.85 crore in 2019 to about 4.13 crore in 2020-21, an increase of nearly 29 lakh. Out of the total enrolled, 51.3% or 2.12 crore are male and 48.7% are women.

❖ Overall, the Gross Enrollment Ratio (GER) in higher education for the age group of 18 to 23 years is 27.3% as against 25.6 % in 2019-20.

❖ GER is a statistical measure to determine the number of students enrolled in undergraduate, postgraduate and research-level studies within the country and is expressed as a percentage of the population in the 18-23 years age group.

❖ According to the survey, the GER for women is more than the GER for men – a trend that has been on since 2017-18. Gender Parity Index (GPI), the ratio of female GER to male GER, has increased from 1 in 2017-2018 to 1.05 in 2020-21.

❖ At the postgraduate level, too, the number of women pursuing business administration, science, technology and commerce has gone down in 2020-21 as compared to 2019-2020 due to pandemic.

Food Subsidy

News Excerpt

Recently, Government has decided to distribute free food grains for one year from January 2023 under the Public Distribution System (PDS) of National Food Security Act (2013) in a move to shield the poor from the effects of the termination of Pradhan Mantri Garib Kalyan Ann Yojana (PMGKAY).

Pre-Connect

How food subsidy works

• Indian Government is running the largest food security program in the world.

• A statutory body created by the **Food Corporation of India Act of 1964**, the FCI was established for the "purchase, storage, movement, transport, distribution and sale of food grains and other foodstuffs".

- For India to achieve the **sustainable development goals (SDGs)** as well as economic and social reforms, it is essential to empower and safeguard the **67.7 percent of women and children in the country** by ensuring their healthy development in a safe and secure environment.
- Of this number, women make up for 48 percent and contribute 18 percent of the country's GDP; thus, much has to be done to solve the difficulties they face.
- The pandemic has further added to the economic and social woes for women with 47 million women and girls having been pushed into extreme hunger.
- India has a social and legal obligation to provide its citizens with a dignified existence by assuring their access to **food and nutritional security** by making a sufficient supply of high-quality food grains available.

Measures taken by the Government

- India has a social and legal obligation to provide its citizens with a dignified existence by assuring their access to food and nutritional security by making a sufficient supply of high-quality food grains available.
- In order to address malnutrition issues and to promote women empowerment, child development and protection, the Budget 2022 announced an umbrella scheme under the Ministry of Women and Child Development to be implemented in Mission mode:
  - o Mission Poshan 2.0
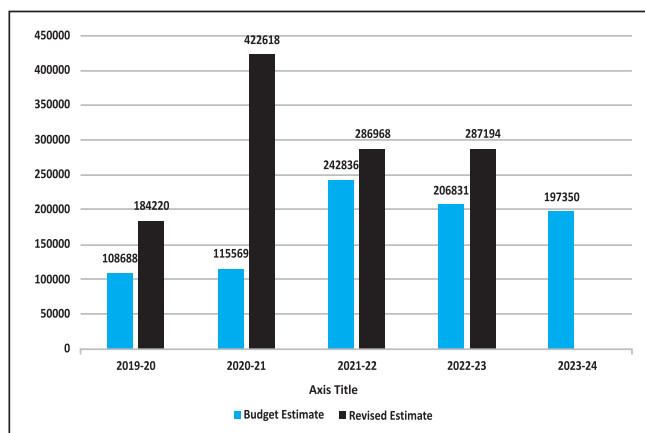 - o Mission Shakti
  - o Mission Vatsalya

Budget allocations

During the Financial Years 2021–22 to 2025–26, the Government of India also approved upgrading 2 lakh Anganwadi Centers (AWCs) to Saksham Anganwadis at a rate of 40,000 each year.

- ✓ **Saksham Anganwadi** and **POSHAN 2.0** under the Mission Poshan 2.0, brings together under one umbrella **the ICDS, POSHAN Abhiyaan, Scheme for Adolescent girls, and National Creche Scheme**, and has been allocated INR 20,554.31 crores of the total allocated INR 25,448.75 crores in 2023-24.
- ✓ This shows an increase of INR 267 crore from the INR 25,172.28 crore allotted in 2022-23.
- ✓ The Union Budget 2023-24 is disheartening with a meagre 1.08 percent increased allocation for crucial social security programs for women and children despite the challenges faced by them
- ✓ **PM-Poshan** (renamed mid-day meal scheme) received an outlay of INR 11,600 crore in 2023-24 from INR 10,233 crores in 2022-23; it was increased by 13 percent but it decreased as to the revised estimates.
- ✓ The budget for **Mission Shakti**, which houses the **Pradhan Mantri Matru Vandana Yojana, Women Helpline, Beti Bachao Beti Padhao,** and other important programmes for the protection of women, declined by 1.2 percent from INR 3,184.11 in 2022-23 to INR 3143.96 crore in 2023-24.

❖ Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY).
❖ In April 2020, the Union government announced the Yojana under which an extra 5 kg of free food grains (wheat or rice) was provided per person, per month to all families holding a ration card in addition to the NFSA entitlement.
❖ Therefore, ration card holders were entitled to 10 kg ration per person.
❖ It was initially launched for three months from April 2020 till June 2020 (Phase I) and then extended several times. It is in its final, seventh phase now and will end on 31st December, 2022.
❖ The scheme covered about 35 crore people over a span of 2 years.

National Food Security Act, 2013 (NFSA).

Under this, all priority category ration card holders are entitled to 5 kg of grain per person per month and the Antyodaya category cardholders to 35 kg of grain.

The NFSA caps the price at ₹3 per kg of rice and ₹2 per kg of wheat and coarse grains at Rs 1 per kg, thus making access to subsidized grain a legal right to 67% of the population (75% in rural areas and 50% in urban areas), based on the population figures of Census 2011.

Chart: Budget Estimate vs Revised Estimate (Axis Title)
- 2019-20: Budget Estimate 108688, Revised Estimate 184220
- 2020-21: Budget Estimate 115569, Revised Estimate 422618
- 2021-22: Budget Estimate 242836, Revised Estimate 286968
- 2022-23: Budget Estimate 206831, Revised Estimate 287194
- 2023-24: Budget Estimate 197350

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

✓ The **Pradhan Mantri Matru Vandana Yojana (PMMVY)** has been underfunded since it began in 2017. As against the requirement of INR 14,000 crore as per the National Food Security Act (NFSA) mandate, the allocation/budget estimate for 2023-24 has been a scanty INR 2581.96 crores.

✓ The **Food Subsidy program** that ensures distribution of food grains at a subsidized price through the Targeted Public Distribution System (TPDS) has been slashed by 32 percent in the 2023-24 budget to INR 1,97,350 crore from INR 2,06,831 crore allocated.

Concerns

▪ **Malnutrition** is a complex issue with roots in a number of dietary, health, and care-related variables that are in turn influenced by social, economic, and political variables.

▪ Therefore, associated issues like food security, access to **healthcare services, sanitary conditions, and jobs** must also receive adequate funding and not be ignored.

▪ The nutrition sensitive programs **like PM-Poshan, National Health Mission, Food Subsidy, Mahatma Gandhi National Rural Employment Guarantee Scheme, and National Rural Drinking Water Mission** have seen a decline from the previous year's revised budget (RE)
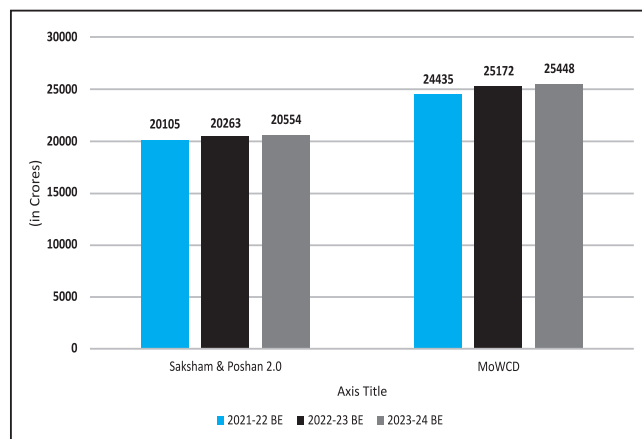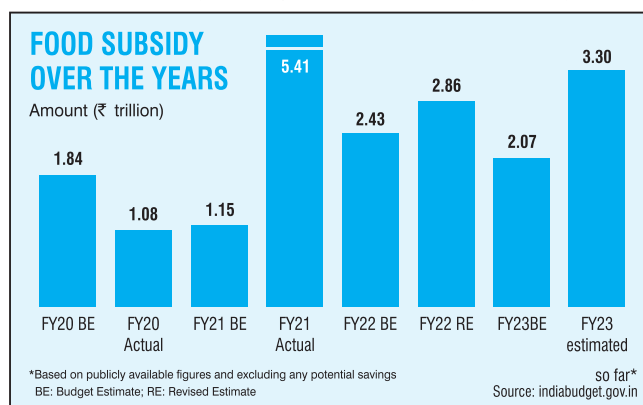
This unusual display of fiscal conservatism by the Government has both positives and negatives as follows:

Positives

🔸 **Rise in savings**: The free food grain distribution under PM-GKAY has costed government nearly $47 billion, which is fiscally impractical. The government will save at least $20 billion over the next 12 months by ending PMGKAY, as they will only spend on one food scheme (NFSA) instead of multiple programmes.

🔸 **Mitigate inflation concerns**: The government was struggling to manage the wheat stockpile due to additional distribution of wheat under PMGKAY and the prices in the local market jumped to the record high. Thus, discontinuing scheme means the government can now sell 2 to 3 million tons in the open market to stabilize prices.

🔸 **Consumption of buffer to ease**: A monthly ration of 10 kg (5 kg each under NFSA and PMGKAY) for 81.35 cr persons translates into nearly 100 million tonnes (mt) or over a third of India's total cereal production. Termination of PMGKAY had become inevitable as buffer stocks of both wheat and rice have depleted considerably in the last one year by 50% and 45%, respectively.

🔸 **Factor of affordability**: It is unviable to provide free food grains to people who could afford to pay with normalizing economic activity.

🔸 **Egalitarian move:** The recent free entitlement under NFSA amounts to roughly half of the average monthly per capita cereal consumption as per the last National Sample Survey data for 2011-12, which can be considered reasonable.

Negatives

o **Fiscally unsustainable**: The Union government bearing the entire cost of Rs 2 lakh crore to give rations free for the next 12 months, citing food security concerns could put immediate pressure on the public purse.It also commits the government to a scheme that makes it more difficult to achieve medium term fiscal consolidation targets.

o **Unworkable post-pandemic plan**: The free foodgrain under NFSA implies that food subsidy will go up and will increase the fiscal burden compared with the pre-pandemic times, because:
  o The selling prices of PDS grains have been reduced to zero
  o The quantities provided have been increased

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

o Politically unviable: In the past, the government could reduce the budget deficit by raising the prices at which food grains were distributed through PDS.However, now it will be difficult for the government to go back to charging a subsidized price for food grains, ever again after making it free now.

o Implications for agricultural policy: This announcement will have repercussions for overall agricultural policy as the government will be more constrained as far as raising the minimum support price (MSP) is concerned. This is because raising the MSP could squeeze its budget further as it will procure the grains at a higher price and then distribute them for free.

o If the government does not raise the MSP, the farmers' income will fall in real terms and they may decide to sell to the free market rather than the government that could lead to a shortage of food grain stock with government.

Way forward

⇒ **Mission Poshan 2.0** will address inadequacies linked to nutrition, address issues associated with malnutrition, and promote nutrition awareness and healthy eating habits for long-term health and well-being.

⇒ **New generation anganwadis** that have better infrastructure and audio-visual aids, powered by clean energy and providing improved environment for early child development.

⇒ **Poshan 2.0** seeks to optimize the quality and delivery of food under the Supplementary Nutrition Program.

⇒ Maternity benefits programs for women in the unorganized sector should recommend.

The Funding and Demand for MGNREGA

News Excerpt

In the Union budget (2022-23), the Central government has cut down the budget allocation by 21.66 % for 2023-24 for the Mahatma Gandhi National Rural Employment scheme (MGNREGS) which leads to many criticisms from different entities.

Pre-Connect

What is MGNREG Scheme?

• The **MGNREGA** was enacted in 2005 to guarantee 100 days of employment per each financial year to every rural household that is willing to do unskilled manual labour.

• The Standing Committee on Rural Development submitted its report on the implementation of the Mahatma Gandhi National Rural Employment Guarantee Act, 2005 (MGNREGA) on August 14, 2013.

• The scheme covers all districts of the country barring the ones with 100% urban population.

• This is a **Centrally Sponsored scheme** i.e. the scheme is funded by both Central and State Governments.

• **Maharashtra Employment Guarantee Scheme (MEGS), 1972,** was the first to recognize the **right to work**, and the success of which paved the way for MGNREGA.

Key Features of the MGNREG Scheme

➤ It is a demand-driven program, conceptualized to create and enhance livelihood security for the most vulnerable households in India.

➤ Keeping the citizen at its centre, planning takes place at all levels of the government administration starting from the bottom i.e. Decentralized mode of implementation.

➤ Annually, the **Central Employment Guarantee Council (CEGC)** submits a report this scheme to Central Government, is required to present in the Parliament.

How does MGNREGA work?

✓ **Panchayati Raj institutions (PRIs)** play a vital role in planning and implementing the act's provisions, signifying the importance of decentralization and decision-making at the grassroots.
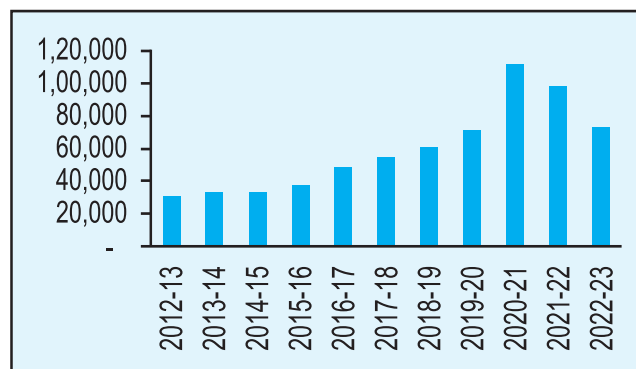
- ✓ The nature and choice of work is decided in consultation with the citizens in open gram sabha assemblies, and ratified by gram panchayats.
- ✓ To ensure accountability and transparency, it is mandatory for state governments to conduct **social audits** to review the utilization of funds.
- ✓ Allocation of work is done directly through the government without any stakeholders in the middle, and preference is given to unskilled workers—who must be employed within a five-kilometer radius of the village.
- ✓ The act permits more than 260 projects classified under four main categories:
  - o Public works relating to natural resources management,
  - o Individual assets for vulnerable sections,
  - o Common infrastructure for **Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM)**
  - o Compliant self-help groups and rural infrastructure.
- ✓ The gram panchayat is the main facilitator for households that wish to apply for work under MGNREGA.
- ✓ The first step that an unregistered household must take is to apply for a job card through their gram panchayat.
- ✓ Once they are issued a job card post verification of their documents and confirmation of their eligibility, they have to submit an application for employment.
- ✓ It is the gram panchayat's responsibility to allocate work within 15 days of the request and provide wages within 15 days of job completion.

Budget allocations for MGNREGA have consistently fallen short of demand

- ▪ During the Pandemic, a substantial amount of household expenditure was met through MGNREGA wages.
- ▪ The Central Government has cut down the budget for MGNREGA scheme to 60000crores for 2023-24.

Reasons for Budget reduction in MGNREGA Scheme

- ♣ Consequently, the last 3 years Indian economy faced several backlashes.
- ♣ Covid-pandemic-Global shutdown and Russia -Ukraine war crisis –increase in oil and food prices.
- ♣ Under Economic Survey 2022-23, In MGNREGA Scheme there's monthly demand decline on Year on Year (YOY) basis, reason for that is rural economy is growing good in numbers due to agricultural growth and a quick rise from pandemic.

Critical Analysis

- o The Mahatma Gandhi National Rural Employment Guarantee Act is considered as welfare legislation that seeks to meet three distinct objectives **– Promotive, Protective, and Preventive.**
- o It protects the vulnerable rural poor by providing them with **demand-driven jobs**. It reduces the risk of agricultural investment and rural impoverished people being compelled to migrate.
- o It indirectly fosters and boosts the development of rural economies by raising employment opportunities which further improvises **living standards and infrastructure availability** in rural areas.
- o As a result of its influence on **livelihood security, social protection, and democratic empowerment,** the Mahatma Gandhi National Rural Employment Guarantee Act is a powerful tool for fostering **equitable growth** in rural India.
  In the case of **Swaraj Abhiyan v. Union of India**, the Supreme Court issued directions while dealing with the implementation of the Mahatma Gandhi National Rural Employment Guarantee Act, 2005 and the Mahatma Gandhi National Rural Employment Guarantee Scheme framed under the provisions of Section 4 of the said Act -
- o State governments should propose a realistic budget, which the Empowered Committee should assess pragmatically in order to avoid any disagreements between state governments and the Indian government over the allocation of funds under the Scheme.
- o The Government of India has been directed to release sufficient funds under the Scheme to the State Governments in a timely manner so that the 'workforce' gets paid on time.
- o The Government of India has been asked to ensure that workers who have had their paychecks delayed for more than 15 days receive compensation.
- o Both state governments and the central government have indeed been ordered to make every effort to encourage poor people to apply for the scheme.

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

o Within 60 days of the date of the ruling, the Central Employment Guarantee Council will be established under Section 10 of the NREG Act.
o Within 45 days after the date of the order, the State Employment Guarantee Council must act under Section 12 of the Act.

Challenges facing in Implementing

⇒ **Fund Management-**Allocation and Usage of funds are the major setbacks for implementing the scheme as Inadequate and untimely allocation funds leads to delay in the program implementation.

⇒ **Corruption and delay in wages-**As there's no proper Social Audit was followed, leads to misusage of funds and this leads for the delay of wages.

⇒ **Varied issues with Job-cards:** There are stances wherein the job-card issuing authority fails to meet the deadline to issue job cards on time. There are also circumstances wherein, there are several issues pertaining to the fabrication of job cards, inclusion of fabricated names, and delays in making entries in job cards.
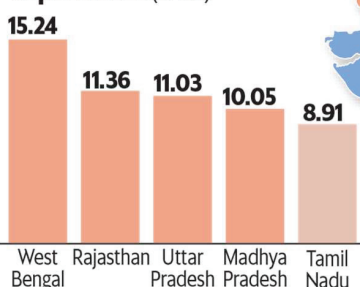
In need of relief

The government's rural job scheme employs 128 million people, who are without work at present as the worksites are not operating due to the lockdown.

Number of active NREGA workers in states/Union territories

Top 5 states (in mn)
15.24 — West Bengal
11.36 — Rajasthan
11.03 — Uttar Pradesh
10.05 — Madhya Pradesh
8.91 — Tamil Nadu

Data available for undivided J&K before its bifurcation into Union territories J&K and Ladakh.

- 0-1,000,000
- 1,000,001-5,000,000
- 5,000,001-10,000,000
- >10,000,000

Source: nrega.nic.in

Way forward

+ **Reforms in Implementation-**Improving the competence and efficiency of the administrative and implementing bodies.
+ **Transparency, Accountability and financial Management-**Proper grievance redressal mechanism is important in ensuring all set of procedures-Financial aspects, Track on work etc.,
+ **Promoting Community Ownership**: Collective and active participation in formulating the scheme to maximize the benefits.
+ **Frequency of monitoring** by National Level Monitors should increase and appropriate measures should be taken based on their recommendations. A nodal officer should be designated to ensure this.
+ **Vigilance cells** must be established at the state and district level and vigilance and monitoring committees must be established at the local level.
+ **Training and capacity building** of elected representatives and other functionaries of PRIs must be done regularly.
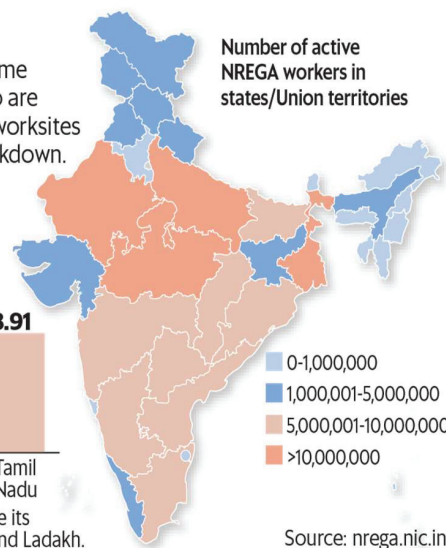
ECONOMY

Embedded Finance

News Excerpt

Embedded finance is the new norm in payments and banking. It is poised to play a significant role in revolutionizing the banking sector in India and is set to play a crucial role in financial inclusion in India.
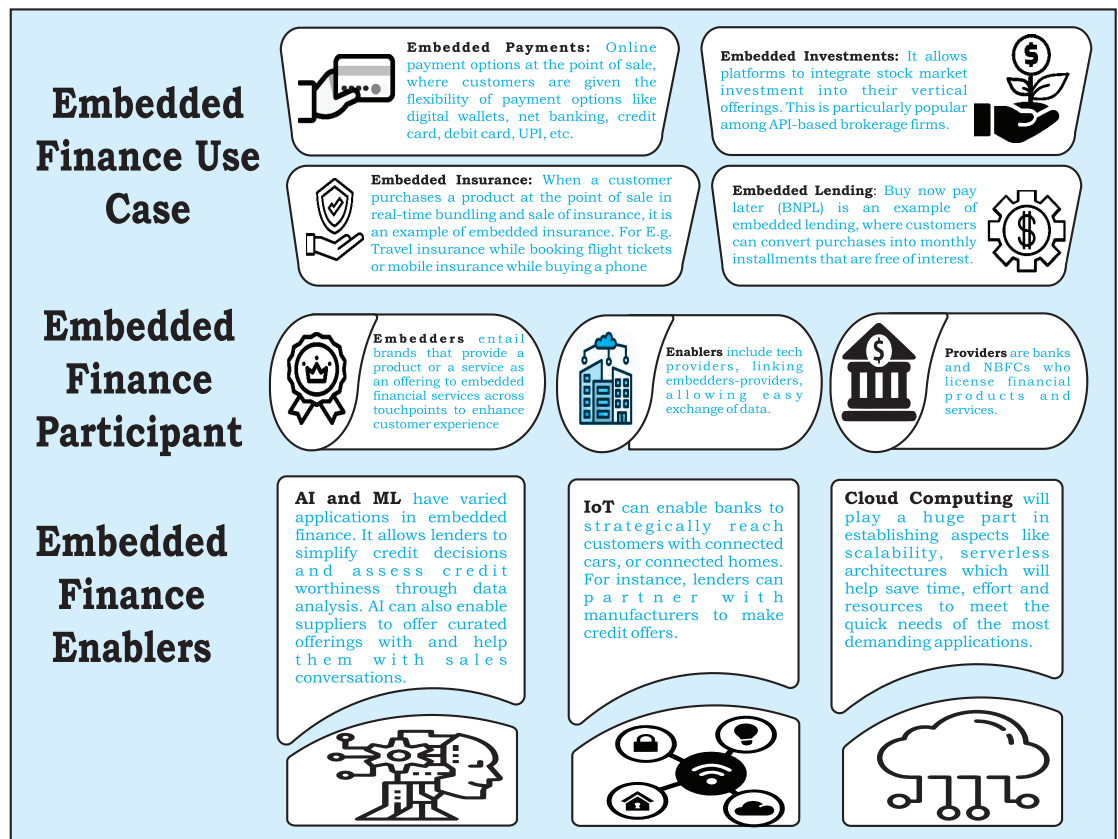
Understanding Embedded Finance

- It is the seamless integration of financial services into a traditionally non-financial service. This enables customers to access financial services within the ecosystem of the business.
- For instance, it allows a customer to make cashless payments within a ride-hailing app, or make a cashless purchase on an online store without having to leave their buying journeys.

Need for Embedded Finance

- ➢ **Faultline's in Traditional Financial Systems**
  - o Traditional financial institutions are oriented towards larger businesses, for instance out of near about 63 million small and medium businesses (SMBs) in India a mere 16 percent of MSMEs have access to formal credit.
  - o Long processing time, lack of transparency in timelines,

Embedded Finance Use Case

Embedded Payments: Online payment options at the point of sale, where customers are given the flexibility of payment options like digital wallets, net banking, credit card, debit card, UPI, etc.

Embedded Investments: It allows platforms to integrate stock market investment into their vertical offerings. This is particularly popular among API-based brokerage firms.

Embedded Insurance: When a customer purchases a product at the point of sale in real-time bundling and sale of insurance, it is an example of embedded insurance. For E.g. Travel insurance while booking flight tickets or mobile insurance while buying a phone

Embedded Lending: Buy now pay later (BNPL) is an example of embedded lending, where customers can convert purchases into monthly installments that are free of interest.

Embedded Finance Participant

Embedders entail brands that provide a product or a service as an offering to embedded financial services across touchpoints to enhance customer experience

Enablers include tech providers, linking embedders-providers, allowing easy exchange of data.

Providers are banks and NBFCs who license financial products and services.

Embedded Finance Enablers

AI and ML have varied applications in embedded finance. It allows lenders to simplify credit decisions and assess credit worthiness through data analysis. AI can also enable suppliers to offer curated offerings with and help them with sales conversations.

IoT can enable banks to strategically reach customers with connected cars, or connected homes. For instance, lenders can partner with manufacturers to make credit offers.

Cloud Computing will play a huge part in establishing aspects like scalability, serverless architectures which will help save time, effort and resources to meet the quick needs of the most demanding applications.

and insufficient loan sizes remain substantive pain points, compelling many MSMEs to continue to seek informal sources, often at significantly higher interest rates.

- ➢ **Advantages offered by Embedded System**
  - o It can streamline financial processes for mid-market businesses by lowering barriers to entry for various products and services through business-to-business payment.
  - o It can address and smoothen liquidity gaps and cash-flow management by making procedural work integral to day-to-day business activities.
  - o It is expected to increase the total size of the financial services sector through the exponential creation of credit and other use cases.

- o It's a people-first approach to finance that allows consumers to access financial services exactly where and when they need them without diluting the context.
- o It makes the digital discovery of credit products easy by conveniently positioning credit products *'in-context'* and by educating consumers.
- o It leverages the platform's deep understanding of the customer and tailors the credit product for the specific needs of the end customer.

Embedded Finance In India

The Covid-19 pandemic provided a boost to the embedded finance sector in India with e-commerce digitalizing financial services.

Further, trust in fintech firms has also increased in recent times. Several factors will promote Embedded Finance in India in the coming times:

✓ **Internet and smartphone penetration:** The proliferation of smartphones and internet access had resulted in the growing popularity of mobile wallets and Unified Payments Interfaces (UPI). This will increase the demand for more mobile-based financial services. As a result, more businesses will incorporate financial services into their platforms.

✓ **Growth of e-commerce in India:** E-commerce growth is expected to drive the growth of embedded finance as businesses integrate financial services into their platforms to provide customers with a seamless and convenient

> ### Financial Inclusion Through Embedded Finance
> Embedded finance can provide new channels for delivering financial services to those underserved by integrating financial services into non-financial products and services. Further, it can potentially increase competition in the financial services market, resulting in better products and services for customers. Financial inclusion, aided by embedded finance, makes financial services more convenient and accessible. For example, by incorporating financial services into mobile apps, people can use their smartphones to access financial products and services anytime and from any location.

experience. Further, Government initiatives such as the Digital India programme and Make in India campaign have played a crucial role in promoting the growth of e-commerce, especially for India's MSME sector.

✓ **Favorable regulatory environment:** The Government is reducing access barriers to allow the growth of formalized credit which has provided a strong innovation impetus. Initiatives such as Trade Receivables Discounting System (TREDS) ecosystem, are encouraging lenders to adopt cash-flow-based lending instead of balance sheet-based credit.

> ### PEPPER IT WITH
> OCEN (Open Credit Enablement Network), ONDC, India Digital Stack decision-as-a-service (DaaS) Lending Evaluation & Analytics Platform (LEAP)

✓ **Reduction of Data Inequality:** The current state of data inequality is gradually being negated via the identification of new ways to evaluate creditworthiness, which includes using alternative data. Sources like GST returns, bank statements, and cash flow transactions are helping in determining the creditworthiness of the firms.

✓ **Rise of BaaS:** The growing global adoption of open banking initiatives and the emergence of banking as a service (BaaS) are major enablers for embedded finance services. Multiple financial institutions are increasingly offering BaaS, enabling non-bank companies to access their services. For financial institutions, BaaS offers a cost-efficient mechanism to enter new markets and capture new revenue growth.

PLI and Indian Economic Growth

News Excerpt

Recently, NITI Aayog has asserted that the Production Linked Incentive scheme (PLI) had attracted investment worth over Rs 45,000 crore and has also created three lakh jobs. The data shows the positive contribution of PLI to Indian economic growth.

Pre-Connect

Why PLI?

- History shows that nearly all the countries that have transitioned from low to high per capita income have managed this shift on the back of manufacturing and export-led growth. However, Indian manufacturing has suffered from its inability to scale up.

Page 30
www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- Studies have shown that every job created in the manufacturing sector has a multiplier effect in creating 2 to 3 jobs in the service sector.
- For India to become a USD-5 trillion economy, its manufacturing sector has to sustainably grow in double digits. This can only become a reality when Indian manufacturing companies become an integral part of global supply chains and build a strong manufacturing base, with global champions capable of producing for the world.
- They need to focus on cutting-edge technology sectors, along with sectors of its core competency and high employment generation potential. Therefore, with the onset of the pandemic, the government of India gave the clarion call for an *"Atamanirbhar Bharat"* to turn *adversity into opportunity* by launching Production Linked Incentive (PLI) scheme.

Advantages of the PLI Scheme

- It carries pre-committed levels of investment and production in a time-bound manner, as a result, it cannot be labeled as either an investment scheme or a subsidy scheme. Therefore it avoids the risk of running into contravention with WTO as happened with the the Merchandise Exports from India Scheme (MEIS Scheme).
- It carries a clear mandate of selecting only the most eligible sectors that can attract maximum investments and scale rapidly to provide maximum returns in terms of incremental production, employment generation, and exports.
- It is fully self-sustaining as the benefit is given to the selected company only after investment and production have taken place in India.
- It is designed to identify and support upcoming technologies that are indicative of the largest economic opportunities of the next few decades. Robust large-scale manufacturing setups in these segments are essential for taking on Asian competitors that have made strong progress in one or more of these areas.
- It will encourage large manufacturers to bring technology, thereby aiding in capacity building and providing higher returns to upstream producers.

About PLI

Launched in 2020, the scheme was was conceived to
- Scale up domestic manufacturing capability.
- Higher import substitution
- Employment generation.

14 sectors including automobile and auto components, electronics and IT hardware, telecom, pharmaceuticals, solar modules, metals and mining, textiles and apparel, white goods, drones, and advanced chemistry cell batteries.
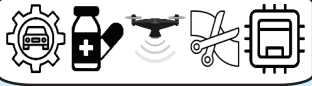
The incentives under the scheme are calculated on the basis of incremental sales and are given based on the sectors nature for instance its low for electronics and technology but high for critical key Sectors like drugs and certain drug intermediaries.
In some sectors the incentive to be given will be calculated on the basis of sales, performance and local value addition done over the period of five years for e.g. Textile products, drone industry etc.

The scheme aims to:
- Reduce India's dependence on imports, especially China with which India has huge trade deficit.
- Provide support to labour-intensive sectors
- increase the employment ratio in India.
- Boost up domestic production.

Role of PLI in creating a Growth Ecosystem in India

- PLI is aiding in the reduction of import dependency in India. Further, the increase in production volume is acting as a catalyst for faster adoption of technologies like 4G and 5G products. E.g. Because of the PLI scheme for large-scale electronics manufacturing (LSEM), 97% of mobile phones sold in India are now being made in India and helped in creating thousands of new jobs.
- Aided by schemes like ODOP and SFURTI, the PLI is playing a crucial role in front-lining Rural India. It is helping industries and artisans in rural areas become part of the country's growth story.
- The scheme is also aiding in boosting the free trade agreements of India as it had improved productivity. This has a cascading impact as increased sales which further drives demand for better logistical connectivity.
- The scheme also emphasizes on green technologies which will reduce the carbon footprint and position India as a pioneer in green policy implementation.

✓ The scheme also provides a fair playground as the beneficiaries of the PLI scheme are shortlisted based on their commitment to achieving scale, while meeting other specified performance parameters, such as minimum investments and minimum incremental production growth.

Challenges under PLI

- **Implementation Issues:** There are several implementation issues involved in the scheme:
    - The implementation of the PLI scheme is cumbersome due to bureaucratic overlap.
    - Each ministry has a project management agency (PMA) that recommends to the empowered committee (EC) the subsidies to be given to the identified firms.
    - This creates a delay in implementation and increases the burden on administrative structures.
- **Procedural Issues**: There are several procedural issues with the scheme such as:
    - The disbursements cannot be rolled out without the Union Cabinet's approval.
    - Firms from different industries have different minimum incremental sales requirements and minimum incremental and cumulative investment requirements.
    - Cap on total disbursements in each sub-scheme.
- **Absence of proper supply chains:** Supply chains are limited for most domestic companies which results in disruption even due to no fault of their own. This will impact their qualification for the incentive.

Way Forward

- The scheme requires careful and continuous monitoring and active coordination between the Centre and State governments.
- The government should ensure that the tariff and/or non-tariff protection for each sector must come with a clearly defined sunset clause. Otherwise, it will defeat its primary objective of creating globally competitive manufacturing capacities.
- The government should ensure that domestic capacities created under the scheme embody frontline technologies to remain globally competitive.
- The marked dualism between the formal and informal segments within the manufacturing sector should be eliminated. Though the expanding coverage of GST will help in reducing dualism, still, sector-specific measures are needed.

Conclusion

In an increasingly interconnected world, manufacturing has been transformed into a series of dependent processes across multiple countries, which together form large global value chains (GVCs). With GVCs slowly shifting towards the East and due to the constantly evolving geopolitical dynamics in the world, there is a massive opportunity for India to capture certain segments by leveraging its strengths and with dedicated support from the government. From the national perspective, the PLI scheme is a policy tool devised to attract investments in areas of strength and to strategically enter certain segments of GVCs, to bring scale and size in key sectors, and create and nurture global champion

> **PEPPER IT WITH**
> State Export Promotion Committee (SEPC), Government e-Marketplace (GeM) Bazaar, Districts as Export Hub' Initiative, GI Tag, SFURTI, ODOP

Income inequality

News Excerpt

Recently, Oxfam India released a report titled "Survival of the Richest: The India Story", a key point highlighted by the report is the fact that the top 1 percent of India's richest population own nearly 40.6 percent of the total wealth of the country, while the bottom half of the population together share just 3% of the wealth.

Pre-Connect

Gini Coefficient

- The Gini coefficient (Gini index or Gini ratio) is a statistical measure of economic inequality in a population.
- The coefficient measures the dispersion of income or distribution of wealth among the members of a population.
- The coefficient can take any value between 0 to 1 (or 0% to 100%):
    - A coefficient of zero indicates a perfectly equal distribution of income or wealth within a population.

- o A coefficient of one represents a perfect inequality when one person in a population receives all the income, while other people earn nothing.
- The Gini coefficient is not an absolute measure of a country's income or wealth. The coefficient only measures the dispersion of income or wealth within a population.

Key highlights of the Report

➢ Due to the pandemic, the wealth of the bottom 50 percent of the population falls to just 13% of the National Income and less than 3 percent of the total wealth. On the other hand, the total number of billionaires in India increased from 102 in 2020 to 166 billionaires in 2022.

➢ Wealth inequality has stripped 70 percent of Indians from as basic a necessity as a healthy, consumable diet leading to the yearly deaths of 1.7 million owing to diseases resulting from a poor diet.

➢ A study by the Indian Journal of Labour Economics found that female workers earned only 63 paise for every 1 rupee a male worker earned. This becomes worse for Scheduled Castes and rural workers, as they earned 55% and 50% of what the advantaged social groups earned respectively, between 2018 and 2019.

➢ Reduction in the corporate tax has led to a shrink in government revenue which is being compensated by the indirect tax.

➢ The indirect nature of both the GST and fuel taxes makes them regressive, which invariably burdens the most marginalized. As a result, the poor in India are paying disproportionately higher taxes and spending more on essential items and services when compared to the rich.

➢ The higher food inflation impels the poor to reduce their already low expenditure on health, education, clothing, and shelter.

➢ The move to control inflation results in an increase in loan rates which affects the middle class. They are already paying as high as a quarter of their income in repaying debt.

Key Recommendations

✓ Taxing the wealth of the richest 1 percent: Tax the net wealth of the top 1 percent on permanent basis, with higher rates for millionaires, multi-millionaires, and billionaires.

✓ Easing the tax burden on the poor and the marginalized: The government should reduce the GST slabs on essential commodities, which form the majority of the poor and middle classes spending habits and hike the taxes on luxury goods.

✓ Improve access to public services like health and education: The report suggested multiple measures to achieve the same:
  - o Enhance the budgetary allocation for health to 2.5 percent of GDP by 2025, as envisaged in the National Health Policy.
  - o Reduce Out-of-pocket (OOP) expenditure and strengthen disease prevention and health promotion ecosystem.
  - o Establish medical colleges with district hospitals, particularly in hilly, tribal, or rural areas where health infrastructure is poor.
  - o Strengthen Primary Health Centres (PHCs), Community Health Centres (CHCs), and government hospitals with adequate infrastructure and personnel.
  - o Enhance the budgetary allocation for education to a global benchmark of 6 percent of GDP, as committed in the National Education Policy.
  - o Reduce existing inequalities in education by spending more on programmes meant for improving the educational status of students from marginalized sections (SC/ST/Girls).

✓ Strengthen safety nets and bargaining power of labour: Inflation and, consequently, a rise in the cost of living hurts the poor and middle class more. Therefore, it is essential to ensure social protection for those in the informal sector and strengthen monitoring and tracking mechanisms that ensure the protection of the labour class of the country.

The Fallacy of Oxfam	
The idea of Wealth	• Wealth is very different from real income. It includes a person's all assets and liabilities and thus it gets revalued every year. E.g. For a business house the wealth will depend on the fluctuations in the stock market. But on the other hand, in a growing population like India which witnessed economic reforms in the last 3 decades, many of them won't be having any assets (or surpluses), for a long time, as they build their future on borrowings. Thus, calculating income inequality solely on wealth is a faulty step.

Page 33

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

Promotes Equal Distribution of Poverty	• Report analysis results in all-kind of the wrong conclusions and often results in a political economy where wealth is being destructed and in absence of wealth creators there cannot be the elimination of poverty.
Taxing the Rich won't help	• Taxation should be based on real income and it cannot be based on the notional idea of wealth. Further, the absolute amount of tax differs based on the income earned in other words 1% of 1 Cr is more than 10% of 20K.
India is moving forward	• The report highlights the fact that the number of billionaires in India has grown but those billionaires came from the same wealth creation which is showing these aspirational people upwards. This shows India is moving forward.
Drives out India's investment capabilities	• Taxation in India is presently in-par with international best practices. Further, any increase in taxation can drive investors out of India as happened in 2018 when the US lowered the taxation rate.
Sensationalism over facts	• Oxfam uses accounting shenanigans by using old data. E.g. Oxfam Data suggest that the bottom 50% of India's per capita-per-annum earnings is a little over 2 lakh but India's per capita GDP at current prices is less than 2 lakh. This shows the oxymoronic nature of Oxfam work.
Wrong Attack on GST and Corporate Tax	• Most of the items Oxfam has looked at are either not taxed, are periodic purchases or are simply not bought by the poor. Further, the GST rates across items show that most essentials are already taxed in the lowest slab or are exempt. Similarly, collection of corporation tax grew around 9.6% (2022-2023) in the lower slab.

Conclusion

Income inequality is not good for any economy but measuring it from the perspective of wealth shows the biases of Oxfam. The idea of a wealth tax can prove disastrous for a growing economy like India. To counter, income inequality there is a need to focus on delivering on the governance front and effective utilization of taxes

PEPPER IT WITH
Windfall Tax, Wealth Tax, Global Minimum Tax

RBI Report on State Government Budget

News Excerpt

The Reserve Bank of India released its report on state government budgets for 2022-23. The report outlines how state government finances, which had come under severe stress in 2020-21 because of the slowdown in the economy due to the pandemic, have improved in the years thereafter. However, there are several areas of concern.

Pre- Connect

- **Revenue Deficit**
  - Revenue Deficit denotes the difference between revenue receipts and revenue expenditure.
  - Revenue Account Gap = Revenue Deficit = Revenue Receipts – Revenue Expenditure

- **Capital Deficit**
  - Capital Deficit denotes the difference between capital receipts and capital disbursements. Capital Account Gap = Capital Account Deficit = Capital Receipts – Capital Disbursements

- **Gross Fiscal Deficit**
  - The gross fiscal deficit (GFD) is the excess of total expenditure including loans net of recovery over revenue receipts (including external grants) and non-debt capital receipts.

- **Gross Primary Deficit**
  - Gross Primary Deficit is defined as Gross Fiscal deficit minus interest payments.
  - Primary Deficit = Gross Fiscal deficit – Interest Payment

The fiscal position of the states

> **Debt-to-GDP:** The state debt-to-GDP ratio remains high. As per the report, the debt-to-GDP ratio has fallen from 31.1 percent in 2020-21 – a year when states had struggled to manage the economic fallout of the pandemic — to 29.5 percent in 2022-23.

Revenue Budget	Basis	Capital Budget
Revenue budget includes: (1) Revenue Receipt (2) Revenue Expenditure	Inclusion	Capital budget includes: Capital Receipt Capital Expenditure
(1) Revenue Receipt: Government receipts that: • Neither creates liabilities for the government nor cause any reduction in assets of the government are called revenue receipts. **(2) Revenue Expenditure:** An expenditure that: • Neither creates any assets nor causes any reduction of liability.	Meaning of types	**(1) Capital Receipt:** Government receipts that: • Either creates liabilities (of payment of loan) or reduce assets (on disinvestment) are called capital receipts. **(2) Capital Expenditure:** Capital expenditure that: • Either creates assets for the government or causes reduction in liabilities of the government.
Examples of revenue receipt are income tax, gift tax, sales tax, fees and penalties etc. **Examples of revenue expenditure are** old age pensions, salaries and scholarship, expenditure on the repayment of loan, defence, health etc.	Examples	**Examples of Capital receipt are** loans by the government, recovery of loans etc. **Examples of Capital expenditure,** Equity (or Shares) of the domestic or multinational corporations purchased by the government, repayment of loans reduces liability of the government.

- o However, there is marked variation across states. Punjab, Tamil Nadu, Haryana, and West Bengal have the highest interest payments to revenue receipts ratio. This implies that in these states, interest payments account for a sizable portion of the state's revenues, leaving them with less room to spend on other areas of priority such as health or education.
- o The Fiscal Responsibility and Budget Management review committee, headed by N K Singh, had recommended a debt-to-GDP ratio of 20 percent for states.

> **Contingent liabilities:** Contingent liabilities here refer to the obligations of a state government to repay the principal and interest payments in case a state-owned entity defaults on a loan.
> - o State governments have also seen a significant increase in their contingent liabilities: the guarantees issued by state governments have risen from Rs 3.12 lakh crore or 2 percent of GDP in 2017 to Rs 7.4 lakh crore or 3.7 percent of GDP. The states of Andhra Pradesh, Telangana, and Uttar Pradesh have the most guarantees outstanding at the end of March 2021.
> - o The state of state-owned power distribution companies or discoms also has adverse implications for state finances.

Capital Expenditure
- ✓ **Government capital expenditure**
  - o Government capital expenditure refers to the outlay of government funds in the form of investments or development spending towards the creation of assets for the long term.
  - o An example of capital expenditure could be the money spent on, say, Railways or building national highways and roads.

Page 35

✓ **Position of capital expenditure of States**
  o Higher allocation to capex but actual spending needs to pick up: Capital expenditure by states recorded an impressive growth of 31.7 percent in 2021-22. Strong growth in revenue collections as well as enhanced transfers from the central government gave the states the required space to accelerate capital expenditure.
  o There are inter-state variations in capital spending. For instance, Uttar Pradesh, accounting for 21 percent of the total budgeted expenditure, made one of the highest allocations on capital spending made by states.
  o In contrast, Maharashtra has allocated only 14 percent of its total expenditure on capex.
  o However, the actual amount spent by the states is less; around 29 percent of the budgeted capital expenditure has been spent.
  o The government launched a scheme for special assistance to states for capital investment. Under this, an amount of Rs 1.07 lakh crore has been allocated and financial assistance is provided to states in the form of a 50-year interest-free loan for capital projects. However, still very less has been released to the eligible states under the scheme.

✓ **Importance of government capital expenditure**
  o The impact multiplier effect of ₹1 spent on capital expenditure is as high as 2.45.
  o A higher capex by the government will help generate demand in the economy, attract private investments over a longer term and sustain economic growth.
  o By creating long-term assets, the economy is benefitted as it can help generate revenues for many years.
  o Through capital expenditure, fixed assets are acquired; existing assets are upgraded or even loans are repaid.
  o Government capital expenditure enhances labour participation in the economy.

Way Forward

- Going forward, increased allocations for sectors like health, education, infrastructure, and green energy transition can help expand productive capacities if states mainstream capital planning rather than treating them as residuals and first stops for cutbacks to meet budgetary targets.
- The report added that a glide path also needs to be set, keeping in view the need for rebuilding fiscal space to deal with future shocks.
  E.g., creating a capex buffer fund during good times when revenue flows are strong to smoothen and maintain expenditure quality and flows through the economic cycle
- To crowd in private investment, state governments may continue to focus on creating a congenial ecosystem for the private sector to thrive.
- The report added that states also need to encourage and facilitate higher inter-state trade and businesses to realize the full benefit of spill-over effects of state capex across the country.

> **PEPPER IT WITH**
> Fiscal Responsibility and Budget Management Act, Competitive Federalism, Public Debt Management, Special Category States, Ways and Means Advance

Conclusion

While the outstanding liabilities of states have moderated from their pandemic time peaks, debt consolidation at the individual state level warrants urgent attention.

World Economic Outlook

News Excerpt

The IMF has released its January update of the World Economic Outlook report, marginally improving the forecast for global growth in 2023.

Pre- Connect

World Economic Outlook report

- The IMF releases the WEO twice every year.
- It presents IMF staff economists' analyses of global economic developments during the near and medium term.

www.ksgindia.com
DELHI VN: 9717380832 & DELHI ORN: 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774| RANCHI: 9939982007 | BHOPAL: 7509975361|
INDORE: 7314977441 | BENGALURU: 7619166663 | HYDERABAD: 79960 66663 | IMPHA: 9650245599 | SRINAGAR: 98712 35599| MUMBAI: 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias
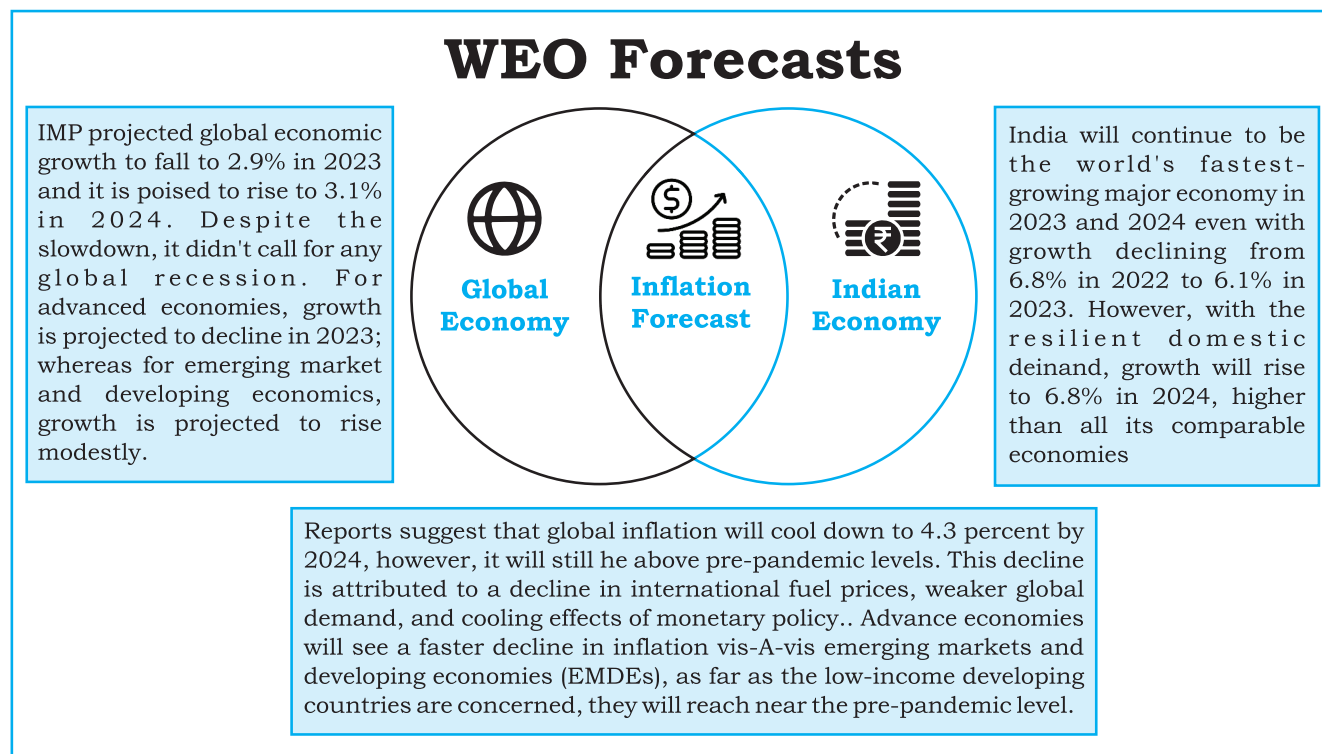
Risks highlighted in the Report

The balance of risks to the global outlook remains tilted to the downside (lower growth and higher inflation), but adverse risks have been moderated.

➢ **Upside risks**: To provide lower-than-expected inflation and less monetary tightening.
  - o Pent-up demand boost: Fuelled by the stock of excess private savings from the pandemic fiscal support, tight labor markets, and solid wage growth, there is scope for a further boost to consumption.

➢ **Downside risks**: To provide lower growth while adding further to inflation.
  - o China's recovery stalling: Spill over to the rest of the world would operate through lower demand and supply chain problems.
  - o War in Ukraine escalating: This will impact food and fuel prices; further social unrest may increase.
  - o Debt distress: The combination of high debt levels from the pandemic, lower growth, and higher borrowing costs exacerbates the vulnerability of economies.
  - o Persistent Inflation: Due to persistent labor market tightness translating into stronger-than-expected wage growth, higher-than-expected oil, gas, and food prices from the war in Ukraine, and a faster rebound in China's growth.

WEO Forecasts

| IMP projected global economic growth to fall to 2.9% in 2023 and it is poised to rise to 3.1% in 2024. Despite the slowdown, it didn't call for any global recession. For advanced economies, growth is projected to decline in 2023; whereas for emerging market and developing economics, growth is projected to rise modestly. | **Global Economy** — **Inflation Forecast** — **Indian Economy** | India will continue to be the world's fastest-growing major economy in 2023 and 2024 even with growth declining from 6.8% in 2022 to 6.1% in 2023. However, with the resilient domestic deinand, growth will rise to 6.8% in 2024, higher than all its comparable economies |

Reports suggest that global inflation will cool down to 4.3 percent by 2024, however, it will still he above pre-pandemic levels. This decline is attributed to a decline in international fuel prices, weaker global demand, and cooling effects of monetary policy.. Advance economies will see a faster decline in inflation vis-A-vis emerging markets and developing economies (EMDEs), as far as the low-income developing countries are concerned, they will reach near the pre-pandemic level.

  - o Sudden financial market repricing: Unfavourable inflation data releases could trigger a sudden repricing of assets and increase volatility in financial markets.
  - o Geopolitical fragmentation: Due to the war in Ukraine, international sanctions on Russia splitting the world economy into blocs, and earlier geopolitical tensions such as the US-China trade dispute.

Way Forward: Policy Priorities as recommended by the IMF

✓ Securing global disinflation:
  - o Raising real policy rates and keeping them above their neutral levels.
  - o Gradual and steady fiscal tightening to cool demand.

✓ Containing the re-emergence of COVID-19:
  - o Boost vaccination and medicine access in countries where coverage remains low.

Page 37

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

o Deployment of pandemic preparedness measures—including a global push toward sequencing and sharing data.
✓ Ensuring financial stability:
  o Monitoring housing sector developments and conducting stress tests in economies where house prices have increased significantly over the past few years.
  o Need to address data and supervisory gaps in the less-regulated nonbank financial sector.
  o Introduce common standards for crypto assets.
✓ Restoring debt sustainability:
  o Restructuring or reprofiling debt including fiscal consolidation and growth-enhancing supply-side reforms.
✓ Supporting the vulnerable:
  o Targeting the vulnerable through social safety nets such as cash transfers to eligible households based on income or demographics or by transfers through electricity companies based on past energy consumption.
✓ Reinforcing supply:
  o Supply-side issues for key structural factors like market power, rent-seeking, rigid regulation and planning, and inefficient education should be addressed.
  o Push for investment along the supply chain of green energy technologies.
✓ Strengthening multilateral cooperation:
  o Restraining the pandemic:
  o Addressing debt distress:
  o Need to agree on mechanisms to resolve debt in a broader set of economies, including middle-income countries.
✓ Strengthening global trade:
  o Roll back restrictions on food exports and other essential items such as medicine
  o Upgrade World Trade Organization (WTO) rules in critical areas such as agricultural and industrial subsidies
  o Concluding and implementing new WTO-based agreements
  o Fully restoring the WTO dispute settlement system.
✓ Speeding the green transition:
  o Implement climate change mitigation policies.
  o International coordination on carbon pricing or equivalent policies for faster decarbonization.
  o Global cooperation to build resilience to climate shocks, including through aid to vulnerable countries.

> **PEPPER IT WITH**
> Global Financial Stability Report, Global Recession, Fiscal Monitor IMF-Article IV consultations

World Economic Forum (WEF)

News Excerpt
Recently, World Economic Forum annual summit was held in Davos amid the anticipation of a global recession in 2023.

Pre-Connect
About WEF
- World Economic Forum was established in 1971 as a not-for-profit foundation. It calls itself independent, impartial, and not tied to any special interests.
- It is an International Organization for Public-Private Cooperation.
- The Forum engages the foremost political, business, cultural, and other leaders of society to shape global, regional, and industry agendas.
- WEF releases Davos Manifesto which majorly revolves around ethics in corporate governance and advocates for a competitive level playing field.
- Significant reports released by WEF include:
  o Global Gender Gap Report
  o Global Risks Report

www.ksgindia.com
DELHI VN: 9717380832 & DELHI ORN: 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774| RANCHI: 9939982007 | BHOPAL: 7509975361|
INDORE: 7314977441 | BENGALURU: 7619166663 | HYDERABAD: 79960 66663 | IMPHA: 9650245599 | SRINAGAR: 98712 35599| MUMBAI: 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- o Global Health and Healthcare Strategic Outlook
- o Environmental Performance Index
- o Global Competitive Index
- o Global Information Technology Report
- o The Global Human Capital Report

Key takeaways

Economic Front

➢ Leaders of major economies were upbeat about their respective economies and were not looking forward to a recession. But the central bank of the major economies cautioned against such optimism and asserted to keep interest rates high to ensure that inflation is under check.

➢ There were apprehensions that the opening of the Chinese market could drive up energy prices and with richer countries looking inwards, it would hit developing countries with limited fiscal capabilities.

Climate

➢ There was a consensus on the faster adoption of green energy and generating funds for the same objective.

➢ WEF launched the Giving to Amplify Earth Action (GAEA), a global initiative to fund and grow new and existing public, private, and philanthropic partnerships (PPPPs) to help unlock the $3 trillion of financing needed each year to reach net zero, reverse nature loss and restore biodiversity by 2050.

➢ There were concerns about the US Green energy laws that benefit products, such as electric vehicles, made in America. While, IMF Chief, hoped that the US, China, India, and European Union would sign a commitment to work together to save the planet.

Geopolitics of Davos

✓ The theme at the Davos this year was *'Cooperation in a Fragmented World'*. It is the acceptance of the current great power contestation and the inability of the global multilateral order to provide an effective framework for governance.

✓ The foundation of Davos was for forging global cooperation but in the present scenario, there is the weaponization of almost all aspects of inter-state engagement that is creating challenges that most states are struggling to cope with.

✓ Growing socio-economic inequality, the Covid pandemic, China's weaponization of economic dependencies, and the Ukraine war have all further pushed large parts of the world to reimagine the contours of globalization.

Conclusion

As Hard-power takes center stage at Davos, negotiations will be viewed from the lens of battlefield realities. This will quickly unravel the Davos Consensus. Amid such realities, India certainly stood out as a 'bright spot', but Indian policymaking is also responding to most of the same pulls and pressures that are shaping wider geopolitical and geo-economic events. But for the larger goods of the world, a fast return to the negotiating table might be a better option as fears of an economic deceleration swirl around.

INTERNATIONAL RELATIONS

India-Egypt Relations

News Excerpt

The President of Egypt was invited as the chief guest for the 74th Republic Day parade. His visit was marked by a new vigour in the relationship between the two countries as both sides agreed to elevate the India-Egypt bilateral relationship to a "strategic partnership".

Pre-Connect

- India and Egypt are two of the World's oldest civilizations and were in trade relations since ancient times. There are Ashoka's edicts that refer to his relations with Egypt under Ptolemy II.
- Two of the most towering personalities in India and Egypt- Mahatma Gandhi and Saad Zaghloul respectively, shared common goals for the independence of their countries.
- Post-Independence new aspirations of both countries brought them together, first in form of the establishment of diplomatic relations in 1947, then a Friendship treaty in 1955, and later on the platform of the Non-Aligned Movement (NAM).
- Both countries joined hands to promote as Pan-Asianism, Pan-Arabism, and Third Worldism by countering the "camp allegiance" policy during the cold war.
- Egypt changed its strategic discourse after the 1973 Yom Kippur war and dumped its military ties to the Soviet Union and turned to the US as a strategic partner. However, the anti-west policy discourse, of the Indian foreign policy in the 1970s was not emphatic to the concerns and interests of Egypt.
- Post Liberalization, India's accelerated economic growth became dependent on the Gulf for energy, labour export, and remittances. Therefore, India changed its strategy toward the gulf.
- In 2016, both countries identified political-security cooperation, economic engagement and scientific collaboration, and cultural and people-people ties as the basis of a new partnership for a new era.

Different Facets of India- Egypt Relations			
Economic	**Defence and Security**	**Diplomatic**	**Others**
• India's trade with Egypt has grown from $4.5 billion in 2018-19 to $7.26 billion in 2021-22. It is expected to grow to $12 billion dollar in the next 5 years. • Top three Indian exports are- petroleum products, meat and cotton Unclassified yarn while the top three Indian imports are- crude petroleum, petroleum products and fertilizers.	• Training exchange program between the Air forces of two countries started in 1960s and lasted the mid-1980s. • India wants to supply domestically produced defence equipment such as the LCA Tejas, missiles like Akash, DRDO's Smart Anti-Airfield Weapon, and radars to Egypt. For this India is also exploring avenues for co-manufacturing.	• India and Egypt are together as a member and dialogue partner respectively of the Indian Ocean Rim Association (IORA). • They are both dialogue partners of the Shanghai Cooperation Organisation (SCO).	• The COVID-19 pandemic acted as a catalyst to bring many bilateral relationships between the two countries out of deep freeze. While Egypt helped India during the worst Delta Wave, India's vaccine diplomacy helped Egypt vaccinate its people.

Relevance of Egypt for India

➢ **Strategic Relevance:**
- o It is the most populous country in West Asia and it occupies a crucial geo-strategic location.
- o It acts as a gateway to both Europe and Africa with 12% of global trade passing through the Suez Canal.
- o It is a pivotal state sitting at the crossroads of the Middle East, Africa, and Europe and can influence political outcomes on multiple fronts.
- o With an increasing Chinese presence in the region, Egypt can act as an opening to the North African region for India.
- o Through Operation Sankalp (the Indian Navy escorted oil tankers through the Strait of Hormuz when tensions between Saudi Arabia and Iran escalated) India has shown that it had moved up in the region from anti-piracy operations to overt

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

protection of national assets and interests. With Egypt on its side, India can protect its energy security which is bound to become even more precarious in the coming times.

➢ **Economic Relevance:**
  o It is a major market for India.
  o It is the strategic location as a center for production and re-export to various countries that are linked by his country's free trade agreements, particularly in the Arab region and Africa
  o Egypt can allocate a special area of land for the Indian industries in the Suez Canal Economic Zone (SCEZ), and the Indian side can arrange for the master plan.

➢ **Security Relevance:**
  o Strong ties with Egypt will help cement India's new coalition with moderate Sunni states in the Middle East (such as Jordan, Saudi Arabia, and the UAE) to counter Islamic religious extremism.
  o Egypt also shares India's concerns on the need to take concerted action to end cross-border terrorism.
  o The current leadership of Egypt has emerged as a force for stability in a region buffeted by al Qaeda, IS, and other Islamists.
  o Egypt's idea of addressing terrorism is based not only on security solutions but also, on examining the economic, cultural, and ideological roots of the problem.

➢ **Diplomatic Relevance:**
  o Under present leadership, Egypt is a moderate Islamic voice among Muslim-majority countries and a friend of India in the Organisation of Islamic Cooperation (OIC). Pakistan uses the OIC forum to further its Kashmir agenda.
  o Good relations with Egypt will align India's regional diplomatic priorities in the Middle East closer to India's core interests and will be in tune with the shifting regional realities.
  o With India set to promote global southism with its G20 presidency, it finds a resonance of the same in Egypt as both countries share the same sentiment since the non-aligned movement.
  o Both countries also share the common viewpoint of supporting African countries' development aspirations. The possibilities of both India and Egypt working towards triangular development cooperation with other African countries are immense.

> **Indo-Abrahamic Alliance**
>
> Indo-Abrahamic Alliance is the convergence of the Middle East with the Southern Asia together forming a Western Asian System. The main driver of integration is the convergence of interest between Israel, India, and Sunni Arab states. It is manifested through the formation of I2U2 and promotion of the Abraham Accords and the Negev Forum. Egypt's Suez Canal solidified its role as a geopolitical and economic cohering point between the Mediterranean Sea, the Red Sea, and the Indo-Pacific. Egypt has cautiously embraced the new strategic environment in West Asia, from supporting the Abraham Accords to becoming a member of the Negev Forum. Therefore, Egypt has emerged as India's fourth main pillar in West Asia and Africa. This allows India to partner with France and Egypt and address the transnational challenges affecting the transoceanic space from the Mediterranean Sea to the Indo-Pacific.

India's Significance for Egypt

Egypt is facing serious economic woes due to the double whammy of the pandemic and the Russia-Ukraine war. It is reeling under the unprecedented rise in inflation and looking for IMF for a bailout package. India had helped Egypt by lifting the restrictions on the export of Wheat and Indian companies are investing in infrastructure projects.

Key Takeaways of the Visit

✓ Both countries decided to elevate the relationship to a 'strategic partnership' which will include
  o Political, Defence, and Security Engagement
  o Economic Engagement
  o Scientific and Academic Collaboration
  o Cultural and People-to-People contacts.
✓ Both leaders called for zero tolerance for terrorism and to strengthen cybersecurity.
✓ Exchange of five MOUs in the crucial areas of cybersecurity, information technology, culture, youth matters, and broadcasting.

Way Forward

There are three things that India and Egypt should do to transform their relationship to new contours:

▪ Finalize the proposed sale of India's 70 Tejas Light Combat Aircraft to Egypt with Hindustan Aeronautics Limited (HAL) setting up production and manufacturing facilities in Egypt.

▪ Establish a yearly 3+3 format that includes the chief intelligence officers, ministers of defense, and ministers of foreign affairs that coordinate the two nations' positions on issues spanning maritime security, energy security, food security, and security architecture in West Asia.

▪ Egypt and India should explore the possibility of a France-Egypt-India trilateral format as an innovative coalition bringing together France, Egypt, and India to address various challenges from the Mediterranean Sea to the Indo-Pacific.

> **PEPPER IT WITH**
> NAM 2.0, India-Africa Economic Growth corridor, India-Africa Defence agreement.

Conclusion- The Third Pole

India is clear-headed about forming a third pole on the global stage instead of being asked again to choose sides in this era of great power competition, which accelerated following the Russian invasion of Ukraine and the rising tensions over Taiwan. This India-driven pole could be a coalition of regional and middle powers that want to pursue their national interests in this era of great power competition and economic uncertainty. The likes of NAM can be repeated as the present environment is not new for both India or Egypt.

Indus Water Treaty (IWT)

News Excerpt

The Government of India issued a notice to Pakistan seeking a modification in the Indus Waters Treaty (IWT) of 1960 just two days before the sitting of a court of arbitration set up on the dispute over the Kishenganga and Rattle hydroelectric power projects being constructed by India.

Pre-Connect

India shares natural water bodies with many neighbouring states. Of them, rivers have remained a constant source of conflict between India and these neighbours. India has riparian disputes with Nepal (over Kosi and Sarada), Bangladesh (over Ganga and Kushiyara, among others), and Pakistan (over Indus and Chenab, among others).

Understanding Indus Water Treaty

- The Indus River system consists of five major rivers: Indus, Jhelum, Chenab, Beas, and Sutlej, that start in the Himalayas and travel westwards to flow into the Arabian Sea.
- After the British took control of the area in the 19th century, they expanded the canal system, irrigating new areas and transforming the economic and social makeup of the region.
- The end of British rule in 1947 and the formation of India and Pakistan sowed the seeds of the riparian conflict because of the way the international borders divided the basins and flow of the rivers.
- Both countries first signed the Standstill Agreement of 1947, upon expiration of which India stopped water from flowing into Pakistan. Then they signed the Inter-Dominion Agreement of 1948 by which India asked for annual revenues to be paid to it for the water. This accord failed too.
- The Indus Waters Treaty, 1960, is a water-sharing pact between India and Pakistan that covers six rivers beginning in India and flowing into Pakistan. The treaty was signed on September 19, 1960.
- The preamble to the treaty aims at satisfactory utilization of the Indus system of rivers (Ravi, Beas, Sutlej, Indus, Jhelum, and Chenab) based on the goodwill between the two countries. It was essentially a confidence-building measure between the two neighbours.
- The treaty divides the Indus system into two segments: Eastern Rivers-Sutlej, Beas, and Ravi, and Western rivers -Indus, Chenab, and Jhelum. India gets the right of unrestricted use over the Eastern rivers. Pakistan is entitled to "unrestricted" use of Western rivers. India is under obligation to let flow the western rivers unrestricted.

Page 42

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

Western rivers
Chenab, Jhelum, Indus
India's rights over these rivers: Limited — can set up certain irrigation, run-of-the-river power plants, very limited storage, domestic and non-consumptive use, all subject to conditions

Baglihar dam on Chenab

Eastern rivers
Sutlej, Beas, Ravi
India's rights over these rivers: All exclusive rights lie with India.

Indus Waters Commission a success story
- Once every five years, conducts a general inspection of all rivers in parts. Total inspection tours so far: Over 100
- Regularly meets once a year. Total meetings thus far, including those for taking up Pak objections: Over 100

- Under the treaty, India got roughly 20 percent of the river system water while Pakistan got 80 percent. However, India also got the right to use the water of this 80 percent share for agricultural, domestic, non-consumptive, and hydroelectric power purposes.
- Both India and Pakistan have the right to non-consumptive use. However, both sides have the rights of drainage issues and river conservation aspects. Both sides are mandated to prevent the pollution of the rivers. As responsible partners, both sides are expected to create permanent Indus Commissions with Commissioners in charge.
- Any dispute will have to be examined by the Commissioners. Under *Article 8* of the treaty, both sides are expected to meet at least once a year to discuss bilateral problems. However, after the Uri attack, India decided to suspend talks between the Commissioners and stopped short of reviewing the treaty.
- The water of the Indus system flowing into Pakistan helps irrigate about 110.000 square kilometers and supports its agriculture belt In Punjab and Sindh

Genesis of the Present Conflict

➢ Pakistan raised issues on the Kishenganga project and the Rattle project at the Permanent Indus Commission. Then, in 2015, Pakistan asked for the appointment 'neutral expert' for the examination of its objections.

➢ In 2016, Pakistan retracted its request and sought a resolution of the disputes through a Court of Arbitration. This, India termed as a violation of Article IX of the IWT, which provides ways for the settlement of differences and disputes.

➢ India has argued that Article IX of the IWT, which provides for 'Settlement of Difference and Disputes' is graded. Thus follows a three-step process wherein one cannot supersede another these are:
  - First Step- Examination by the Permanent Indus Commission.
  - Second Step- If the step first fails then, Differences to be by a neutral expert.
  - Third Step- If the step second fails then, the dispute is to be settled by a Court of Arbitration.

IWT-A mutual cord of Diplomacy

❖ The IWT is the only agreement between India and Pakistan that has stood the test of time, through wars and terrorism. Underlying the treaty is the principle that water does not recognise international boundaries and upper riparians have a responsibility to lower riparians.

❖ It would be plain dangerous to build big dams to stop the western rivers from flowing across the LoC in a seismologically active region. Using water as a weapon is never a good idea. It would be so much better for both countries to treat the IWT as an instrument for collaboration on climate action in the fragile Himalayan region.

➢ Pakistan, on the other hand, claimed that the opinion of a neutral expert can be sought for technical issues only and that it has referred the matter to the Court of Arbitration since there are 'legal issues involved.

➢ Further, in 2021, a parliamentary committee asked for a renegotiation of the IWT, given present-day exigencies such as the impact of climate change on water availability in the Indus basin.

Technical and legal grounds for IWT modifications

✓ The treaty is not equipped to cater to new techniques, technologies, and studies in the building of hydropower projects, which increase their life and efficiency but were not available at the time the treaty was negotiated.

✓ The World Bank rather than acting as a facilitator has indulged Pakistan's ranked bad behavior and allowed it to run riot even with the dispute resolution mechanism. This becomes clear when it allowed Pakistan to approach the Court of Arbitration without resolution at the neutral expert level.

✓ Pakistan is using the treaty not to resolve differences but to delay the Indian projects, adding to their cost and affecting their techno-economic viability.

Political and strategic dimensions to IWT modifications

▪ For decades, the government of India consciously and scrupulously continued to adhere to the provisions of the Treaty. However, Post Uri attack the strategic thought in India has changed, Now India has decided to leverage the IWT to prevent any waters allotted to India from flowing into Pakistan.

▪ Former Secretary to the Government of India, Ramaswami Iyer, had written a paper in 2005 proposing that the treaty be relooked and renegotiated. In all likelihood, it's clear Pakistan won't agree to this proposition, however, India is all set to push the envelope on the IWT, something the country wasn't ready to do earlier.

Implications of the Indian move on the IWT

✚ For sure there is no exit clause in the IWT but no treaty lasts in perpetuity. Treaties survive till they serve the purpose for which they were negotiated. This isn't so much a question of international law as it is about the dynamics of power.

✚ India's move comes against the backdrop of the enormity of the crises that confront Pakistan. It serves the message that Pakistan must stop its prejudicial and pernicious opposition to Indian projects.

✚ India, at the same time, is not looking to walk out of the treaty for several reasons:
  o India doesn't have the structures to either stop the flow of water into Pakistan or divert the waters for use in India.
  o Pakistan has not been weakened or de-fanged to a point that there is nothing it can do about India altering the treaty.
  o India is yet to asses the political, economic, and diplomatic impact of souring relations with the World Bank and its affiliates organizations before it takes the plunge.
  o The third factor India needs to take into account is the precedent it will set vis-à-vis China especially given its aggression on Brahmaputra and Mekong.
  o There are the Western powers, who will also try and intervene in this matter, especially if they think it could lead to a Water War or worse between India and Pakistan.

Way Forward

⊃ Walking out of the treaty is not a realistic option for India and too much aggressiveness can also prove costly since India cannot afford to belittle the China factor as some of the rivers under the IWT originate in Tibet,

PEPPER IT WITH
River System India shares with neighbouring countries

⊃ At the same time, allowing Pakistan to misuse the treaty is also not in India's favor. For now, the best possible solution for both India and Pakistan is to sit down at the re-drawing table and reach a consensus.

⊃ Further, As climate change has become a serious concern now, it might be a good idea for the two sides to sit together and redraft the terms of the IWT.

Conclusion

For now, India has fired the first shot on the IWT. It remains to be seen if Pakistan is ready to negotiate on modifying the treaty or if it will fall back on its old, time-tested but increasingly rusting tactic of blocking any move by India. Pakistan's past track record is one of never missing an opportunity to miss an opportunity, only to realize later that the terms being offered earlier are no longer on the table. The ball is now in Pakistan's court.

iCET

News Excerpt

Recently, India-US ties saw an elevation with the launch of the U.S.-India initiative on Critical and Emerging Technology (iCET) announced in May 2022 during the Quad summit. It is a step towards adapting to new strategic realities in the Indo-Pacific region.

Pre-Connect

India-US Cooperation in Science & Technology

- High technology cooperation has long been a major focus of US-India relations. Early advances in India's nuclear and space programmes in the 1950s and 1960s involved significant inputs from the US.
- But the US nuclear sanctions from the 1970s steadily whittled down the extent of bilateral high-tech cooperation. The historic civil nuclear initiative of 2005 opened the door for renewed technological cooperation. But residual restrictions on technology transfer in the USA and India's political ambivalence and bureaucratic inertia prevented the best use of the new possibilities.
- In 2000, India and the USA endowed the India-U.S. Science & Technology Forum (IUSSTF) to facilitate mutually beneficial bilateral cooperation in science, engineering, and health.
- The India-US S&T cooperation is guided by the framework of U.S.-India Science and Technology Cooperation Agreement signed in October 2005.
- There is an Indo-U.S. Science & Technology Joint Commission, co-chaired by the Science Advisor to U.S. President and Indian Minister of S&T.
- In 2008, the Ministry of Earth Sciences and U.S. National Oceanographic and Atmospheric Administration signed an MOU on Earth Observations and Earth Sciences. Under this, a "monsoon desk" has been established at the U.S. National Centers for Environmental Prediction
- In 2009, The U.S.-India Science & Technology Endowment Fund was established under the Science and Technology Endowment Board promote commercialization of jointly developed innovative technologies with the potential for positive societal impact.
- India's contribution of $250 million towards Thirty-Meter Telescope Project in Hawaii and Indian Initiative in Gravitational Observations (IndiGO) with U.S. LIGO Laboratory are examples of joint collaboration to create world-class research facilities

Technology and National Security

- ❖ Technology is today at the very core of national security. It is playing a decisive role in capacity building of the countries across the globe. The recent Covid-19 pandemic has served as a warning sign on how technology dependency can prove costly in longer run.
- ❖ The centrality of technology in reshaping the current world order cannot be overstated, especially as the US and China have entered a new tech-race spearheaded by the 'Chip war'.
- ❖ The recent 'spy balloon' incident underlines, use of technology can allow countries to challenge sovereignty, gather information on critical and sensitive assets and push the perimeter of one's influence, all while remaining below a threshold of a quintessential grey zone trope. The use of technology is changing the landscape of strategic competition, even as it blurs national boundaries.

About iCET

- ➢ Launched in May 2022, the initiative aims to position the two countries as trusted technology partners. It will facilitate building of technology value chains and supports co-development and co-production of items.
- ➢ It will address bottlenecks like regulatory restrictions, export controls and mobility barriers through a standing mechanism.
- ➢ India has committed
- ➢ It will run under the National Security Councils of both countries. But, at the institutional level, it will be led by the U.S. National Science Foundation and Department of Science and Technology of India.
- ➢ Areas of cooperation under the initiative are:
    - o Scientific research and development
    - o Quantum and Artificial Intelligence
    - o Defense Innovation
    - o Space

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- o Advanced Telecom- 5G and 6G wireless infrastructure
- o Semiconductors
➢ The model of iCET would gradually be expanded to QUAD, then to NATO, followed by Europe and the rest of the world.

Need for iCET

✓ It will allow both countries to build an open, accessible, and secure technology ecosystem, based on mutual trust and confidence, that will reinforce democratic values and democratic institutions.

✓ It will help weed out business and talent mobility issues by strengthening the innovation ecosystems in both India and the United States.

✓ It could become a "game changer" in catalyzing Indo-US technology cooperation by persuading the US to lift existing export control restrictions, and encouraging the private sector of both countries to cooperate in sensitive sectors.

✓ It would help in dispel the cloud of mistrust that has hung over India-USA relationship and to demonstrate a mutual commitment to investing in advanced technologies

Challenges for India under iCET

- ▪ **Clearance concerns:** Even though ownership of technology in the US may lie with the private sector, the US Arms Export Control Act not only requires clearances from the Departments of State and Defence for ToT but also imposes certain restrictions on the recipient state.

- ▪ **Russia Factor**: The Long-term objective of the iCET is, surely, to wean India off its dependency on Russian military hardware. This might create problem in Indo-Russia relation which is largely driven by military hardware sales.

- ▪ **Lack of Commitment**: Till today, the Indo-US "strategic partnership" had delivered $22 billion worth of military hardware, purchased by India via the foreign military sales programme. Shows a lack of commitment from the USA side.

- ▪ **Know-what and Know-why:** India neither asked nor was offered the "know-what" and "know-why" involving the principles and laws that would have enabled it to design and build its own weapon-systems. As a direct consequence of this oversight or lapse, India has remained among the world's largest importer of arms

- ▪ **Trade Mindset**: India is in dire need of technology; however, the US industry remains firmly focused on trade. India will, therefore, need to leverage its considerable purchases in the arms, energy, civil aviation, nuclear and other sectors in a holistic manner to extract technology from the US.

- ▪ **Atamanirbharta Factor**: India must bear in mind that merely switching from Russian to American military hardware will be a case of *"jumping from the frying pan into the fire".* Atmanirbharta must remain India's ultimate aim.

iCET and Indo-Pacific

❖ Critical and Emerging Technologies (CET) could become central to maintaining a sustained relationship between partners in the Indo-Pacific, resilient supply chains as well as in ensuring a favourable balance of power in the region by thwarting adversarial steps of hostile actors. With China working hard to reduce India's influence in the Indian ocean region,

❖ Primary concern for India is to remain ahead in a turbulent environment by ensuring some early gains through sustained and adaptive technological cooperation as well as tech-driven initiatives.

❖ With iCET as a roadmap, India and the US are rapidly adapting to the changing realities of the global order. The two most important ways in which this shift is taking place are recalibrations in regional roles and expectations in the Indo-Pacific region and preparing the bilateral relationship for the challenges of a new technology order which is likely to shape the geopolitics and more so the geostrategy of the stakeholders in the region.

PEPPER IT WITH

Indo-US Civil Nuclear Agreement, Defence Technology and Trade Initiative, Defence Framework Agreement, Next Steps in Strategic Partnership Major Defence Partner, Four Foundational Agreement

Conclusion

The India-U.S. strategic relationship looks to be set on firm footing, with deep interest in both sides to materialize deeper collaboration across defense and critical and emerging technologies. The launch of iCET and the way in which it is leveraged jointly by India and the US could prove a pivotal moment in the emerging tech-order of the Indo-Pacific and the way a joint leadership can be fostered in the region.

India is key to 21st century multilateralism	
Triumph of Taliban	• The triumph of the Taliban was not a victory by just war but the defeat of a people by deceit. The hypocrisy of Doha Deal is naked and jarring. • India kept a principled distance from that pernicious deal. it continued to seek an elected and pluralist government in Kabul. • Despite being a lone voice, India didn't compromise and India continues to support the people of Afghanistan without recognizing the regime that tyrannizes it.
Ukraine War	• India's position of principled independence, while advocating cessation of violence and pursuit of diplomacy, is recognized as the only meaningful way forward. • India has consistently argued for respect for sovereignty and investigation of crimes against humanity, including those possibly committed by the Russian army.
Technology Domain	• India has long championed an open, free and fair digital order. • India doesn't endorse instruments that sought free data flow without sufficient accountability from actors responsible for storing and transporting such data. • India is exploring sharing data with "trusted geographies" while seeking surgical data protection for specific sectors. An inclusive, equitable internet remains a core priority.
COP 26	• India demonstrated extraordinary commitment to the planet by announcing its goal of reaching net-zero by 2070. It voluntarily imposed on itself a timeline for climate action, although its emissions per capita were well under two tonnes. • India also launched LiFE (Lifestyle for Environment) Mission.

ENVIRONEMNT

Warming of Oceans

News Excerpt

Recently, a study published in the Journal of Atmospheric Sciences analyses factors that drive heating trends in the world's oceans. As per the study, the **world's oceans recorded extreme heating in 2022** on account of anthropological activities like GHG emissions.

Pre-Connect

- The ocean absorbs vast quantities of heat as a result of increased concentrations of greenhouse gases in the atmosphere, mainly from fossil fuel consumption.
- The Fifth Assessment Report published by the Intergovernmental Panel on Climate Change (IPCC) in 2013 revealed that the ocean had absorbed more than 93% of the excess heat from greenhouse gas emissions since the 1970s.
- When sunlight reaches the earth, oceans absorb this energy and store it as heat.
- While the heat is first absorbed in the surface of the water body, some of it is eventually disbursed throughout.
- The heat stored in the ocean causes its water to expand, which is responsible for one-third to one-half of the global sea level rise.

Climate Change
A triple threat for the ocean

Burning fossil fuels, deforestation and industrial agriculture release carbon dioxide (CO_2) and other heat-trapping gases into our atmosphere, causing our planet to warm. The ocean has buffered us from the worst impacts of climate change by absorbing more than 90 percent of this excess heat and about 25 percent of the CO_2, but at the cost of causing significant harm to marine ecosystems.

CO_2

> 90% HEAT   ~25% CO_2

WARMER   **LESS OXYGEN**   **MORE ACIDIC**

SEA LEVEL
Sea level rise is accelerating, flooding coastal communities and drowning wetland habitats.

BLEACHING
Warm-water coral reefs (marine biodiversity hotspots) could be lost if the planet warms by 2°C (3.6°F).

TOXIC ALGAE
Larger and more frequent blooms are making fish, birds, marine mammals and people sick.

HABITATS
Lower oxygen levels are suffocating some marine animals and shrinking their habitats.

ACIDIFICATION
More acidic water harms animals that build shells, such as corals, clams, and oysters.

FISHERIES
Disruptions in fisheries affect the marine food web, local livelihoods, and global food security.

Key Findings of the Report

- Spatial maps of ocean heating in 2022, relative to the mean 1981-2010 conditions, show significant warming in most ocean areas.
- Atlantic and southern oceans are warming at a faster rate than other oceans.
- The increasing instances of heatwaves and droughts in the northern hemisphere is due to the intensive ocean warming in the mid-latitude Pacific and Atlantic oceans.

Page 48

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- Salinity trends for 2022 show that most of the Pacific and East Indian Oceans are currently undergoing a **freshening**, while mid-latitude Atlantic, the Mediterranean Sea and West Indian oceans are **becoming more saline**.
- The rise in ocean temperatures is a **result of** the earth's **energy imbalance**, primarily associated with an increase in greenhouse gas emissions. These gases trap heat in a blanket around the earth, not allowing it to escape, thus raising the temperature of the earth's surface and leading to global warming.
- The global long-term warming trend is so steady that annual records continue to be set with each new year, as noted in the last four years.
- The study used in-situ data obtained from the World Ocean Database.

Why Ocean Heat Matters

- ✓ Covering more than **70% of Earth's surface**, the global ocean has a very high heat capacity. It has **absorbed 90% of the warming that has occurred in recent decades** due to increasing greenhouse gases, and the top few meters of the ocean store as much heat as Earth's entire atmosphere.
- ✓ The **distribution of excess heat in the ocean is not uniform**, with the greatest ocean warming occurring in the **Southern Hemisphere** and contributing to the subsurface melting of Antarctic ice shelves.
- ✓ The ocean's ability to absorb excess heat has **shielded humans from even more rapid climate changes**. Without this oceanic buffer, global temperatures would have risen much more than they have done to date.

Impact

Biodiversity	o The effects of ocean warming **include** sea level rise due to thermal expansion, coral bleaching, accelerated melting of Earth's major ice sheets, intensified hurricanes, and changes in ocean health and biochemistry.
Impact on marine species and ecosystems	o Marine fishes, seabirds and marine mammals all face very high risks from increasing temperatures, including high levels of mortalities, loss of breeding grounds and mass movements as species search for favourable environmental conditions. Coral reefs are also affected by increasing temperatures which cause coral bleaching and increase their risk of mortality.
Impact on humans	o A 2012 report by the Food and Agriculture Organization of the United Nations estimates that marine and freshwater capture fisheries and aquaculture provide 4.3 billion people with about 15% of their animal protein. o Fisheries and aquaculture are also a source of income for millions of people worldwide. By altering distributions of fish stocks and increasing the vulnerability of fish species to diseases, ocean warming is a serious risk to food security and people's livelihoods globally. Economic losses related to ocean warming are likely to run from tens to hundreds of millions of dollars. o Rising temperatures also affect vegetation and reef-building species such as corals and mangroves, which protect coastlines from erosion and sea-level rise. Rising sea levels and erosion will particularly affect low-lying island countries in the Pacific Ocean, destroying housing and infrastructure and forcing people to relocate. o The rise in sea surface temperatures is causing more severe hurricanes and the intensification of El Niño events bringing droughts and floods. This can have significant socio-economic and health effects in some regions of the world. o Warming ocean temperatures are linked to the **increase and spread of diseases** in marine species. Humans risk direct transmission of these diseases when consuming marine species, or from infections of wounds exposed in marine environments.

Way forward

- **Limiting greenhouse gas emissions:** There is an urgent need to achieve the mitigation targets set by the Paris Agreement on climate change and hold the increase in the global average temperature to well below 2°C above pre-industrial levels.
- **Protecting marine and coastal ecosystems:** Well-managed protected areas can help conserve and protect ecologically and biologically significant marine habitats.

Page 49

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- **Restoring marine and coastal ecosystems: B**uilding artificial structures such as rock pools that act as surrogate habitats for organisms or boosting the resilience of species to warmer temperatures through assisted breeding techniques.
- **Improving human adaptation:** Governments can introduce policies to keep fisheries production within sustainable limits. Coastal setback zones which prohibit all or certain types of development along the shoreline can minimise the damage from coastal flooding and erosion.

Human- Elephant conflict

News Excerpt

Kerala has seen a relative spike in the human animal conflict in recent years. In 2021-22, the number of human deaths scaled a new high of 35.

Pre-Connect

- According to **Ministry of Environment, Forest and Climate Change** (MoEFCC), 87 elephants and 359 people died due to human-elephant conflicts in 2020. The numbers in 2019-20 were 19 elephants, although human deaths were higher at 585.
- Rapid economic and population growth impose huge demands and pressure on wildlife resources and their living environment. Human–wildlife conflict becomes inevitable when the area for human settlement overlaps with wildlife habitat.

- ❖ The Indian elephant (*Elephas maximus*) **occurs in** the central and southern Western Ghats, North-east India, eastern India and northern India and in some parts of southern peninsular India.
- ❖ It is included in **Schedule I** of the Indian Wildlife (Protection) Act, 1972 and in **Appendix I of the** CITES.
- ❖ Asian elephants are listed as "Endangered" on the IUCN Red List of threatened species.
- ❖ **PROJECT ELEPHANT** was launched by the Government of India in the year 1992 as a Centrally Sponsored Scheme with following objectives:
  - o To protect elephants, their habitat & corridors
  - o To address issues of man-animal conflict
  - o Welfare of captive elephants
- ❖ More than 60% of wild Asian elephants are in India. The population of 29,964 elephants as recorded in the last elephant census conducted in 2017.
- ❖ India has 31 Elephant Reserves (recent one- **Agasthiyamalai in Tamil Nadu**)
- ❖ India plans to conduct DNA profiling of elephants for census 2022.

Causes

- ➢ **T**here is conflict from crop-raiding, injuries and deaths to humans caused by elephants, and elephants being killed by humans for reasons other than ivory and habitat degradation.
- ➢ The rapid growth of the population and urbanization is the root cause of the human-elephant conflict
- ➢ Elephants are far-ranging animals. Most often, fragmentation of habitats and corridors due to legal and illegal changes in land use — clearances for mining, or encroachment for agriculture —fuel conflict.

- • **DIRECT CAUSES**

| AGRICULTURAL EXPANSION | URBANIZATION | INFRASTRUCTURE DEVELOPMENT | CLIMATE CHANGE | WILDLIFE POPULATIONS GROWTH AND RANGE EXPANSION |

1Conservation issues

- ❖ The Wildlife Protection Act, 1972 (WPA), clearly lays down the laws that protect the elephants in India.
- ❖ WPA was amended in 2002 and banned the sale of captive elephants which were not registered with the Chief Wildlife Warden of the State.
- ❖ If an elephant is owned without being declared, the Forest Department has the authority to cease the elephant on the grounds of illegal ownership.
- ❖ Section 9 of the Wildlife Protection Act, 1972 talks about the prohibition of hunting of the animals listed under Schedule I, II, III, IV.
- ❖ Section 40 (2) of the Wildlife Protection Act, 1972 prohibits the acquisition, possession and transfer of a captive elephant without the written permission of the Chief Wildlife Warden of the State.
- ❖ Section 42 reinstates that the Ownership Certificate can be issued to the person who has the lawful authority of the captive animal listed under Schedule I and II.
- ❖ Section 40 of the Wildlife Protection Act, 1972, also talks about the mandatory issuance of Transit Permit (TP) by the State Forest Department when an elephant is being transported from one state to another.

Way forward

- ✓ **Avoiding Conflict**: Well-maintained barriers serve to keep elephants away from farmland.
- ✓ **Long-term Methods:** Most long-term measures require humans to modify their behaviour.
- ✓ **Land Use:** Current and future land-use plans need to accommodate elephants. Since habitat loss, degradation and fragmentation are the root causes of the problem, they need to be addressed to provide long-term solution to conflict.
- ✓ **People's Participation**: To mitigation of conflict, both government and society should work together as a single entity and alter perspectives towards wildlife and human existence in the forest and on its fringes. Parallelly, forest conservation must be made more effective, through participatory programmes involving the people.

WHO Zero Draft

News excerpt

The World Health Organization's (WHO) Intergovernmental Negotiating Body (INB) published a 'zero-draft' of the pandemic treaty. Negotiations will be presented at the World Health Assembly in 2024.

Understanding Zero-draft

- • Zero-draft is aimed to develop new guideline for the prevention and treatment of a particular disease or health condition.
- • The zero-draft is typically circulated internally or with a select group of stakeholders for feedback and revision before being finalized and released to the public.
- • This draft would be reviewed and revised based on feedback from internal and external experts before being finalized and released as an official WHO guideline.
- • The zero-draft of the pandemic treaty was **established based on recognising** the "catastrophic failure of the international community in showing solidarity and equity in response to the novel coronavirus disease (COVID-19) pandemic.

Objectives of draft

- ➤ The objective of the WHO, is to **prevent pandemics**, save lives, reduce disease burden and protect livelihoods, through strengthening, proactively, the world's capacities.

➢ It aims to **comprehensively and effectively address systemic gaps** and challenges that exist in these areas, at national, regional and international levels.

Key Features

✓ Draft advocates a time-bound response, As per the document, an outbreak is considered a pandemic when an infection spreads quickly globally — with high morbidity and mortality.

✓ Draft **contains measures** to provide everyone, everywhere, with access to the tools needed to prevent and combat pandemics.

✓ This draft marks a **powerful recognition** that pandemic response cannot succeed in charity, rather it requires global solidarity.

✓ Draft is aligned on 'common but differentiated responsibilities' and capabilities in pandemic prevention, preparedness, response and recovery of health systems.

✓ CBDR was proposed by India.

✓ As per this draft, if and when a pandemic occurs, parties must "take appropriate measures to support time-bound waivers of intellectual property rights that can accelerate or scale up manufacturing of pandemic-related products."

✓ The constitution of a Pathogen Access and Benefit-Sharing system (PABS) under the WHO is one of the key elements of the draft. Genomic sequences of all pathogens with pandemic potential — and the benefits that come with such information — are to be shared on an "equal footing" in the system.

✓ The draft also stresses the need to strengthen health systems to help realise the goal of universal health coverage.

✓ In addressing gender disparities in the healthcare workforce, the draft aims to "ensure meaningful representation, engagement, participation and empowerment of all health and care workers" by stressing equal pay and addressing barriers specific to women in taking leadership roles.

> ❖ The International Health Regulations (IHR) (2005) are an instrument of international law that is legally-binding on 196 countries, including the 194 WHO Member States.
>
> ❖ The IHR grew out of the response to deadly epidemics that once overran Europe. They create rights and obligations for countries, including the requirement to report public health events.
>
> ❖ The Regulations also outline the criteria to determine whether or not a particular event constitutes a "public health emergency of international concern".

Challenges

▪ The inclusion of an independent monitoring mechanism to ensure countries comply with the treaty, on the other hand, **continues to remain missing,** despite several commentaries on the conceptual zero-draft from health policy watchers across the globe.

▪ The draft is **unlikely to survive** in its current form given the strong pharmaceutical lobby, particularly in the European Union.

Way forward

⬥ **Low- and middle-income Member States must stand firm through negotiations** and ensure that rich nations do not dilute the text in the interests of private profit

⬥ An **independent central coordinating body** for decisions on pandemic tools allocation & distribution mechanisms is needed to avoid trying to come up with an agreement in the midst of an emergency situation.

Solar Energy Conundrum

News Excerpt

The Minister for Power, New and Renewable Energy cited in parliament that India faces a significant headwind in this quest. At the core of India's energy transformation is its bet on solar power.

Pre-Connect

• A key central policy to source solar power is facilitating the establishment of large solar parks; small solar power projects usually translate to higher per-unit production costs.

• Therefore, in 2014, the Centre announced the 'Solar Parks and Ultra-Mega Solar Power Projects' policy to facilitate the creation of large parks.

• By the end of 2022, India had committed to having in place 1,75,000 MW of renewable energy capacity, with 1,00,000 MW from solar power. However, only around 61,000 MW of such capacity has actually been installed.

- Based on a commitment to address the global climate crisis, India has promised to source nearly half its energy from non-fossil fuel sources by 2030 and, in the shorter term, source of at least 60% of its renewable energy from solar power. However, a disclosure in Parliament by the Minister for Power, New and Renewable Energy suggests that India faces a significant headwind in this quest
- Few experts advocate that how the overemphasis on solar power is not the right option for India. It also provides arguments in support of hydropower.

Panchamrit

➤ India will reach its non-fossil energy capacity to 500 GW by 2030.

➤ India will meet 50 percent of its energy requirements from renewable energy by 2030.

➤ India will reduce the total projected carbon emissions by one billion tonnes from now onwards till 2030.

➤ By 2030, India will reduce the carbon intensity of its economy by less than 45 percent.

➤ By the year 2070, India will achieve the target of Net Zero.

What are the misconceptions about solar energy?

Green Bonds
❖ Green bonds are bonds issued by any sovereign entity, inter-governmental groups or alliances and corporates with the aim that the proceeds of the bonds are utilised for projects classified as environmentally sustainable.
❖ The framework for the sovereign green bond was issued by the government on November 9, 2022.
Where will the proceeds go?
❖ The government will use the proceeds raised from sovereign green bonds (SGrBs) to finance or refinance expenditure (in parts or whole) for various green projects, including renewable energy, clean transportation, energy efficiency, climate change adaptation, sustainable water and waste management, pollution and prevention control and green buildings.
❖ In renewable energy, investments will be made in solar, wind, biomass and hydropower energy projects.

➤ **Levelized cost of power is coming down and is close to that of coal:** Wrong comparison of solar power with coal electricity at the load center -Coal costs about half that of the load center.
➤ **According to the Central Electricity Authority:** moving electricity through high voltage wires is cheaper than moving coal
➤ **Not comparing like with like:** Solar electricity is intermittent and coal electricity is continuous. - The cost of storage by battery has to be added.
➤ **The shadow price or true economic value of coal is** even lower than its market price, since the cost of labor in mining carries a shadow price of zero (they being unskilled workers who would be unemployed otherwise).

Initiatives by India to shift to renewable energy:

✓ **National Solar Mission (NSM)**: the 100 GW solar ambitions at the heart of the world's largest renewable energy expansion programme
✓ **The Wind Energy Revolution:** Leveraging India's robust wind energy sector to boost clean energy manufacturing and the rural economy
✓ **National Biofuels Policy and SATAT**: Building value chains to reduce fuel imports, increase clean energy, manage waste, and create jobs
✓ **Small Hydro Power (SHP)**: Harnessing the power of water to integrate remote communities into the economic mainstream.
✓ **National Hydrogen Energy Mission (NHEM)**: Exploring the commercial viability of a versatile clean fuel
✓ **Production-Linked Incentive (PLI) Scheme**: Integrating India into the global clean energy value chains
✓ **National Biofuels Policy and SAYAY**: Building value chains to reduce fuel imports, increase clean energy, manage waste and create jobs.

Socio-Economic Effects

Social/Economic		
Impacts	**Positive**	**Negative**
Land use and landscape	• Decreased land use compared to conventional energy resources • Reuse of-degraded sites • Use of unused sites (such as in deserts) • Multi-purpose and integrated use on existing developments or buildings (like rooftops, facades)	• Unavailable land high competition with other land uses (such as agriculture) • Degradation of vegetation and soil erosion • Higher up-front costs • Visual/landscape experience • Microclimatic change • Glare risk by reflection
Infrastructure	• Reduced transmission lines/grids • Energy supply for decentralized, low-density off-grid areas, also in developing countries	• Requirement for energy storage for continuous supply
Political	• National energy independency from import • Lower military expenses (less conflicts in the oil rich countries)	• Economically detrimental subsidies such as uncontrolled and miscalculated fee-in-tariff mechanisms
Energy market	• Diversification • Deregulation	• Intermittent supply issues
Industry, R&D, education	• Jobs creation • Higher development and education level	• Health hazards and risks during manufacturing phase

Conclusion

While India should continue to expand its economy on the back of renewable energy, the Government must take a hard look at whether renewable power, the solar, wind, or nuclear, meets standards of economic viability and environmental sustainability. Solar power may be a valuable tool in India's energy transformation story, but it cannot be the panacea for every need.

MISHTI

News Excerpt

The Union Budget for 2023-24 announced an initiative for mangrove plantation along the coastline and on salt pan lands, under MISHTI (Mangrove Initiative for Shoreline Habitats & Tangible Incomes).

Pre-Connect

- As per India State of Forest Report, the mangrove cover in India is 4,992 sq km, which is 0.15% of the country's total geographical area.
- Mangroves in India are distributed across nine States and three Union Territories, India has such forests on both its Eastern and Western coasts with the Sundarbans in Bengal being one of the largest mangrove forests on the planet.
- The IFSR report also points out that there has been an increase in the mangrove cover from 4,046 sq km in 1987 to 4,992 sq km in 2021.

About MISTHI Scheme

➢ MISHTI will facilitate mangrove plantation along India's coastline and on salt pan lands.

www.ksgindia.com
DELHI VN: 9717380832 & DELHI ORN: 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774| RANCHI: 9939982007 | BHOPAL: 7509975361|
INDORE: 7314977441 | BENGALURU: 7619166663 | HYDERABAD: 79960 66663 | IMPHA: 9650245599 | SRINAGAR: 98712 35599| MUMBAI: 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- The programme will operate through convergence between MGNREGS, Campa Fund and other sources.
- This new programme will aim at intensive afforestation of coastal mangrove forests.

Significance of Mangrove forests

- ✓ They **support a rich food web**, with molluscs and algae-filled substrate acting as a breeding ground for small fish, mud crabs and shrimps, thus providing a livelihood to local artisanal fishers.
- ✓ They act as **effective carbon stores**, holding up to four times the amount of carbon as other forested ecosystems. They capture vast amounts of carbon dioxide from the atmosphere and their preservation can both aid in removal of carbon from the atmosphere and prevent the release of the same upon their destruction.

Mangrove Alliance for Climate
- ❖ An initiative led by the United Arab Emirates (UAE) and Indonesia, the Mangrove Alliance for Climate (MAC) includes India, Sri Lanka, Australia, Japan, and Spain.
- ❖ It seeks to educate and spread awareness worldwide on the role of mangroves in curbing global warming and its potential as a solution for climate change.

- ✓ **Role in fighting climate change**-The '**State of World Mangroves 2022**' points out that mangroves are estimated to hold up to four times the amount of carbon as some other ecosystems. "The **loss of even 1% of remaining mangroves could lead to the loss of 0.23 gigatons of CO2 equivalent**, equating to over 520 million barrels of oil," the report states.
- ✓ Mangroves are **salt-tolerant plant** (Halophytes) species found in tropical and subtropical intertidal regions.
- ✓ They are important **refuges of coastal biodiversity** and also act as bio-shields against extreme climatic events.

Challenges

- **Infrastructure projects** — industrial expansion and building of roads and railways, and natural processes — shifting coastlines, coastal erosion and storms, have resulted in a significant decrease in mangrove habitats.
- Experts say aquaculture or fisheries along the coast obstructing tidal flow are one of the **biggest threats** to the mangrove ecosystem.
- Between 2010 and 2020, around 600 sq km of mangroves were lost of which more than 62 per cent was due to direct human impacts, **the Global Mangrove Alliance** said in its 2022 report.
- The survival rate of mangrove seed plantation is 50% and of saplings is about 60% and it **takes three years for a new plant to stabilise**. A contract-based one-time plantation under MGNREGS and CAMPA may not work unless the local communities take ownership of the forests.
- Discharge of untreated domestic and industrial effluents into the rivers **impede the natural inter-tidal flow** along the coast and the mixing of freshwater and saline water which help in gradual formation of the mangrove forest.

Way forward

- ♣ Restoration of the land and allowing intertidal flow is crucial for plantation and survival of mangrove forests.
- ♣ **Fishbone channel plantation technique** is used to artificially inundate areas that do not get regular tidal inundation. By flooding dried-up wetlands near the intertidal zones, new mangroves can be reforested.

Heat Dome

News Excerpt

Several countries of Europe have recorded their hottest January during this year, it is due to the warm spell formed due to the heat dome.

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

Understanding Heat Dome

- A heat dome formed when an area of high-pressure traps warm air over a region, just like a lid on a pot, for an extended period of time. The longer that air remains trapped, the more the sun works to heat the air, producing warmer conditions with every passing day.
- Heat domes generally stay for a few days but sometimes they can extend up to weeks, which might cause deadly heat waves.

Difference between heat waves & heat domes

- Heat waves and heat domes are two related but distinct phenomena that can cause hot weather conditions.

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

➤ **A heat wave** is a **prolonged period of excessively hot weather**, often accompanied by high humidity. It occurs when a high-pressure system traps hot air under it and prevents cooler air from moving in.

➤ This results in temperatures that are much higher than average for an extended period of time. Heat waves can occur in any location and are a natural weather phenomenon that has been occurring for thousands of years.

➤ Heat domes are typically larger and more long-lasting than heat waves, and they tend to occur in certain regions more frequently, such as in the western United States.

Relationship between heat domes and the jet stream

✓ Fast-moving air high in the atmosphere- The jet stream is believed to have a wave-like pattern that keeps moving from north to south and then north again. When these waves get bigger and elongated, they move slowly and sometimes can become stationary. This is when a high-pressure system gets stuck and leads to the occurrence of a heat dome.

The 'heat dome'

Occurs when the atmosphere traps hot ocean air like a lid or cap

1 In summer, the **jet stream** (which moves the air) shifts northward

2 **Hot** and stagnant **air expands** upwards

3 Strong and **high-pressure** atmospheric conditions combine with influences from La Nina act like a dome or cap

4 In a process known as **convection,** hot air attempts to escape but high pressure pushes it back down

5 Under the dome, the air sinks and **compresses,** releasing more heat

6 As winds move the hot air east, the jet stream traps the air where it sinks, resulting in **heat waves**

❸ **High pressure**

Temperature forecasts (darker color = hotter)

Heat dome also blocks out clouds, which provide some relief from the sun's heat

The hotter the temperature is, the stronger the heat dome gets, and vice versa
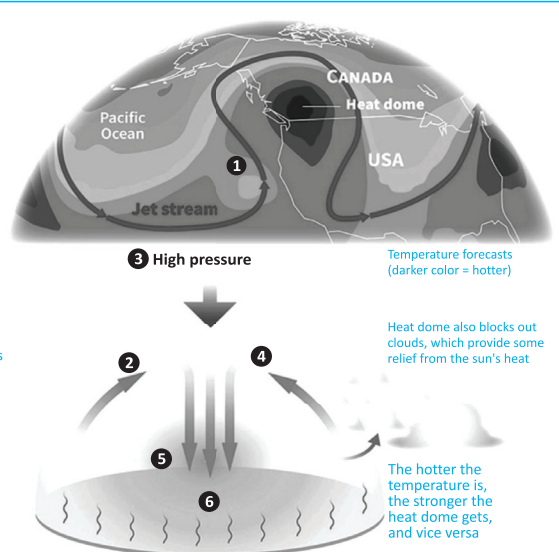
Causes of the formation

▪ A heat dome forms due to multiple factors, including changes in ocean temperature, atmospheric pressure, and climate change.

▪ The process starts with a strong gradient in ocean temperatures, which triggers convection, causing warm air to rise over the ocean surface. Prevailing winds then push the hot air east, and shifts in the jet stream trap the air and move it towards land. As the warm air sinks over land, it creates heat waves.

▪ As high pressure (HP) in the atmosphere pushes warm air towards the ground. This effect is intensified by the heat rising from the ocean, creating a feedback loop.

▪ The HP system expands vertically, forcing other weather systems to change course, minimizing wind and cloud cover, and resulting in stifling air. This is why heat waves often persist for several days or more.

▪ Rising temperatures have made them hotter and more common, with scientists attributing their occurrence to human-induced climate change.

▪ Overall, a heat dome forms due to a complex interplay of various factors, and understanding them can help us better prepare for and mitigate their impact.

Red Sanders

News Excerpt

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) recorded 28 incidents of confiscation and seizure of more than 19,049 tonnes of Red Sanders.

Pre-Connect

● Red Sanders (Pterocarpus santilinus) is an endangered tree species endemic to the southern Eastern Ghats. Red Sanders is regarded as the 'Pride of Andhra Pradesh'.

● Red Sanders is found in the forests with climate forest type in the tropical forests in India.

● The natural habitat of Red Sanders is a hilly region with a hot, dry climate.

● Red Sanders is also granted protection as it is enlisted in Appendix II of the CITES. This means that a certificate is required to export it.

● Red Sanders is registered under Schedule II of Wildlife (Protection) Act 1972.

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

Key Concerns

➢ India is the main and lucrative market for smugglers, and many incidents are reported every year. As exporting sandalwood is banned in India, smugglers find ways and cause harm to the forests with the presence of Red Sanders.

➢ Red Sanders is smuggled from India mainly to China, Japan, UAE, Malaysia and Singapore. Smuggling to China is mostly done by road via Nepal, and to Malaysia and Singapore from the Chennai port. For UAE, the Mumbai port acts as the transit point. Smuggling to Japan and China also takes place from Manipur and Mizoram.

➢ In recent years, it has been found that the species' population is depleting at an alarming rate, so much so that it is under threat of losing is existence.

➢ Red Sanders face the problem of Illicit felling, Recurrent forest fires and Mutated regeneration in vulnerable pockets of distribution.

Red Senders usage

✓ Red sanders yield a hard fragrant timber and are prized for cabinet works, musical instruments, house posts and agricultural implements.

✓ The dark red heartwood is used as a dyewood.

✓ The wood enriched in 'Santalin' is also ground and used for dyeing cotton, wool, and leather.

✓ The bark extract is used in the treatment of diabetes.

✓ The felling of trees and depletion of the species (Pterocarpus santilinus) is due to its usage in one of India's Critically Endangered medicinal species.

Way Forward

▪ Remote Sensing and Geographical Information Systems can be effectively utilized to understand Red Sanders bearing forest for objectives of conservation, tree improvement and legal commerce.

▪ Areas with rich repositories of the species should be identified, and habitats must be protected in situ conservation. Likewise, the gene sanctuaries must be granted protection and constant surveillance.

▪ Local communities and village people should be nudged about Red Sanders's importance.

Joshimath Crisis- Land subsidence

News excerpt

Joshimath, situated **6,000 m above sea** level in **Chamoli district in Uttarakhand** is in the midst of a crisis as 723 houses have developed **major or minor cracks** on the floors, ceilings and walls. Beams have also been dislodged in many houses.

Pre-connect

• After the 1962 India-China war, Joshimath emerged as a **place of strategic importance** (en route to Barahoti, a disputed territory along the border).

• The town is a gateway to noted sites of pilgrimage – **Badrinath** for Hindus and **Hemkund Sahib for Sikhs**; the international skiing site of **Auli**; and the **Valley of Flowers,** a UNESCO World Heritage site.

• Joshimath is located in **Zone V** of India's seismic zonation scheme, which denotes a high-risk area.

• The appearance of **cracks on many roads and houses across Joshimath**, due to land subsidence, is **neither a new phenomenon in this region — nor a reversible one.** Such cracks have been observed in and around the town for several years now although this time, experts say, they are deeper than ever adding to growing anxiety and concern.

• Indian Space Research Organisation (**ISRO**) said in a report that the town in Uttarakhand **sank 5.4 cm between December 27, 2022, and January 8, 2023**.

• Joshimath is **not the only habitation facing this problem**. There are several places in Uttarakhand, most of the towns that are above 5,000 feet above sea level have similar characteristics.

Causes of land sinking

WHAT AILS JOSHIMATH

➢ Settled on approx 500m of debris from past landslides, the town has low soil bearing capacity

➢ Population and tourism pressure leading to deforestation and occupancy of unstable land areas

➢ No drainage system due to unplanned settlement and water seeping in has further reduced the bearing capacity

➢ Sub-surface ground motion leading to development of cracks

➢ Leakage and flow of water at places located below buildings

➢ NTPC tunnel may be the cause but no expert from GSI, IIT Roorkee, WING had commented on that yet

➢ However, source of water not yet identified and requires further investigation

Note: Inputs from the Centres fact-finding team and experts assessment on the latest sinking of landmass in Joshimath

➢ Joshimath is built on the deposits of an **old landslide**, which means the slopes can be destabilised even by slight triggers. It lies between two thrusts, **the Main Central Thrust** (MCT) and the **Vaikrita Thrust** (VT), and thus occupies a seismically active terrain.

➢ Because of the MCT, the area around Joshimath is **highly active** in terms of slope mobility.

➢ **Climatologically**, Joshimath lies in a region that frequently receives high-intensity, focused rainfall- extreme rains, could trigger landslides, since the slopes are precariously balanced

➢ Due to the massive deforestation, there is hardly any greenery left on the mountains; and due to this, landslides have become a common feature in these youngest fold mountains

➢ According to **Uttarakhand State Disaster Management Authority** (USDMA) report in September 2022 said that floods in June 2013 and February 2021 heightened erosion in the area. Very heavy rains in October 2021 – 190 mm in 24 hours – also worsened the subsidence and vulnerability to landslides, it stated.

➢ Locals have blamed the **NTPC's 520-MW Tapovan Vishnugad hydropower project**, under construction in the area, for exacerbating the Joshimath land subsidence.

RUMBLING PLATES
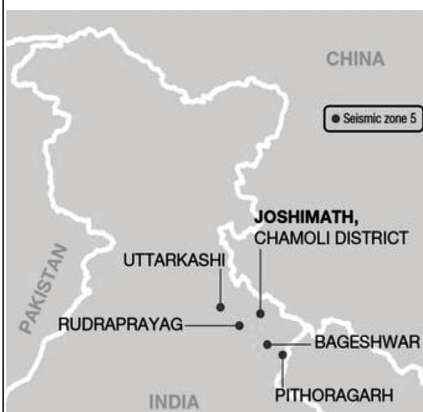
The Main Central Thrust (MCT) is a very large block of rock mass that has moved and has been, at times, active. It extends from Pakistan to Assam. So. when there is a movement, the rocks move fast against each other. Therefore, the Joshimath region, which is just north of the MCT, is highly fragile and sensitive.

• Seismic zone 5

JOSHIMATH, CHAMOLI DISTRICT

UTTARKASHI

RUDRAPRAYAG

BAGESHWAR

PITHORAGARH

The Indian plate is moving northward against the Eurasian plate at the rate of 55mm per year. Himalayas are fold mountains that are still growing because of the pressure of this collision.

www.ksgindia.com
DELHI VN: 9717380832 & DELHI ORN: 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774| RANCHI: 9939982007 | BHOPAL: 7509975361|
INDORE: 7314977441 | BENGALURU: 7619166663 | HYDERABAD: 79960 66663 | IMPHA: 9650245599 | SRINAGAR: 98712 35599| MUMBAI: 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

➢ The 6-km **Helang-Marwari bypass** (bypass is part of the 825-km Char Dham highway expansion project in Uttarakhand), being built by the Border Roads Organisation (BRO), is also under scrutiny for weakening slopes and further destabilising the local topography.

➢ The 2022 USDMA report also pointed to a lack of drainage and wastewater disposal systems as being part of the subsidence problem.

Seismic zone of India	
National Centre for Seismology under **Ministry of Earth Sciences** is the **nodal agency** of Government of India (GoI), for monitoring earthquakes in and around the country.	
ZONE V (very severe intensity zone)	**seismically the most active region**, ~ **11% area of the country** - Parts of J& K (Kashmir valley); Western part of Himachal Pradesh; Eastern part of Uttarakhand, Kutch in Gujarat; part of Northern Bihar; all northeastern states of India and the Andaman & Nicobar Islands.
ZONE IV (severe intensity zone)	**18%,** Ladakh; Remaining parts of Jammu & Kashmir, Himachal Pradesh and Uttarakhand; Some parts of Haryana, Parts of Punjab; Delhi; Sikkim; the northern part of Uttar Pradesh; small portions of Bihar and West Bengal; parts of Gujarat and small portions of Maharashtra near the west coast and small part of western Rajasthan.
ZONE III (moderate intensity zone)	**30%,** Kerala; Goa; Lakshadweep islands; parts of Uttar Pradesh and Haryana; remaining parts of Gujarat and Punjab; parts of West Bengal, western Rajasthan, Madhya Pradesh; remaining part of Bihar; northern parts of Jharkhand and Chhattisgarh; parts of Maharashtra, Odisha, Andhra Pradesh, Telangana, Tamil Nadu and Karnataka.
ZONE II (low intensity zone)	Remaining parts of Rajasthan, Uttar Pradesh, Gujarat, Haryana, Madhya Pradesh, Maharashtra, Odisha, Andhra Pradesh, Telangana, Karnataka and Tamil Nadu.

Way forward

✓ There is little else that can be done **at this point**. The priority, is to avoid any human tragedy. The area is likely to get rains in the coming days, and that can trigger landslides which can be very dangerous at this time.

✓ A detailed carrying capacity assessment of Uttarakhand should be done to ensure that the number of tourists visiting these places is accounted for and also to ensure that the tourist flow does not cause environmental overburdening

✓ Experts have also suggested replanting in the region, particularly in vulnerable areas, to retain soil capacity.

✓ In **long-term** response plan should involve a detailed microzonation plan, identifying the risks in different places.

✓ According to the **risk assessment**, activities would have to be very strictly regulated. It is possible that some areas are found to be no longer safe for human settlements. But the bottomline is that a business-as-usual scenario is just too dangerous now

✓ The first such warning by, 1976, **M.C. Mishra committee** is still relevant. The report maintained that Joshimath was a landslide-affected area, and hence it was not recommended that a township be built here.

✓ It recommended that no boulders be removed either by digging or blasting, plantation be done on hill slopes and no trees cut, and that there be no mining within a radius of 5 km. It noted that poor drainage facilities led to landslides, and the government must plan for a proper drainage and sewage system.

✓ There is need to balance development needs of the region with the protection of the environment. Development is necessary but not at the cost of local environment or population. Ensuring sustainability should be the top priority.

SCIENCE & TECHNOLOGY

Hybrid Immunity

News Excerpt

A recent study published in the journal ''The Lancet Infectious diseases held that hybrid immunity'' provides better protection against severe Covid-19 vis-à-vis other immunities which wanes against a re-infection within a few months.

Pre-Connect

Understanding Immunity

- Immunity to a disease is achieved through the presence of antibodies to that disease in a person's system.
- The immune system forms B cells (that make antibodies) and specialist T cells (that either aid B cells or kill infected cells), as well as memory cells, to prepare for any future attacks from the same pathogen.
- Antibodies are proteins produced by the body to neutralize or destroy toxins or disease-carrying organisms. Antibodies are disease-specific.
- There are two types of immunity
  - **Active Immunity**-It activates when a person is exposed to a disease triggering the immune system to produce antibodies to that disease. It can be acquired through:
    - **Natural immunity** is acquired from exposure to the disease organism through infection with the actual disease.
    - **Vaccine-induced immunity** is acquired through the introduction of a killed or weakened form of the disease organism through vaccination.
  - **Passive Immunity-** It activates when a person is given antibodies to a disease rather than producing them through his or her immune system. A newborn baby acquires passive immunity from its mother through the placenta. One can also get passive immunity through antibody-containing blood products such as immune globulin.
- The major advantage of passive immunity is that protection is immediate, whereas active immunity takes time to develop. However, passive immunity lasts only for a few weeks or months. Only active immunity is long-lasting.
- **Hybrid immunity** is gained from a previous infection plus vaccines (primary or booster doses).

About Study

- The study was based on a meta-analysis of 11 other studies on the protective effect of previous SARS-CoV-2 (Covid) infection and 15 studies on the protective effectiveness of hybrid immunity.
- The study points out that hybrid immunity offers a higher magnitude and durability of protection as compared to infection alone thus proving the significance of vaccination.

Hybrid vigor immunity with COVID-19 vaccines

Hybrid vigor can occur when different plant lines are bred together and the hybrid is a much stronger plant. Something similar happens when natural immunity is combined with vaccine-generated immunity, resulting in 25 to 100 times higher antibody responses, driven by memory B cells and CD4+ T cells and broader cross-protection from variants.
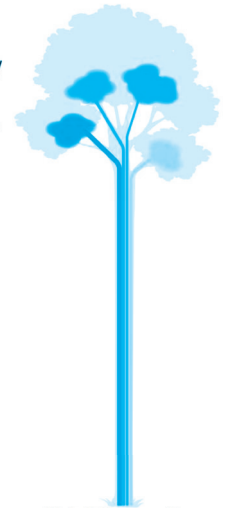
- Memory B cells
- CD4+ T cells
- Antibodies
- CD8+ T cells

Natural immunity   Vaccine immunity   Hybrid immunity

Immune Imprinting

- ❖ Immune imprinting is a tendency of the body to repeat its immune response based on the first variant it encountered either through infection or vaccination.
- ❖ Thus, the immune system, rather than generating new B cells, activates memory B cells, which in turn produce antibodies that bind to features found in both the old and new strains, known as cross-reactive antibodies.
- ❖ Although these cross-reactive antibodies do offer some protection against the new strain, they aren't as effective as the ones produced by the B cells when the body first came across the original virus.
- ❖ To counter Immune imprinting, scientist believe that nasal vaccines might be better at preventing infections than injected ones. They believe the mucous membranes would create stronger protection, despite carrying some imprint of past exposure

➢ In a comparative analysis, it was found that hybrid immunity with just a primary vaccine is far more effective than the immunity developed from the infection alone.

Implications of the Findings

✓ It will help in reducing vaccine hesitancy.

✓ It will nudge countries to roll out booster vaccine drives in face of the ever-evolving covid virus.

✓ It will help people who are old or co-morbid in protection against the virus.

<div style="border: 1px solid;">

PEPPER IT WITH

m-RNA vaccine, Herd immunity

</div>

BharOS

News Excerpt

An incubated startup of IIT Madras developed a mobile operating system named BharOS. It is being promoted by the government as India's answer to the Google-owned Android and Apple's iOS, the two most dominant mobile operating systems in the world.

Pre-Connect

Understanding Mobile Operating System

• An Operating System is software that provides a link between the user and the system hardware. Furthermore, it manages all interactions between software and hardware.

• A MobileOS is a software platform designed specifically for mobile devices such as smartphones, tablets, and other embedded devices. It allows mobile devices to run applications and other programmes.

• **The functions of an Operating System are:**
  o OS keeps track of various apps or tasks, as well as the number of people who perform them. As a result, storage can be allotted to the device for programmes with higher demand.
  o It assists the user in identifying hardware and/or software issues and making necessary device modifications.

• It is the maintenance of the major memory. Furthermore, any programme that is run must be present in the main memory. As a result, multiple programmes might be active at the same time. As a result, memory management is essential.

Memory Management

• It is capable of completing multiple jobs at once. The operating system allows the user to operate with multiple processes at the same time without difficulty.

Multitasking

• An operating system's kernel is its heart. It contains all of the operations and actions needed to keep OS running smoothly.

Kernel

• The OS runs many processes in order for the statements to run and the application programme to connect to the hardware. When a process runs, it consumes storage and other resources also.

Process Execution

Components of a Mobile Operating System

• Graphical User Interface is termed as GUI in short. It provides a graphical interface that allows the user to communicate with the device, as the name implies. It interacts with the user through icons, menus, and other means.

User Interface

• Through authentication, the operating system maintains the system and programmes safe and secure. The user's legitimacy is determined by their user id and password.

Security

• Hardware devices mostly use interrupts to interact with the CPU. It is essentially a signal generated by the device to request the CPU. Furthermore, anytime an interrupt occurs, the CPU's current process is temporarily halted.

Interrupt

Page 61

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- o It is used to load and execute the programmes.
- o It analyses the device's performance and alerts the user.
- o It protects user data and prevents illegal access and aids in the identification of those who use the system.
- o It is in charge of all process management tasks and also keeps track of the status of each process.
- o It divides the file system into folders so that files may be found and used quickly.

About BharOS

➢ It is an indigenous mobile operating system that is focused on privacy and security.

➢ It is currently being provided to organizations that have stringent privacy and security requirements. Such users will require access to private cloud services through private 5G networks.

➢ It has several significant features such as:

- o Native Over the Air: It will offer NOTA updates which will make security updates and bug fixing more automatic than the present, user-dependent.
- o No Pre-install apps: It will have a clean UI with No Default Apps (NDA) or bloatware, therefore users do not have to keep or use pre-installed apps. Such apps either slow down the device or take a toll on battery life.
- o Private App Store Services (PAAS): It is a safety standard for apps and will examine the apps and only those apps which pass this standard will be made available for users.
- o DuckDuck Go: Android Stock OS has Chrome set up as the default browser, and BharOS is partnering with DuckDuck Go for its default browser.

> ### Fork Version-Android
> BharOS is not a distinctive indigenous OS. It is more of a fork version of Android. In forking, a developer can copy the source code of a programme, app, or even operating system and create a new project without violating copyright laws. Google's Android has been an open-source project ever since it debuted in 2008. But a forked version loses access to the Google Play Store that prevents malware from infiltrating Android devices. However, after CCI ruling BharOS will be able to run with Google nod and with access to some of its services

Significance of the BharOS

✓ It will give a boost to *Atamanirbhar Bharat* and *Vocal for Local* campaign by reducing the dependence on foreign OS in smartphones.

✓ It will help in building an indigenous ecosystem and a self-reliant future.

✓ It will allow Indian users to have more control over the apps on their mobile phones and thereby more control over their privacy and data.

Challenges with BharOS

▪ **Duopoly of Android and iOS:** Competing with Android or iOS could be a mammoth task. It would require both infinite resources and robust developer support.

▪ The f**low of Apps**: Even if India develops an alternative to Android and provides its own App Store, it can't promise a flow of apps from local developers like China does on its many Android app stores. For eg, if Gmail is not made the default app, then no one would want to use a homegrown OS.

▪ **Ties with Major Manufacturers:** Convincing smartphone manufacturers to launch phones with BharOS will be a tough task. Especially, given the fact that the maximum number of mobiles sold in India are from Chinese manufacturers who will have no reason to move to an Indian OS.

> ### PEPPER IT WITH
> Software as a Service (SaaS), Data Privacy, Data Security, Malwares

▪ **Tech-Ecosystem:** The current tech ecosystem is intertwined with multiple stakeholders as a result, no one would be willing to take a risk to bring a phone with a completely new operating system unless the Indian government funds the project and heavily subscribes to the cost of the handset.

Way-Forward

BharOS is a positive start for the India tech industry, however given the dominance of Android and iOS, there is a need to build on this start by developing an ecosystem that pushes the acceptance rate of the Indian operating system.

ChatGPT

News Excerpt

Recently, the independent research body OpenAI produced a conversational chatbot known as ChatGPT. The chatbot is trained to follow the instruction in a prompt and provide a detailed response. Users can simply feed in their query and the chatbot will reply to them.

Pre-Connect

Generative AI

- In simple terms when Artificial Intelligence generates something on its own it is referred to as generative AI.
- It includes learning algorithms that make predictions as well as those that can use prompts to autonomously write articles and paint pictures.
- A generative AI requires:
  - Generative Adversarial Networks (GANs): A Generative Adversarial Network (GAN) is a deep learning architecture that consists of two neural networks competing against each other in a zero-sum game framework. The goal of GANs is to generate new, synthetic data that resembles some known data distribution.
  - Variational Autoencoders (VAEs): It encodes data into a low-dimensional representation thereby capturing key features. Then the model decodes the low-dimensional representation back into the original data. This encoding and decoding produce a compact representation of the data distribution, which it can then use to generate new outputs.
- Generative AI also uses random noise as input to generate new outputs. This new data is used as additional, synthetic training data for creative applications in art, music, and text generation.

Generative Pre-Trained Transformer

- ➢ Generative Pre-trained Transformer, is a neural network machine learning model trained using internet data to generate any type of text. It uses deep learning to produce human-like text
- ➢ GPT-3 on which ChatGPT is based has over 175 billion machine-learning parameters. Before it was Microsoft's Turing Natural Language Generation (NLG) model, which had 10 billion parameters.
- ➢ It uses both *natural language generation* and *natural language processing* to understand and generate natural human language text.

About ChatGPT

- ✓ It is trained using Reinforcement Learning from Human Feedback (RLHF). Under this model, human AI trainers provided conversations in which they played both sides viz. user and AI assistant
- ✓ This is known as supervised fine-tuning. As a result, it can answer follow-up questions, admit its mistakes, challenge incorrect premises, and reject inappropriate requests.
- ✓ However, it is not free from errors or limitations such as
  - It sometimes writes plausible-sounding but incorrect or nonsensical answers.
  - It is often excessively verbose and overuses certain phrases.
  - The chatbot is sensitive to how the input is phrased.

Chatbots

These are form of Artificial Intelligence (AI) which operates either via machine learning or with set guidelines. A machine learning chatbot is based on artificial neural network inspired by the neural nodes of the human brain, as a chatbot receives new voice or textual dialogues, the number of inquiries that it can reply to and the accuracy of each response it gives increases.

Generative vs Discriminative AI

Discriminative AI is one under which decisions are based on boundaries such as color, weight, etc. Then the algorithm compares the pattern and based on probability gives an answer. Generative AI on the other hand draws model in n-dimensional plane, therefore each object carries its own points and then the algorithm compares the probability curve to derive to a conclusion.

For e.g. If both AI are given apple and banana as data feed. Then Discriminative AI will decide based on the features, while Generative AI will draw an apple and banana and based on its drawing gives decision.

Generative AI is better than Discriminative AI as it requires less data feedback and produces more accurate result as it has less data outliers.

Ethics Based AI-Model

An ethics based AI-model must be:

- ❖ Inclusive, explainable and use data responsibly
- ❖ Unbaised and works equally across all spectra of society.
- ❖ Monitor and audit training model to ensure its uncorruptable.
- ❖ Observes data privacy rights and therefore more data results in better models.
- ❖ Reduce fraud, eliminate waste, reward people, slow climate change, cure disease, etc.

- o Facts and Logic is missing
- o It's unable to understand Abstract relation-based queries.

Challenges from ChatGPT or Generative AI

- **Plagiarism:** There is a real possibility of students cogging papers. There are high chance people might pass AI-generated content as their original work. This will hamper the creativity of the students and hamper future research & development.
- **Privacy Factor**: With ChatGPT the regulation of the relationship between data principles and fiduciaries will become more difficult to manage. The common refrain among policymakers around the world has been that policy innovation and regulatory frameworks are almost always playing catch-up with technology.
- **Policy Challenges:** It will force policymakers to map out and plan for the changes in the education system, labor codes, and new commodities that are bound to emerge as a result.
- **Legal Challenges:** While Generative AI claims that all it produces on its platform is its copyright but the data it is based on is the intellectual properties of others thereby creating legal problems. This will increase the legal burden.

Ethical Challenges due to Generative AI

- ❖ **Accountability Issues**: Generative AI can produce outputs that are difficult to trace back to the responsible parties, make it challenging to hold individuals or organizations accountable for fake news or deepfake videos generated by AI.
- ❖ **High Risk of fraud:** The quick spread of misinformation and fraud is one more risk. It can be frequently be used for malicious or criminal purposes.
- ❖ **Envrionment Unfriendly:** Generative AI like ChatGPT are based on huge machine learning parameters which require huge data centers which uses a lot of energy resulting in carbon emissions.
- ❖ **Baiseness:** Generative AI will carry an inherent biasness as the sources it is based on are inherently bias.

Conclusion

Artificial intelligence has now emerged as an equivalent of nuclear energy and therefore requires regulations at the global level. A global minimum on Artificial intelligence can help in preventing the catastrophic impact it might create in the future.

Corona Nasal Vaccine

News Excerpt

Incovacc developed by Bharat Biotech becomes the world's first intranasal vaccine to be approved as a booster dose for Covid-19.

Pre-Connect

Types of Vaccine

- Inactivated Vaccines- These are used to kill the version of the germ that causes a disease. These vaccines are created using an inactivated pathogen using heat or chemicals such as formaldehyde or formalin. This way pathogen's ability to replicate is destroyed but the immune system is still able to recognize it.
- Live-attenuated Vaccines- These use a weak form of the germ that causes a disease. Since they are very similar to natural infections, they create a strong and long-lasting immune response.
- Messenger (m) RNA Vaccines: These vaccines make proteins to trigger an immune response. These vaccines have several benefits compared to other types of vaccines such as shorter manufacturing times, no live virus, and no risk of causing disease in the person getting vaccinated.
- Toxoid Vaccines: These vaccines use a toxin that is made by the germ that causes a disease. Therefore, immunity is created to the parts of the germ that cause disease instead of the germ itself i.e., targeted immunity
- Viral Vector Vaccines: These use a modified version of a different virus as a vector to deliver protection. E.g., vaccines for influenza, vesicular stomatitis virus (VSV), measles virus, and adenovirus, which causes the common cold.

About Incovacc

- ➤ It is produced by Bharat Biotech. Its platform is Ad35 adenovirus.
- ➤ It is developed in partnership with Precision Virologics and Washington University School of Medicine.
- ➤ The dose in animal trials has been shown to confer superior protection than conventional doses as it elicited antibodies in the mucous membranes and epithelial cells in the lungs which the intramuscular jabs would not be able to deliver.

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

Advantages of Nasal Vaccines

Scientists have described protection from nasal vaccines as akin to "putting guards outside a home, instead of having them inside there are several other advantages such as:

- ✓ Better Lung Protection: Studies at Yale University found that the nasal vaccine led to IgA antibody secretions in the lung, thereby protecting it better.
- ✓ Makes Viral Entry Difficult: These vaccines elicit what is known as IgA antibodies, which coat the mucous lining. This is crucial because the coronavirus first infects the mucous membrane in the nose and throat from where it spreads further. In other words, there are likely to prevent infection in the first place.
- ✓ Possible Drop in Infectivity: Shots delivered to the muscle only marginally limit a vaccinated person's tendency to spread the virus, though they are significantly protected from disease. Nasal vaccines will cut this infectivity drastically, which could blunt new waves.

Challenges

While Nasal vaccines are largely safe, they are tough to get right. Efficacy depends entirely on the bioengineering and platform involved and current candidates employ a wide variety of approaches.

NISAR

News Excerpt

National Aeronautics and Space Administration (NASA) and the Indian Space Research Organisation (ISRO), have jointly developed an Earth Observation Satellite NISAR which recently got a send-off ceremony at the American space agency's Jet Propulsion Laboratory (JPL) in Southern California. It will be launched from Satish Dhawan Space Centre most probably in 2024.

About NISAR

- NISAR is a combination of NASA-ISRO-SAR (Synthetic Aperture Radar). SAR will be used to measure changes in the surface of the Earth.
- SAR can produce high-resolution images and can penetrate clouds and darkness and therefore can collect data day and night in any weather.
- NISAR will scan the globe every 12 days throughout its three-year mission of imaging the Earth's land, ice sheets, and sea ice.
- NASA will contribute
  - o A Radar
  - o A high-rate communication subsystem
  - o GPS receivers
  - o Payload Data Subsystem
  - o Reflector Antenna (largest ever made by NASA)
- ISRO will contribute
  - o Spacecraft Bus
  - o S-Band Radar
  - o Launch Vehicle and associated launch services

S-Band Radar

These operate on a wavelength of 8-15 cm and a frequency of 2-4 GHz. They are not easily attenuated and this makes them useful for near and far range weather observation. This radar however, requires a large antenna dish and a large motor to power it.

Objectives of NISAR

- ➢ Track- Subtle changes in the Earth's surface
- ➢ Monitor Groundwater Supplies
- ➢ Monitor the rate of ice sheet melting
- ➢ Spotting warning signs of imminent volcanic eruptions.

Benefits of NISAR

- ✓ It will help in better management of natural resources and hazards.

- ✓ It will provide critical information which will aid in a better understanding of the effects and pace of climate change.
- ✓ It will help in the understanding of local changes and measure regional trends.
- ✓ It will help in better understanding the causes and consequences of land surface changes.
- ✓ It will aid in a better understanding of the earth's outer layer curst.

Muons

News Excerpt

A team of scientists is examining the fortress wall of Xi'an (an ancient city in China) to find small density anomalies in the structure which can act as a potential safety hazard.

Understanding Muons

- Muons are subatomic particles raining from space. These are created due to the collision of particles in Earth's atmosphere with cosmic rays.
- They were discovered in 1936 by the American physicists Carl D. Anderson and Seth Neddermeyer.
- These particles resemble electrons but are 207 times as massive and therefore are termed "fat electrons". They are highly unstable and exist for just 2.2 microseconds.
- Their weight allows them to travel through hundreds of meters of rock or other matter before getting absorbed or decaying into electrons and neutrinos.

Muography or Muon Tomography

- ➤ Conceptually it is similar to X-ray but capable of scanning much larger and wider structures, owing to the penetration power of muons.
- ➤ Muons are naturally produced and ubiquitous and therefore require only a muon detector underneath, within, or near the object of interest.
- ➤ The detector then tracks the number of muons going through the object from different directions, to form a three-dimensional image.
- ➤ This image is then compared with a muon image of the "free sky." This indicates how many muons have been blocked.
- ➤ The final picture is essentially a shadow of the object, in the light of cosmic muons.

Muons and Archaeology

- ✓ Muon radiography can identify underground cavities while preserving them from any invasive intervention. This makes muography of great interest for archaeology mining and urban applications.
- ✓ The detection of cavities inside heritage buildings can, for instance, prevent possible damages, or can lead to the discovery of unknown cavities preventing any future catastrophe.
- ✓ The technique was first used in the late 1960s when the technology was used to search for hidden chambers in the Pyramids.
- ✓ In 2017, as the technology progressed and more sophisticated and advanced muon detectors were manufactured, archaeologists were able to discover a previously unknown chamber in the inner structure of Pyramids.

Other Applications

- ▪ Customs Security
- ▪ Internal Imagining of volcanoes- Prevention of Disaster due to volcano
- ▪ Scanning of nuclear reactors

SECURITY

Veer Guardian 2023

News Excerpt

The inaugural edition of the bilateral air exercise 'Veer Guardian 2023' between the Indian Air Force (IAF) and Japan Air Self Defence Force (JASDF) concluded in Japan, on 26 January 2023.

Pre-Connect

Indo-Japan Strategic Ties

- In 2008, India - Japan issued "the Joint Declaration on Security Cooperation between Japan and India".
- There are also various frameworks of security and defence dialogue between Japan and India including Foreign and Defence Ministerial Meeting ("2+2" meeting), annual Defence Ministerial Dialogue and Coast Guard-to-Coast Guard dialogue.
- In November 2019, the first "2+2" meeting was held in New Delhi.
- On 2020, the Agreement between Japan and India Concerning Reciprocal Provision of Supplies and Services between the Self-Defence Forces of Japan and the Indian Armed Forces (so-called "Acquisition and Cross-Servicing Agreement" or ACSA) was signed which came into force on July 11th, 2021.
- Defence Exercises:
  - JIMEX- bilateral naval exercise
  - Dharma Guardian- bilateral army exercise
  - Malabar- QUAD naval exercise

Veer Guardian Exercise

- ➢ India and Japan held their maiden air exercise.
- ➢ This is the first time that the Indian Air Force and Japanese Air Self Defence Forces exercised together. The exercise took place at Hyakuri Air Base, Japan.
- ➢ The JASDF participated in the exercise with its F-2 and F-15 aircraft, while the IAF contingent participated with the Su-30 MKI aircraft. The IAF fighter contingent was complemented by one IL-78 Flight Refuelling Aircraft and two C-17 Globemaster strategic airlift transport aircraft.
- ➢ Aircrew of the two participating Air Forces also flew in each other's fighter aircraft to gain a deeper understanding of each other's operating philosophies.

Significance

- ✓ Bilateral ties- India-Japan already have strong bi-lateral ties spanning from economic, political, social, and strategic cooperation among others. This addition will further improve the friendship and bond that India and Japan share.

Exercise Dharma Guardian

- ❖ The armies of India and Japan conducted the fourth edition of joint military exercise, 'Ex Dharma Guardian', at Camp Imazu in Japan's Shiga province from 17 February 2023. The military drill that will last till 2 March 2023 will help them know each other better, share their wide experiences and enhance their situational awareness, the Army said.
- ❖ The scope of this exercise covers platoon-level joint training on operations in jungle and semi-urban/urban terrain.
- ❖ The troops of the Garhwal Rifles Regiment of the Indian Army and an Infantry Regiment from the Middle Army of the Japan Ground Self Defence Force (JGSDF) are participating in the exercise to share experiences gained during operations in order to enhance interoperability in planning and execution.
- ❖ The joint exercise will enable the armies from the two countries to share best practices in tactics, techniques, and procedures for conducting tactical operations under a UN mandate, in addition to developing interoperability, bonhomie, camaraderie, and friendship between the two armies.
- ❖ This annual training event with Japan is crucial and significant in terms of security challenges faced by both nations against the backdrop of the current global situation.

- ✓ Multilateral ties- Both India and Japan share a common grouping known as QUAD along with USA and Australia. Thus, such initiatives between the partner countries further strengthens the multilateral groupings.

- ✓ Tackling China aggression- China has been violating Japan's air space on one hand, and India's borders on the other. The increasing Indo-Japan strategic ties in form of Veer Guardian exercise strengthens the military capabilities and military cooperation between the two, which could prove very efficient in tackling this Chinese aggression.

Conclusion

The genesis of Veer Guardian exercise shows that the two democratic countries in Asia, can cooperate to contribute to global peace and prosperity. Both share political, economic and strategic interests based on the firm foundations of common values and traditions.

Spy Balloons

News Excerpt

Recently, US-China relations witnessed another conflict over the appearance of Chinese spy balloons over the United States. The F-22 Raptor using an AIM 9X Sidewinder missile destroyed the balloon.

Pre-Connect

Spy Balloon

- A spy balloon is a gas-filled balloon that is flying quite high in the sky, more or less where we fly commercial airplanes.
- Surveillance capability- Different kinds of cameras are used for collecting different types of information. Imaging is conducted across different regions of the electromagnetic spectrum, especially infrared.
- Navigation- Most of these balloons follows the wind direction. There can be a little bit of navigation, but there are certainly not people aboard them.
- Spying is not usually done these days with balloons because they are a relatively easy target and are not completely controllable.

Components of Spy Balloons (As per US government assessment)

- It had some sophisticated cameras and imaging technology on it, and it was pointing all of those instruments down at the ground.
- It was collecting information through photography and other imaging of whatever is going on down on the ground below it.
- It had propellers to help steer it. If this is confirmed, it means that its operator would have much more control over the path of the balloon.

High altitude surveillance balloons

Helium-filled balloon

Solar panels provide power

Instruments can include cameras, radar, sensors and communications equipment

How high do they fly?

120,000ft (37km)

80,000ft (24km) — Surveillance balloon

65,000ft (20km) — Fighter aircraft

40,000ft (12km) — Commercial airliners

Concerns for India

- ➢ There are reports which has suggested that the Chinese are operating such kind of balloons for several years partly out of Hainan province off China's south coast.

➢ It has collected information on military assets in countries and areas of emerging strategic interest to China including India, Japan, Vietnam, Taiwan and the Philippines."

➢ Based on local media reports from Andaman, it seems that a surveillance balloon was cited over the strategically important islands in the Bay of Bengal which have India's critical military installations.

Challenges posed by the Chinese Spy Balloons

✓ **Violative of Sovereignty**- There is an internationally accepted boundary called the *Karman Line* at 62 miles (100 kilometers) altitude. These balloons were well below that, so it was in US airspace thus violating its sovereignty.

   o The deployment of spy balloons by China could also exacerbate tensions between India and China, particularly in light of the ongoing border disputes between the two countries.

✓ **These balloons are equipped with high-tech surveillance equipment,** including cameras, radar, and electronic sensors that can collect information on military activities, infrastructure, and other sensitive information. The data collected by the balloons could be used for a range of purposes, including intelligence gathering, espionage, and even targeting US military assets.

   o The balloons could also be used to conduct espionage and sabotage operations against Indian targets, potentially causing significant harm to India's national security.

✓ **The use of spy balloons by China could undermine the global norms and principles** that underpin international relations, particularly if their use is perceived as a violation of international law or norms.

✓ **The deployment of spy balloons by China could also trigger an arms race** as other countries seek to develop their own surveillance capabilities to counter the Chinese threat.

Spy Satellites and Spy Balloons

Satellites are the preferred method of spying from overhead. Spy satellites are typically placed at one of two different types of orbits.

❖ Low Earth orbit-
   o Pro- They're closer to the Earth so they're able to see things more clearly than satellites that are farther away.
   o Con- They are continually moving around the Earth. It takes them about 90 minutes to do one orbit around the Earth. That turns out to be pretty fast in terms of taking clear photographs of what's going on below.

❖ Geosynchronous orbit-
   o Pro- Allowing satellites to capture images continuously because the satellite moves in exactly the same way the earth rotates.
   o Con- It's harder to see things clearly when you're very, very far away.

Balloons
❖ These are much closer to the ground than any of the satellites, so they can see even more clearly.
❖ They move relatively slowly, so they also have a degree of persistence.
❖ However, they are a relatively easy target and are not completely controllable.

Way Forward

Balloons are not covered by existing arms control agreements, they also operate in a legal grey area, as they can be classified as civilian or military equipment depending on their use, making it challenging to determine whether their deployment violates any international laws or regulations. Therefore, there is need to establish new legal regulations on the subject under the guidance of the UN.

Defence Budget

News Excerpt

Union Budget (2023-24) proposed 5.94 Lakh crore rupees ($72.6 billion) in defence spending for the 2023-24 financial year, 13% up from the previous period's initial estimates, aiming to add more fighter jets and roads along its tense border with China. The Budget continues to emphasise indigenisation.

Pre-Connect
Allocation of Defence Budget

• Out of total allocation, INR 1.62 lakh crore has been allocated under the **capital expenditure** head whereas INR 2.70 lakh crore is designated for salaries and maintenance of defence establishments under the revenue head.

Page 69

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- The INR 1.62 lakh crore will be used for **modernising the armed forces** including procurement of new weapon platforms, warships, and fighter jets. The capital expenditure also has seen a small hike from 2022-23's INR 1.50 lakh crore.
- The budget has also focused on the **research and development** and technological base in augmenting the capacities of the armed forces. This has led to an allocation of INR 23,264 crore to the Defence Research and Development Organisation (DRDO).
- Additionally, to step up technology development and to support the domestic defence industrial ecosystem, the iDEX and DTIS are designated with INR 116 crore and INR 45 crore respectively
- **_Border infrastructure_** has also found worthy allocation in this year's budget. Given the state of the relations between India and China and frequent conflict on the border, infrastructure development along the Sino-Indian border areas becomes crucial.
- Capital Budget of Border Roads Organisation (BRO) has increased by 43 percent to INR 5,000 crore in FY 2023-24 as against INR 3,500 crore in FY 2022-23 This will facilitate the upgradation of border infrastructure, especially the strategically important assets like Sela Tunnel, Nechipu Tunnel & Sela-Chhabrela Tunnel and will also enhance border connectivity.

Significance

- ➢ **Modernization of Armed Forces:** A significant portion of the defence budget is allocated towards modernizing the Indian armed forces. This allocation will be used to purchase new weapons and equipment for the Army, Navy, and Air Force.
- ➢ **Focus on Indigenous Production:** The Indian government has been emphasizing the importance of indigenous production in the defence sector for a long time. The allocation will be used to promote the Make in India initiative in the defence sector.
- ➢ **Strengthening Border Infrastructure:** A significant portion of this allocation will be used to strengthen border infrastructure, including roads, bridges, and tunnels, in the border areas with China and Pakistan.
- ➢ **Investment in Defence Research and Development:** This allocation will be used to develop new technologies and equipment for the Indian armed forces.

Challenges

- ✓ The capital expenditure increase is critical for filling the significant gaps that the Indian armed forces face.
  - ✓ The Indian Navy, for instance, needs new fighter planes for its new aircraft carrier, the INS Vikrant and there is a push to buy the marine version of the Rafale fighter, Rafale-M, for the Indian Navy.
  - ✓ The Navy's submarine numbers are also lagging. Under Project 75I, there have been plans for the development of six new submarines but the government has put in place a "back up plan" to acquire more Scorpene class submarines if the Project 75I contracting process is "stuck".
- ✓ Make in India requires long lead times to generate tangible outcomes in indigenously developed defence systems. Whereas wars can occur at short notice without advance warning before initiatives such as Make in India can optimally and satisfactorily deliver to meet the operational requirements of the forces
- ✓ The meagre increase in the military's capital budget is disheartening for military planners, who can see their fiscal room for manoeuvre shrinking.
  - ✓ The Air Force will have to delay plans for acquiring more fighter planes and upgrading existing Sukhoi jets.
- ✓ The military is unable to spend its allotted share of the modernisation budget. The revised estimates in the budget documents for FY2022- 23 reveal that the armed forces failed to spend INR 2,369 crore out of last year's capital outlay of INR 1.50 lakh crore.
- ✓ China's rising military might is an immediate challenge in the form of aggression in Eastern Ladakh and North East. China's capabilities are expanding at a rapid pace with the country announcing the development of a third aircraft carrier.

Way Forward

- ▪ The demand for a multi-year non-lapsable fund for defence modernisation continues to remain a "work in progress".

- The pension outlay has been increased this year to INR 1.38 lakh crore, up from INR 1.19 lakh crore in FY 2022-2023, owing mainly to the announcement of the implementation of "one-rank-one-pension." The government seems to have anticipated the impact of pensions, which is why it introduced the "Agniveer" scheme last year as a way of cutting the salary and pension bill of the armed forces.

> **PEPPER IT WITH**
> Modernisation of defence forces, Agniveer Scheme, Rationalisation of Pension

- Other countries in the Indo-Pacific region are stepping up their efforts to counter the projection and application of Chinese military power:
  - Japan has increased the spending on defence to around 2 per cent of GDP.
  - South Korea is planning to raise defence expenditure by 5 per cent.
  - The Philippines is also expected to raise defence spending by as much as 8 per cent in 2023
- One Time Funding Initiatives- To complement defence spending.
  - The Pacific Deterrence Initiative (PDI), created by USA/QUAD Partnership.
  - India should create a Bharat Raksha Fund (BRF) in which Indian citizen's/ NRI can donate funds.

ART & CULTURE

Swami Vivekananda

News Excerpt

January 12th, 2023 marks the **161st** birth anniversary of Swami Vivekananda, observed as **National Youth Day**. **Spiritual primacy** is the central theme of Vivekananda's teachings, through which human beings can succeed in every sphere of their lives.

Pre-Connect

Swami Vivekananda and Ramakrishna Movement

- Swami Vivekananda was a 19th-century Indian monk and philosopher who played a key role in introducing **Vedanta** and **Yoga** to the Western world. He was **born Narendranath Datta** in Calcutta (now Kolkata) in **1863** and was greatly influenced by his guru, **Sri Ramakrishna Paramahamsa**, a mystic and saint who lived in Dakshineswar, a village near Kolkata.
- After Ramakrishna died in 1886, Narendranath (who had taken the monastic name Swami Vivekananda) and a few of his disciples established the Ramakrishna Math and Ramakrishna Mission, which are **organizations dedicated to the propagation of Vedanta philosophy and the service of humanity.**
- The Ramakrishna movement emphasizes the harmony of different religions and the unity of all beings. It seeks to promote spiritual values and social welfare through various educational, healthcare, and relief programs. The movement also places great importance on meditation and self-realization as a means of achieving spiritual growth and enlightenment.
- Swami Vivekananda played a pivotal role in spreading the teachings of Ramakrishna and the Vedanta philosophy to the West. He traveled extensively across the United States and Europe, giving lectures and talks on Hinduism and spirituality. He also **founded** the **Vedanta Society of New York**, which became the **first Hindu organization in the US.**
- Swami Vivekananda's teachings **emphasized the importance of self-discipline, faith, and the realization of one's inner divinity**. He saw the **unity of all religions** and emphasized that **the ultimate goal of all spiritual paths is the same, to attain oneness with the divine.**

Swami Vivekananda's Chicago Visit in 1893

- ❖ Swami Vivekananda was invited to represent Hinduism at the **World's Parliament of Religions**, which was part of the **World's Columbian Exposition in Chicago in 1893**.
- ❖ He arrived in Chicago in July 1893 and stayed there for four months.
- ❖ On **September 11, 1893,** he delivered **his famous speech at the Parliament of Religions**. His opening words, **"Sisters and brothers of America",** received a standing ovation and established his popularity among the audience.
- ❖ In his speech, Swami Vivekananda spoke about the **need for tolerance and understanding among different religions. He emphasized the unity of all religions and the universality of spiritual truths.**
- ❖ He also spoke about the **concept of karma** and the **importance of self-realization**. He explained how Hinduism teaches the idea of **oneness of all beings and the divinity of the soul**.
- ❖ Swami Vivekananda's speech was widely acclaimed, and he became an overnight sensation in the US. He went on to give several lectures and talks across the country and even travelled to Europe for a brief period.
- ❖ Swami Vivekananda's visit to the US was significant for promoting Indian philosophy and spirituality in the West. He introduced the ideas of Vedanta, Yoga, and meditation to a Western audience and helped dispel many misconceptions about Hinduism.

- Today, the Ramakrishna movement continues to thrive, with numerous centers and ashrams around the world. It has a strong presence in India and is recognized for its contributions to education, healthcare, and social welfare. The movement's message of spiritual unity and social service continues to inspire people of all ages and backgrounds.

Philosophy of Swami Vivekananda

- ➢ **Vedantic Humanism -** Swami Vivekananda believed that there is only **one Self in the universe.** There is **only one Existence**. He saw the entire universe as a manifestation of the absolute One. On the coexistence of various faiths, he believed religious acceptance, and not tolerance was important. He claimed that **tolerance comes out of a superiority complex.**
- ➢ **Divinity within ourselves -** "Infinite power is in the soul of man, whether he knows it or not. Its manifestation is only a question of being conscious of it. With the full consciousness of his infinite power and wisdom, the giant will rise to his feet."
- ➢ Swami Vivekananda talked about the four pathways of attaining moksha from worldly pleasure and attachment:

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- ➤ **Karma Yoga -**Emphasising **the importance of work,** he said that God can be attained through work. It teaches how to employ to the maximum advantage all our energies in our work. Karma-Yoga teaches how to work for work's sake, unattached to the results.
- ➤ **Bhakti Yoga -**It teaches that love **is a vital element of all human beings.** "All love is expansion, all selfishness is contraction. Love is therefore the only law of life. He who loves lives, he who is selfish is dying," said Swami Vivekananda.
- ➤ **Raja Yoga -**Raja Yoga opens up the psychological way to union with God. This Yoga teaches that to acquire knowledge, we'd have to use a method called concentration.
- ➤ **Jnana Yoga -**Jnana Yoga is the path of knowledge. Weeding out the darkness of ignorance through the light of knowledge can bring the 'fire' and 'light' alive by burning all the impurities of the mind.
- ➤ **Faith in oneself -** Whatever you think, that you will be. If you think yourselves weak, weak you will be; if you think yourselves strong, strong you will be. One has to know that all knowledge, power, purity, and freedom are in oneself.
- ➤ Swami Vivekanand also urges people to not shy away from taking responsibility for their actions.

Relevance of Swami Vivekananda's Thought

- ✓ "Arise, awake and stop not till the goal is reached." This mantra of Vivekananda is as effective, relevant, and inspiring today as it was in the days of colonialism. Now, India is ready to be a global leader. With the power of yoga and the energy that comes from spirituality, the youth of the country are impatient about giving direction to the world.
- ✓ "Make a life's aim and incorporate that idea into your life. Think that thought over and over again. Dream it, Live it, that is the secret to being successful." This inspires many, especially youth.
- ✓ His mantra for the youth is evergreen: "Until you can trust yourself, you cannot trust Allah or God." Such philosophy can help in dealing with the situation of rising communalism and religious fundamentalism, not only in India but in the world at large.
- ✓ Swami Vivekananda took forward the efforts made by other thinkers to reach the roots of Indian culture. His inclusive thinking is reflected in the government's slogan "Sabka Saath, Sabka Vikas".
- ✓ Swami Vivekananda taught the world that we have to encourage all those doing good so that they can make their dreams come true. His vision also gave rise to the idea of Antyodaya. His idea of charity is at the root of Sanatan Dharma. He said, **"The more we come to help and help others, the purer our heart becomes. Such people are like God."**
- ✓ Swami Vivekananda combined thinking of different religions, communities, and traditions. His thoughts inspire liberation from inertia. His views are still standing firmly on the world stage with his positive thinking. His ideas remain fresh and relevant.

> **PEPPER IT WITH**
> Yoga and Meditation, Youth Power, Ramakrishna Movement

Way Forward

Swami Vivekananda's teachings continue to inspire people around the world. His message of tolerance, unity and spiritual upliftment is especially relevant in today's world, where there is often conflict and division based on religious and cultural differences.

In recognition of his contribution to the promotion of interfaith understanding and spiritual values,

Assam Charaideo

News Excerpt

Centre has decided to nominate **Assam's Charaideo Moidams site** for the prestigious **United Nations Educational, Scientific and Cultural Organization's (UNESCO) World Heritage Sites list.** If selected, Assam will have three world heritage sites, the other two being Kaziranga National Park and Manas National Park.

Pre-Connect

CharaideoMoidams

- • **Charaideo Moidams**, **home to over 90 royal burial mounds, is also referred to as the Pyramids of Assam.**
- • Located approximately 30 km from Sibsagar town in Assam is **Charaideo, the first capital of the Ahom established by the first Ahom king Chao Lung Siukapha in 1253.**
- • Charaideo symbolizes the Ahom power, the place of origin of the royal Ahoms. The mausoleum or the burial mounds of the Ahom royals are called Charaideo Moidams.

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

Moidams

- ❖ **A moidam is a mound of earth raised over a grave of Ahom royalty and aristocracy.** While Charaideo exclusively contains moidams of Ahom royals, other moidams of aristocrats and chiefs can be found scattered across Eastern Assam, in the region between the towns of Jorhat and Dibrugarh.
- ❖ A typical moidam at Charaideo contains one or more chambers in a vault. On top of these is a hemispherical earthen mound, rising high above the ground, covered in grass. On top of this mound, there is a pavilion, known as the chow chali. A low octagonal wall surrounds the mound with one entrance.
- ❖ Ahom kings and queens were buried inside these moidams. Unlike Hindus who cremate their dead, the predominant funerary method of the Ahoms, originating from the Tai people, was the burial.
- ❖ The height of a moidam is typically indicative of the power and stature of theperson buried inside.

- Surrounded by hills and forests, water bodies, and tufted wild grass, the Moidams in Charaideo are considered sacred. For the local people, it's a place where holy spirits reside under the endless sky.
- It was in 1951 that the ASI declared four large Moidams in Charaideo as protected sites for their historical significance.
- Excavations of two Moidams by the ASI between 2000 and 2003 revealed more architectural details. They recovered human skulls, terracotta plaques, decorated ivory pieces, and gold pendants. In the past two years, three more Moidams have been excavated.
- As per oral history, about 10 Moidams were vandalized by the army of Mir Jumla II, a prominent governor under Aurangzeb who invaded Assam in 1662. But it would be difficult to find out the precise location of those Moidams.

Ahom Kingdom

- The Ahoms were one of India's longest-reigning ruling dynasties. At their peak, their kingdom stretched from modern-day Bangladesh to deep inside Burma. Known to be able administrators and valiant warriors, the Ahom dynasty has enduring cultural appeal in Assam.
- The Ahoms represented a time when the Assamese race was united and able to fight an alien, formidable force such as the Mughals.
- Last year, Ahom general and folk hero **Lachit Borphukan's400th birth anniversary** was celebrated in New Delhi. This LachitDiwas is special because it marks the 400th birth anniversary of the great LachitBorphukan. He epitomized unparalleled courage. He placed the well-being of people above everything else and was a just as well as visionary leader.

India's World Heritage Sites
Cultural Sites-32
- ❖ Agra Fort (1983)
- ❖ Ajanta Caves (1983)
- ❖ Archaeological Site of Nalanda Mahavihara at Nalanda, Bihar (2016)
- ❖ Buddhist Monuments at Sanchi (1989)
- ❖ Champaner-Pavagadh Archaeological Park (2004), Gujarat
- ❖ Chhatrapati Shivaji Terminus (formerly Victoria Terminus) (2004)
- ❖ Churches and Convents of Goa (1986)
- ❖ Dholavira: a Harappan City (2021)
- ❖ Elephanta Caves (1987)
- ❖ Ellora Caves (1983)
- ❖ Fatehpur Sikri (1986)
- ❖ Great Living Chola Temples (1987, 2004)
- ❖ Group of Monuments at Hampi (1986)
- ❖ Group of Monuments at Mahabalipuram (1984)
- ❖ Group of Monuments at Pattadakal (1987)
- ❖ Hill Forts of Rajasthan (2013)
- ❖ Historic City of Ahmadabad (2017)
- ❖ Humayun's Tomb, Delhi (1993)
- ❖ Jaipur City, Rajasthan (2019)
- ❖ Kakatiya Rudreshwara (Ramappa) Temple, Telangana (2021)
- ❖ Khajuraho Group of Monuments (1986)
- ❖ Mahabodhi Temple Complex at Bodh Gaya (2002)
- ❖ Mountain Railways of India (1999, 2005, 2008)
- ❖ QutbMinar and its Monuments, Delhi (1993)
- ❖ Rani-ki-Vav (the Queen's Stepwell) at Patan, Gujarat (2014)
- ❖ Red Fort Complex (2007)
- ❖ Rock Shelters of Bhimbetka (2003)
- ❖ Sun Temple, Konârak (1984)
- ❖ Taj Mahal (1983)
- ❖ The Architectural Work of Le Corbusier, an Outstanding Contribution to the Modern Movement (2016)
- ❖ The Jantar Mantar, Jaipur (2010)
- ❖ Victorian Gothic and Art Deco Ensembles of Mumbai (2018)

Page 74

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

Significance of Charaideo Moidams

➢ The word Charaideo has been derived from three Tai Ahom words, **Che-Rai-Doi. "Che" means city or town, "Rai" means "to shine" and "Doi" means hill.** In short, Charaideo means, "a shining town situated on a hilltop."

➢ While the Ahoms shifted capitals multiple times over their 600-year history, Charaideo is considered to be their first capital city established in 1253 AD by king Sukaphaa.

> **Natural Sites- 7**
> ❖ Great Himalayan National Park Conservation Area (2014)
> ❖ Kaziranga National Park (1985)
> ❖ Keoladeo National Park (1985)
> ❖ Manas Wildlife Sanctuary (1985)
> ❖ Nanda Devi and Valley of Flowers National Parks (1988, 2005)
> ❖ Sundarbans National Park (1987)
> ❖ Western Ghats (2012)
>
> **Mixed Sites- 1**
> ❖ Khangchendzonga National Park (2016)

➢ Throughout the Ahom rule, it remained a symbolic and ritual center of power, due to its salience in the dynasty's founding. After Sukaphaa was laid to rest in Charaideo in 1856, subsequent royals also chose it as their resting place.

➢ Today, these moidams are major tourist attractions. While there are over 150 moidams in the region, only 30 are protected by the Archaeological Survey of India with many in a state of disrepair.

➢ According to the dossier on the CharaideoMoidams, such burial sites have been seen across East and Southeast Asia but the "cluster of moidams in Charaideo distinguishes itself in scale, concentration and being located in the most sacred land of the Tai-Ahoms".

Challenges

✓ As of now, only 30 of those royal burial mounds are under the protection of the Archaeological Survey of India. The rest of the mounds are in a state of decay with human encroachment being one of the main reasons for the damages.

✓ At present, a number of these monuments are in a state of neglect. But soon, we will be able to see these monuments preserved the way they should be.

✓ The site is also considered a sacred place for the ancestral gods of the Ahoms. Thus, locals are resisting their maintenance and development as tourist attraction spots. However, Charaideo is already visited by a lot of tourists, both local and international.

✓ Among many residents, there's an undercurrent of tension. They are of the view that opening the Moidams for exploration and excavation could violate their sanctity.

Way Forward

■ The government needs to convince the stakeholders including local people, through workshops and cultural awareness programs. Few people have assured full cooperation with all research work.

> **PEPPER IT WITH**
> UNESCO World Heritage Sites, Archaeological Survey of India, Ahom Kingdom

■ For ASI officials, the UNESCO tag could create more awareness of the Ahom dynasty in schools and colleges.

■ The Moidams is a thing of intrigue and marvel. Schools and college students visit them during summer vacation. In this line, it can be transformed into a major tourist attraction center in Assam.

Beating the Retreat Ceremony

News Excerpt

Tri-service bands perform **Beating the Retreat Ceremony at the Vijay Chowk on January 29 every year which marks the culmination of the four-day-long Republic Day celebrations.**

Pre-Connect

● The **Chief Guest** of the function is the **President of India** who arrives in a cavalry unit escorted by the 'President's Bodyguards' (PBG).

● Beating the Retreat' has emerged as an event of national pride when the Colours and Standards are paraded.

● The ceremony traces its origin to the early 1950s when Major Roberts of the Indian Army indigenously developed the unique ceremony of display by the massed bands.

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- It marks a centuries-old military tradition when the troops ceased fighting, sheathed their arms and withdrew from the battlefield, and returned to the camps at sunset at the sound of the Retreat.

> ### Drone Show
> ❖ For the first time, a 3-D anamorphic projection was to be organised during Beating Retreat Ceremony 2023
> ❖ While the audience and performers remained undeterred by the constant rain, the drone show had to be cancelled due to bad weather.
> ❖ The drone show, as per the Ministry of Defence, was expected to light up the evening sky over the Raisina Hills, weaving myriad forms of national figures/events through smooth synchronisation.
> ❖ It was to depict the success of the start-up ecosystem, technological prowess of the country's youth and pave the way for future path-breaking trends.

CONTEMPORARY ETHICS CASE STUDIES

1. You are the chairman of a capital market regulating body. Recently, you have received information from sources that one of the top officials in the management has been sharing confidential information, including organizational structure, financial projections, business plans, agenda of the board meeting, and even ratings/performance appraisals of employees with an outside person. This outside person is believed to be a religious personality. There have been also allegations that she favored certain individuals in terms of their compensation and contract win.

   The official has been one of the most prestigious, efficient, and well-performing officers to have ever worked in the organization. Her decisions have brought a major positive impact on the functioning of the capital market.
   - **(a)** **What are the ethical issues involved in the above case?**
   - **(b)** **Which values were compromised in the above case?**
   - **(c)** **As a leader of the organization, what are the values that you will like to promote?**

2. Recently, a local MP was in news because of his choice of an extempore in a public meeting to open up an unstructured discussion on constitutional clauses. A video of his speech went viral creating confusion about his intentions. On the one hand, it provoked challenging debates among the public on constitutional sanctity. On the other hand, some people view that his tongue might have got slipped or he made statements unaware of the risk of falling into a legal fiasco. Nevertheless, all these acts have made him vulnerable to allegations of violations of constitutional oath.
   - **(a)** **Discuss the ethical issues involved in the above case. Does it warrant resignation? Give your opinion keeping in context the values in political life.**
   - **(b)** **What are your views on the dilemma as to whether such an opinion-formation should start with people and end in parliament or start in parliament and end with peoples' mandate?**
   - **(c)** **How will you justify the decision of the MP as the party leader?**

3. In the times of the pandemic of covid-19, we have seen a price surge in the range of 25-180% owing to two factors - a sudden surge in demand and supply side issues. The pandemic has also put vulnerable communities under long-term stress in terms of financial and health security.

   There have also been rising instances of black-marketing and counterfeit products. Pharmaceutical companies are going to continue exploiting the current crisis by hiking the prices of medical equipment and drugs.
   - **(a)** **Examine the ethical issues involved in the above case.**
   - **(b)** **Consider that you are a District Magistrate. What are the options available to you? In the given case, how will you intervene against exorbitant price surges and black marketing?**
   - **(c)** **Explore the above narrative in the context of humanitarian ethics.**

SCAN THIS QR FOR MODEL ANSWER

PHILOSOPHY OF THE MONTH

'Just because you have a choice, it doesn't mean that any of them has to be right'

- The quote comes from Norton Juster's children's fantasy novel, The Phantom Tollbooth (1961). The Phantom Tollbooth offers a moral lesson on making mistakes and learning from them, looking at different viewpoints, and being open to new ideas.
- On the way from the city of Dictionopolis, the land of words and letters, to Digitopolis, the land of numbers, Milo, the main character, and his troupe encounter a sign pointing to three different directions, stating that their destination is five miles away.
- As they contemplate which of the three roads to take, a peculiar character appears – Dodecahedron. When Milo asks him for help in making a decision, Dodecahedron responds with a mathematical problem that leaves Milo confused. The problem is eventually solved by another character, and they realise that all three roads "arrive at the same place at the same time."
- The excerpt reads as follows:

> *"Correct!" shouted the Dodecahedron. "And I'll take you there myself. Now you can see how important problems are. If you hadn't done this one properly, you might have gone the wrong way."*
> *"But if all the roads arrive at the same place at the same time, then aren't they all the right way?" asked Milo.*
> *"Certainly not!" he (Dodecahedron) shouted, glaring from his most upset face. "They're all the wrong way. Just because you have a choice, it doesn't mean that any of them has to be right."*

 And indeed, when Dodecahedron spins the sign, a new road appears, also five miles long, but the one that would lead them to Digitopolis.
- The characters' dilemma in the novel is similar to the ones we often face in our own lives when we are confronted with many options and it's not easy to pick one. Every choice would entail its set of consequences – good and bad.
- And as Dodecahedron puts it, sometimes all the options presented before us may be wrong. But in those moments, **it is important to be sure of one's ethical values, and to do the right thing as far as possible, despite the limited framework presented to us.** The prospect of wrong choices is not meant to cripple one's ability to choose. For making them, Dodecahedron essentially makes a case for thinking out of the box, being wary of how things might appear at first glance, and seeking advice.
- While we may think that we have to choose from the limited number of options before us, and while some may look right, a suggestion or advice from a third person might present a better alternative.
- A case in point is the author of The Phantom Tollbooth. An architect by profession, Juster sought to write a book about cities and how we interact with them. He even won a government grant for it. However, after 3-4 months of trying, he eventually had to give up his pursuit and went on a vacation. It's there he met a ten-year-old boy who questioned him on what is the "biggest number there is". Their conversation prompted Juster to write his first novel, which went on to become a classic.

'Arise, awake, and stop not till the goal is reached'

- The message and teachings of Swami Vivekananda, who was one of the most well-known spiritual leaders of India, outlive him.
- Through his speeches and lectures, Vivekananda worked to disseminate his religious ideas. He preached 'neo-Vedanta', an interpretation of Hinduism through a Western lens, and believed in combining spirituality with material progress.
- That the National Youth Day is celebrated every year on **January 12 to commemorate his birth anniversary** seems appropriate, as throughout his work he underlined the importance of youth in India. He saw in them the power to lead society toward the path of spiritual growth.
- "Arise, awake, and stop not till the goal is reached", Swami Vivekananda took from the Katha Upanishad. It soon became a clarion call for galvanizing youth to be cognizant of the supreme power within, thus 'Arise,' and once conscious of the God within, to hold on to the belief and see the world through this divine self-consciousness, to become 'Awake.'
- The quote reflects the basis of Swami Vivekananda's philosophy, which says human beings have infinite power and strength within themselves.
- **The phrase can be expressed through the following markers of his philosophy:**
  - **Fearlessness**: Swami Vivekananda appealed to the youth to follow the religion of fearlessness, for that is the only way to achieve any goal. He decried inactivity and 'hypnotism' of weakness, which he believed are the biggest deterrent to achieving anything. "Arise, awake! Awake from this hypnotism of weakness," he urged.

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- o **Balance of mind**: To remain focused on any goal, Swami Vivekananda claimed that patience, perseverance, and purity are required. He categorically articulated that it is the calm, forgiving, equable, and well-balanced mind that does the greatest amount of work. Swami Vivekananda also stressed the importance of concentration to achieve one's goals. "The world is ready to give up its secrets if we only know how to knock, how to give it the necessary blow and that can be done through concentration of the powers of the mind. The strength and the force of the blow come through concentration," he said. The more focused a human mind is, the more power is brought to bear on one point; that is the secret to achieving what one has set out for.

- o **Divinity**: To highlight the importance of work, he even said that through work even God can be attained. He called on the youth to wake up from their slumber and be awake to the divinity within themselves, which can lead to their success in every sphere of their lives. He said that when the sleeping soul is roused to self-conscious activity, power, glory as well as goodness and purity will naturally follow. "So work, says the Vedanta, putting God in everything, and knowing Him to be in everything. Work incessantly, holding life as something deified, as God Himself. Thus knowing, we must work—this is the only way, there is no other."

> **Other prominent quotes by Swami Vivekananda**
>
> Based on similar themes are some other lines by Vivekananda.
> - ❖ "Freedom can never be reached by the weak. Throw away all weakness. Tell your body that it is strong, tell your mind that it is strong, and have unbounded faith and hope in yourself."
> - ❖ "I stand for truth. The truth will never ally itself with falsehood. Even if all the world should be against me, Truth must prevail in the end."
> - ❖ "Ours not to reason why, ours but to do and die. Be of good cheer and believe that we are selected by the Lord to do great things, and we will do them."

PT Concatenation

Polity

Outrage of Modesty

About: A Man who urinated on a woman, on an Air India flight was accused of 'outraging' her modesty

Understanding-'outraging the modesty of a woman:

- Under the Indian Penal Code, outraging the modesty of a woman is a punishable, cognisable (which means the police can arrest without a warrant), non-bailable offence (which means that bail is not a right of the accused and is granted on the discretion of the judge), and it can be tried by any magistrate offence.
- *IPC Section 354* prescribes either a jail term of up to five years (and not less than one year) or a fine or both for the offence.
- Less severe offences, fall under the purview of *Section 509 of the IPC*, which deals with "word, gesture or act intended to insult the modesty of a woman".
- The main difference between *Sections 509 and 354 IPC is that the latter goes beyond the act of outraging the modesty of a woman and involves a clear threat of physical harm or assault to the woman.*
- Definition of 'modesty': What constitutes an outrage to female modesty is not defined in IPC. However, the Supreme Court in 2007, in the case of 'Ramkripal vs State of Madhya Pradesh', noted that although the IPC does not define what constitutes an outrage to female modesty, the *"essence of a woman's modesty is her sex".* The court gave examples such as the act of pulling a woman, and removing her saree, coupled with a request for sexual intercourse with the knowledge that her modesty might be outraged is sufficient to constitute the offence even without any deliberate intention.

Link it with: Section 294 (for obscenity), Travel mannerism in India, She-Box

Padma Awards

About: The government announced the annual Padma Awards for the year 2023. Every year the names of the recipients are announced on Republic Day eve.

- The Padma Awards are India's highest civilian honours after the Bharat Ratna, to recognize achievements in all fields of activities or disciplines where an element of public service is involved.
- The Bharat Ratna and Padma Vibhushan were first instituted in 1954 as India's highest civilian honours.

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- The Padma Vibhushan had three classes: Pahela Varg (1st Class), Dusra Varg (Second Class), and Tisra Varg (Third Class). In 1955, these were subsequently named Padma Vibhushan, Padma Bhushan, and Padma Shri respectively.
- While the award is normally not conferred posthumously, the Government can consider posthumous felicitation in exceptional circumstances.
- The first ever Padma Vibhushan awardees in 1954 were scientist *Satyendra Nath Bose, artist Nandalal Bose, educationist and politician Zakir Hussain, social worker, and politician Balasaheb Gangadhar Kher, and diplomat and academic V.K. Krishna Menon.*
- The first ever non-Indian Padma Vibhushan awardee was *Bhutanese king Jigme Dorji Wangchuk, who also received the award in 1954.*
- The awards are, however, not a conferment of title and the awardees are expected to *not use them as prefixes or suffixes to their names.*
- While a Padma awardee can be given a higher award (i.e. a Padma Shri awardee can receive a Padma Bhushan or Vibhushan), *this can only happen after five years of the conferment of the previous award.*
- The awards are given in certain select categories which include *Art, Social Work, Public Affairs, Science & Engineering, Trade & Industry, Medicine, Literature & Education, Civil Service, and Sports*. Awards are also given for the propagation of Indian culture, protection of human rights, and wildlife protection among others.
- All persons without distinction of race, occupation, position, or sex are eligible for these awards. *However, government servants including those working with PSUs, except doctors and scientists, are not eligible for these awards.*
- The process of selection for Padma Awards: *Any citizen of India can nominate a potential recipient. One can even nominate one's self.*
- All nominations received for Padma awards are placed before the Padma Awards Committee, which is constituted by the Prime Minister every year. *The Padma Awards Committee is headed by the Cabinet Secretary and includes Home Secretary, Secretary to the President, and four to six eminent persons as members.* The recommendations of the committee are submitted to the Prime Minister and the President of India for approval.
- While explicit consent is not sought from the awardee, they can refuse at that time of call from the MHA. There have been a few instances of refusals.
- Annulment of Padma Awards: While extremely rare, *the President of India can annul/cancel someone's Padma award in case of any egregious misconduct committed by the recipient.*

Link it with: Military honours, Article 18, Arjun Awards, Rajiv Gandhi Khel Ratna Awards

---

President Address

About: President delivers the first address to the Parliament.
- History: In India, the practice of the President addressing Parliament was established after the promulgation of the Government of India Act in 1919. This law gave the Governor-General the right of addressing the Legislative Assembly and the Council of State. The law did not have a provision for a joint address but the Governor-General did address the Assembly and the Council together on multiple occasions.
- After the Constitution came into force, President Rajendra Prasad addressed members of Lok Sabha and Rajya Sabha for the first time on January 31, 1950.
- The Constitution gives the President and the Governor the power to address a sitting of the legislature.
- Article 87 provides two special occasions on which the President addresses a joint sitting. The first is to address the opening session of a new legislature after a general election. The second is to address the first sitting of Parliament each year.
- When the Constitution came into force, the President was required to address each session of Parliament. However, in 1951, the First Amendment to the Constitution changed this and made the President's address an annual affair.
- The address of the President, which is the viewpoint of the government and also written by it, highlights the government's accomplishments from the previous year and sets the broad governance agenda for the coming year.
- The President or Governor cannot refuse to perform the constitutional duty of delivering an address to the legislature. But there can be situations when they deviate from the text of the speech prepared by the government. Though there have been no instances of a President doing so, there have been occasions when a Governor skipped or changed a portion of the address to the Assembly (recently, Tamil Nadu's Governor R N Ravi made changes to the prepared speech he read out in the Assembly).

- **Procedure:** After the President's address, the two Houses move a motion to thank the President for her speech; the issues raised by MPs are then addressed by the Prime Minister, who also replies to the motion of thanks.
- The motion is then put to vote and MPs can express their disagreement by moving amendments to the motion.
- Opposition MPs have been successful in getting amendments passed to the motion of thanks in Rajya Sabha on five occasions, including in 1980, 1989, 2001, 2015, and 2016. However, they have been less successful in the Lok Sabha.

Link it with: the Powers and functions of the President, Sessions of the Parliament, Motion of Thanks to the President's Address

Joint Parliamentary Committees

About: Opposition demands a JPC probe into Adani allegations

- **Joint Parliamentary Committee (JPC):** A Joint Parliamentary Committee (JPC) is set up by the Parliament for a special purpose, like for the detailed scrutiny of a subject or Bill.
- It has members from both the Houses and from both the ruling parties and the opposition.
- It is dissolved after its term ends or its task has been completed.
- It is an ad-hoc body, a JPC is set up after one House of Parliament has passed a motion and the other has agreed to it.
- Members of the JPC are decided by the Parliament. The number of members can vary – there is no fixed number.
- **What can a JPC do?** the mandate of a JPC depends on the motion constituting it. To fulfill its mandate, a JPC can scrutinize documents and summon people for questioning. It then submits a report and makes recommendations to the government, recommendations, however, are not binding on the government.
- The government can choose to launch further investigations based on what the JPC has said, but it can't be forced to do so.
- The government is required to report on the follow-up action taken based on the recommendations of the JPC and other committees. The committees then submit 'Action Taken Reports' in Parliament.
- There have been six JPCs set up so far.

Link it with: Parliamentary Standing Committees, CAG, CBI Vigilance

Emergency Powers to Ban

About: Under emergency powers, the BBC documentary on PM Modi has been blocked

- The directions were issued using emergency powers under the IT Rules, 2021.
- Rule 16 of the IT Rules, 2021 — formally known as the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 — describes the government's power concerning "Blocking of information in case of emergency".
- The Rule says that "in case of emergency nature, the Secretary, Ministry of Information and Broadcasting may if he is satisfied that it is necessary or expedient and justifiable for blocking for public access of any information or part thereof through any computer resource and…as an interim measure issue such directions as he may consider necessary to such identified or identifiable persons, publishers or intermediary in control of such computer resource hosting such information or part thereof without giving him an opportunity of hearing."
- Such orders may be passed on certain specified grounds including national security and public order.

Link it with: IT Act sections 66A and 77-B

Constitutional Benches

About: Generally, the standard matters are heard by **Division Benches consisting of two judges** but for cases which involve a substantial interpretation of constitutional provisions, Constitutional Benches are set up.

- As per **Article 145(3),** Constitutional Benches usually consist of five, seven, nine, 11 or even 13 judges. Hence, for such benches, numerical majorities are of particular importance. This is to facilitate decision-making by ensuring numerical majorities in judicial outcomes.
- The requirement for a majority consensus flows from **Article 145(5)** of the Constitution. It states that no judgment in such cases can be delivered except with the concurrence of a majority of the judges. This article also states that judges are free to deliver dissenting judgments or opinions.
- Presidential Reference under article 143 is also treated through constitutional benches.

SOCIAL ISSUES

Tribal Welfare under Union Budget

About: In the Union Budget, Finance Minister announced some targeted schemes for tribal welfare, ranging from better education to clean drinking water to sanitation.

- **Facilities for Eklavya Schools**: the Centre will recruit 38,800 teachers and support staff for the 740 Eklavya Model Residential Schools, in the next three years.
- Eklavya Model Residential Schools (EMRS) were set up in 1997-98 to impart quality education to ST children in remote areas.
- wherever the density of the ST population is higher in identified Sub-Districts (90% or more), it is proposed to set up **Eklavya Model Day Boarding School (EMDBS)** on an experimental basis for providing additional scope for ST Students seeking to avail of school education without the residential facility.
- **Sickle Cell Anaemia Elimination Mission launched:** to eliminate Sickle Cell Anaemia by 2047. It will entail awareness creation, universal screening of 7 crore people in the age group of 0-40 years in affected tribal areas, and counseling through collaborative efforts of central ministries and state governments.
- Sickle Cell Anaemia is a genetic condition that causes Red Blood Cells to deform and break down. Sickle Cell Disease (SCD) is widespread among the tribal population in India where about 1 in 86 births among STs have SCD.
- **Focus on PVTGs:** Rs 15,000 cr to be spent under PM PVTG Development Mission to improve socio-economic conditions of particularly vulnerable tribal groups (PVTGs) with basic facilities such as safe housing, clean drinking water and sanitation, improved access to education, health and nutrition, road and telecom connectivity, and sustainable livelihood opportunities.
- PVTGs are tribal communities that have a declining or stagnant population, low level of literacy, pre-agricultural level of technology, and are economically backward.
- 75 such groups of tribals in 18 States and 1 Union Territory have been identified and categorized as Particularly Vulnerable Tribal Groups (PVTGs).

Link it with: the Van Dhan scheme, Janjatiya Gaurav Divas, and Key Schemes of the Ministry of Tribal Affairs.

ZO

About: The Zo Reunification Organisation urges Prime Minister Narendra Modi to nudge his Bangladeshi counterpart to declare a ceasefire with an armed indigenous group in the Chittagong Hill Tracts

- Zomi identified themselves as descendants of the Zo, the Tibeto-Burman people that speaks the Chin-Kuki language group.
- They are scattered in Nagaland, Mizoram, Manipur, and Assam.
- Zomi council is an apex body of the Zomi tribes which include Gante, Kom, Mate, Paite, Simte, Tedim Chin, Thangkhal, Zou, and Vaiphei.

Link it with: Marram Nagas (PVT of Manipur), Bru refugees

Economy

Debt-Equity Conversion

About: The Union government **cleared the plan** to convert Vodafone Idea's (Vi) interest dues worth more than Rs 16,000 crore ($2 billion) into equity, paving the way to become the single largest shareholder in the cash-strapped telecom company.

- A debt/equity swap is a transaction in which the obligations or debts of a company or individual are exchanged for something of value, namely, equity.
- Debt/equity swaps involve the exchange of equity for debt to write off money owed to creditors.
- Example of a Debt/Equity Swap: Suppose company ABC has a $100 million debt that it is unable to service. The company offers 25% percent ownership to its two debtors in exchange for writing off the entire debt amount. This is a debt-for-equity swap in which the company has exchanged its debt holdings for equity ownership by two lenders.

Link it with: the capital market, types of financial instruments, bankruptcy, Insolvency, and Bankruptcy Code

---

Sustainability Indices

About: S&P Dow Jones Indices **removed Adani Enterprises**, the flagship company of the Adani Group, from its widely used sustainability indices.

- Sustainability/ ESG indices: Sustainability indices are instruments to measure the responsibility of a certain company in social and environmental areas.

- ESG stands for Environment, Social responsibility, and (Corporate) Governance, which have over the last few years emerged as key themes for investors everywhere, including in India.
- The asset size of ESG funds — which incorporate environmental, social responsibility, and corporate governance in their investing process — has ballooned in India, and in 2021, the NSE launched NSE Prime, a framework that allows companies to submit to standards of corporate governance that are higher than those required by existing regulations.

About: Additional surveillance mechanism

About: NSE puts Adani Group firms under the 'additional surveillance mechanism'
- The ASM was introduced on March 26, 2018, to protect investors from market volatility and unusual changes in share price.
- An ASM shortlisting signals to investors that the stocks have seen unusual activity.
- **This means trading in their shares will require a 100% margin, which is aimed at curbing speculation and short-selling.**
- The shortlisting of securities for placing in ASM is based on criteria that are jointly decided by the Securities and Exchange Board of India (SEBI) and exchanges, covering the parameters of high-low variation, client concentration, PE, close to close price variation, market capitalization, volume variation, delivery percentage, and several unique PANs.
- The shortlisting of securities under ASM is purely on account of market surveillance and it should not be construed as an adverse action against the concerned company/entity.

Circuit Breaker

About: A Stock Market Mechanism started by the Securities and Exchange Board of India (SEBI) in 2001. Recently used by SEBI in the Adani case share fall incident.
- Circuit breakers are triggered to prevent markets from crashing due to a panic-induced sale of stocks. This can happen due to many reasons which lead to stockholders in the market feeling that their stocks are overvalued. Thus, they enter into a sell-off.
- Circuit breakers temporarily halt trading and thus stop the sell-off.
- Effectively, circuit-breakers cap how much the value of a stock can fall in a single day/trading session and in doing so, create a more stable market overall.
- This index-based market-wide circuit breaker system applies at three stages of the index movement, at 10, 15, and 20 percent. When triggered, these circuit breakers bring about a coordinated trading halt in all equity and equity derivative markets nationwide.

Link It With: Double trading, Insider Trading, Algo trading, Unifed Bond Market

Agri Commodity Trade

About: Protest against the **continued suspension of derivates trading in seven agri commodities by SEBI.**
- Agricultural commodities like cotton, paddy, soybean, soya oil, mustard seed, etc., are traded on the National Commodities and Derivatives Exchange (NCDEX) and the Multi Commodity Exchange (MCX).
- Derivatives are short-term financial contracts that are bought and sold in the market. Profits are made in the derivatives trade by predicting the price movements of the asset that underlies the contract. The derivatives trade can be in futures and options.
- In a futures contract, a supplier pledges to sell a certain quantity at a fixed price at a future date. Also, farmers can put fixed amounts of their products, which fit the quality standards of the exchange, to be sold at a fixed price — almost like price insurance. Both contracts can be exited by either the producer or the trader by paying a margin price to the exchange.

Link it with: e-NAM, APMC, Agricultural Marketing and Farmer Friendly Reforms Index (AMFFRI), GrAMs (Gramin Agricultural Market), Small Farmers Agribusiness Consortium (SFAC)

Follow-On Public Offer (FPO)

About: Adani Enterprises decided on February 1 to call off its ₹20,000 crore follow-on public offer and return the money that it had collected from investors.
- What is a follow-on public offer? An FPO is a process wherein a company that is already publicly listed in the stock market issues additional shares to investors. During an FPO, a company could decide to issue fresh shares to investors, or existing shareholders in the company could decide to sell their shares to other investors.

www.ksgindia.com
DELHI VN: 9717380832 & DELHI ORN: 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774| RANCHI: 9939982007 | BHOPAL: 7509975361|
INDORE: 7314977441 | BENGALURU: 7619166663 | HYDERABAD: 79960 66663 | IMPHA: 9650245599 | SRINAGAR: 98712 35599| MUMBAI: 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- An FPO is similar to an initial public offering (IPO), except that an IPO refers to the issuance or sale of shares by a company to investors when it taps into the public market for the very first time.
- Companies can float an FPO to raise equity capital for various reasons such as to pay off debt or to improve their capital structure. FPOs can also be a way for existing shareholders to sell their shares and exit the company.
link

Link It with: Types of companies according to ownership-Public Sector, Private Sector, Holding Company, Subsidiary Company, Limited Liability Partnership.

Startup India Seed fund Scheme

About: Over ₹477 crores, of a ₹945 crore corpus fund, has been approved to incubators under Startup India Seed Fund Scheme (SISFS)

- The Startup India Seed Fund Scheme (SISFS), which is being implemented by the government with effect from 1 April 2021, provides financial assistance to eligible Department for Promotion of Industry and Internal Trade (DPIIT) recognized startups for proof of concept, prototype development, product trials, market-entry, and commercialization.
- This enables the startups to graduate to a level where they will be able to raise investments from angel investors or venture capitalists or seek loans from commercial banks or financial institutions.
- Flagship schemes under Startup India--Fund of Funds for Startups (FFS), Startup India Seed Fund Scheme (SISFS), and Credit Guarantee Scheme for Startups (CGSS)--extend support to startups at various stages of their business cycle.

Link it with: States' Startup Ranking, National Startup Awards, and Innovation Week

---

Sweet Revolution

About: Describing the beekeeping industry as an eco-friendly industry, the Chairman said that beekeeping not only generates income but also increases the productivity of the crop by 30% by the pollen grains spread by the bees.

- The government launched the 'Honey Mission' as part of 'Sweet Revolution' in 2017. The project aims to promote apiculture which is called beekeeping.
- Under the mission, KVIC has distributed 1,75,000 bee boxes after providing beekeeping training to 17,500 beneficiaries across the country.
- A unique innovation was taken by KVIC in the form of a mobile honey process van. In a village in Uttar Pradesh, KVIC unveiled the first mobile honey processing van in the nation.
  - It costs a lot for small farmers and beekeepers to carry honey to processing facilities. Hence, the processing van was launched to minimize the costs associated with honey extraction and processing.
  - Also, with this, the processing can take place at farmers' or beekeepers' doorsteps and thus prevent any possibility of honey adulteration.
- the state of Jharkhand is considered best for the implementation of the sweet revolution. The state's climate is suitable for honey production, around 30% of the land is covered by forest which is the most important resource for honey production.
- **The global reach of honey from India**: India is one of the leading honey exporting countries in the world. The major export destinations include the US, Saudi Arabia, Canada, Bangladesh, and Qatar.

Link it With: Green Revolution, Pink Revolution, Blue Economy, Yellow Revolution, and other color revolution

---

Loan-Loss Provision

About: The Reserve Bank of India (RBI) published a discussion paper on "loan loss provision", proposing a framework for adopting an expected loss (EL)-based approach for provisioning by banks in case of loan defaults.

- The RBI's proposal is based on the premise that the present "incurred loss"-based approach for the provision by banks is inadequate, and there is a need to shift to the "expected credit loss" regime to avoid any systemic issues.
- **Under the Loan-Loss provision-** Banks set aside a portion of the expected loan repayments from all loans in their portfolio to cover the losses either completely or partially. In the event of a loss, instead of taking a loss in its cash flows, the bank can use its loan loss reserves to cover the loss. An increase in the balance of reserves is called a loan loss provision.
- The level of loan loss provision is determined based on the level expected to protect the safety and soundness of the bank.

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- Under this practice, a bank is required to estimate expected credit losses based on forward-looking estimations, rather than wait for credit losses to be actually incurred before making corresponding loss provisions.
- As per the proposed framework, banks will need to classify financial assets into one of three categories — Stage 1, Stage 2, or Stage 3 — depending upon the assessed credit losses on them, at the time of initial recognition as well as on each subsequent reporting date, and make necessary provisions.
- Stage 1 assets are financial assets that have not had a significant increase in credit risk since initial recognition or that have low credit risk at the reporting date. For these assets, 12-month expected credit losses are recognized and interest revenue is calculated on the gross carrying amount of the asset.
- Stage 2 assets are financial instruments that have had a significant increase in credit risk since initial recognition, but there is no objective evidence of impairment. For these assets, lifetime expected credit losses are recognized, but interest revenue is still calculated on the gross carrying amount of the asset.
- Stage 3 assets include financial assets that have objective evidence of impairment at the reporting date. For these assets, lifetime expected credit loss is recognized, and interest revenue is calculated on the net carrying amount.
- **Benefits of this approach:** The forward-looking expected credit losses approach will further enhance the resilience of the banking system in line with globally accepted norms.

T+1 Settlement

About: After China, India will become the second country in the world to start the **'trade-plus-one' (T+1) settlement cycle** in top-listed securities, bringing operational efficiency, faster fund remittances, share delivery, and ease for stock market participants.

- T+1 settlement plan: The T+1 settlement cycle means that trade-related settlements must be done within a day, or 24 hours, of the completion of a transaction. For example, under T+1, if a customer bought shares on Wednesday, they would be credited to the customer's demat account on Thursday. This is different from T+2, where they will be settled on Friday.
- As many as 256 large-cap and top mid-cap stocks, including Nifty and Sensex stocks, will come under the T+1 settlement from Friday.
- Until 2001, stock markets had a weekly settlement system. The markets then moved to a rolling settlement system of T+3, and then to T+2 in 2003.

Short Selling

About: Hindenburg Research, which has accused the Adani Group of fraud, is a short seller.

- "Buy low, sell high" is the traditional investment strategy in which one buys a stock or security at a particular price and then sells it when the price is higher, thereby booking a profit. This is referred to as a "long position", and is based on the view that the price of the stock or security will appreciate with time.
- **Short selling,** or shorting, on the other hand, is a trading strategy based on the expectation that the price of the security will fall. While fundamentally it is based on the "buy low, sell high" approach, the sequence of transactions is reversed in short selling — to sell high first and buy low later.
- In short selling, the trader usually does not own the securities he sells, but merely borrows them.
- In the stock market, traders usually short stocks by selling shares they have borrowed from others through brokerages. When the price of the shares falls to the expected levels, the trader would purchase the shares at the lower price and return them to the owner, booking a profit in the process. If, however, the price of the shares appreciates instead of falling, the trader will be forced to buy shares at a higher price to return to the owner, thereby booking a loss.

International Relations

Pravasi Bhartiya Divas

About: The 17th edition of the Pravasi Bharatiya Diwas (PBD) was held in Indore, Madhya Pradesh.

- PBD is an annual celebration held every year on January 9 for Non-Resident Indians (NRIs). January 9 was selected as it was the date when Mahatma Gandhi returned to India from South Africa in 1915
- PBD was started in 2002 on the recommendation of the LM Singhvi committee.
- PBD is the focal point for networking between India and its overseas Indian community.
- This year's theme is "Diaspora: Reliable partners for India's progress in Amrit Kaal".
- On the occasion of PBD, an award called the Pravasi Bharatiya Samman Award is given out as part of the programme. It is the highest honour conferred on a Non-Resident Indian, a Person of Indian Origin or an organization or institution established and run by them.

- The award is given for:
  - o For creating a better understanding of India abroad.
  - o Support India's causes abroad.
  - o Work for the welfare of the local Indian community.
- The award is given on the recommendation of the committee headed by the Vice President as Chairman and the External Affairs Minister as vice chair. It also includes other distinguished members from various walks of life.

Link it with: Remittances to India, Indian Diaspora

Paris Club

About: The Paris Club, an informal group of creditor nations, will provide financial assurances to the International Monetary Fund on Sri Lanka's debt.

- It is a forum of 22 countries (founded in 1956) that act as official creditors and meet to solve payment difficulties faced by debtor countries.
- Member Countries are- *Australia, Austria, Belgium, Brazil, Canada, Denmark, Finland, France, Germany, Ireland, Israel, Italy, Japan, Korea, Netherlands, Norway, Russian Federation, Spain, Sweden, Switzerland, United Kingdom, United States of America.*
- *All 22 are members of the group called Organisation for Economic Co-operation and Development (OECD).*
- It operates on the principles of consensus and solidarity. Any agreement reached with the debtor country will apply equally to all its Paris Club creditors.
- A debtor country that signs an agreement with its Paris Club creditors, should not then accept from its non-Paris Club commercial and bilateral creditors such terms of treatment of its debt that are less favourable to the debtor than those agreed with the Paris Club.

Link it with: IMF lending instrument, AIIB

Environment

Liquid Natural Gas (LNG)

About: LNG will compensate for lost Russian gas supplies.

- LNG is natural gas reduced to a liquid state (liquefaction) through intense cooling to around -161 degrees Celsius (-259 Fahrenheit).
- The liquid gas is 600 times smaller than the original volume and is half the weight of water.
- The compressed fossil fuel is constituted almost wholly of methane which is a potent greenhouse gas and can be transported around the world by ship.
- After arriving at its destination, the cargo is regasified in a floating terminal and redistributed through pipelines.
- It has LNG's export potential but because of high cost of liquefaction and producing, it has limited its market.
- The cooling, liquefying and transport processes, as well as the post-transport regasification procedures, also require a lot of energy.

Link it with: Mission Life, Compressed Natural Gas, Liquid Hydrogen

---

Bar-headed Goose

About: A bar-headed goose, has been spotted in Koonthankulam - Kadankulam Birds Sanctuary.

- It is a native of East and South Asia.
- It is one of the iconic winter migratory bird species that arrive at Koonthankulam-Kadankulam Bird Sanctuary, Tamil Nadu.
- It can be easily identified by their signature white and grey plumage with distinct black bars on the head and their orange-yellow beaks and legs.
- During the flight, these birds appear to have all-grey plumage with black wing tips. They feed on grass, aquatic plants and occasionally insects.
- IUCN: Least Concern

Link it with: Bengal Florican, Pink -headed duck, Great white pelican.

Chestnut-winged cuckoo

About: The species has been spotted in Coromandel Coast.
- It is a distinctive, long-tailed cuckoo with a peaked black crest like a witch's hat, bright orange throat, rusty wings, a black back, and white nape and belly.
- It forages and sings high in dense canopy.
- Varied vocalizations are harsh, raspy, or metallic sounding and include high-pitched "veep-veep" notes, a strident "kooree", and a maniacal rattling cackle.
- IUCN: Least Concern

Link it with: Andaman Teal, Purple heron, Chinese sparrow hawk

Nilgiri Tahr

About:
- It is a state animal of Tamil Nadu.
- It is a hoofed mammal or ungulate endemic to the Western Ghats.
- It is the only mountain ungulate in India amongst 12 other species of ungulates.
- The Nilgiri Tahr was found everywhere in the Western Ghats but currently only 3,000 exist and their habitat is restricted to one-tenth of their original range.
- Currently, they are found only in the southern Western Ghats in an altitude range of 1,100 metres to 2,600 metres.
- IUCN: Endangered
- It has been listed in Schedule 1 of the Wildlife (Protection) Act, 1972.

Link it with: Mukurthi National Park, Pangolins, The Indian Elephant

Indian Star Tortoise

About: Indian star tortoise faces twin challenges of habitat loss and genetic diversity, finds study.
- The Indian star tortoise (Geochelone elegans) is a threatened tortoise species native to India, Pakistan and Sri Lanka where it inhabits dry areas and scrub forest.
- It is of medium size for a tortoise. Its name comes from the star-like patterns that feature on its high-domed shell.
- Because of these very distinctive patterns and its highly rounded shell, the Indian star tortoise is popular in the world's trade in exotic pets.

Conservation Status:
- IUCN: Vulnerable
- CITES: Appendix I
- WPA, 1972: Schedule IV
- It is threatened by habitat loss and poaching for the illegal wildlife trade.
- It was upgraded to CITES Appendix I in 2019 by full consensus among all member states, giving it the highest level of international protection from commercial trade.
- Conservation group TRAFFIC found 6,040 were seized globally that were intended to be sold in the pet trade.

Link it with: Indian softshell turtle, Indian roofed turtle

Neelakurinji Sanctuary

About:
- Though the Union government has included Neelakurinji (Strobilanthes kunthiana) on the list of protected plants from the State, the proposal for a Neelakurinji sanctuary in Idukki still remains a distant dream.

- The sanctuary was announced in Idukki in 2006, but its demarcation is yet to begin.
  Neelakurinji:
    - These flowers belong to a shrub that is particularly found in the **Shola forests of the Western Ghats in Karnataka, Kerala, and Tamil Nadu.**
    - Most of these species have a unique flowering cycle, **resulting from an annual to a 16-year blooming cycle**. The Kurinji Flowers at Kodagu have grown after **12 years.**

Link it with: Rhododendron

Hornbill

About:

- The hornbills (Bucerotidae) are a family of birds found in tropical and subtropical Africa and Asia.
- The northeastern region has the highest diversity of hornbill species within India.
- The great hornbill is state animal of Kerala and Arunachal Pradesh
- Hornbill look for large tree holes to nest. And their four-month nesting period coincides with the coffee-picking season.
- There are 9 species of hornbills found in India. From Great to Grey. Hornbills are generally monogamous. The pair lasts long.

Conservation Status:

- IUCN: Near Threatened
- CITES: Appendix I
- WPA, 1972: Schedule I
- They swallow the fruits as a whole. They spread them wherever they are going and especially where there are nests.
- This is how nature manages the forest. Not all fruits are delivered, some simply get dropped on the floor while the exchange takes place.
- They swallow the fruits as a whole and in this process, the seeds are taken to long distances. If a male doesn't come or gets poached the family dies waiting. That is the hardest part.

Link it with: The Narcondam hornbill, Indian Vultures

Single Use Plastic

About: Single-use plastic waste rose worldwide despite pledges.

- Polluting single-use plastic production rose by 6 million tonnes per year from 2019 to 2021 despite tougher worldwide regulations, with producers making "little progress" to tackle the problem and boost recycling.
- Single-use plastics have emerged as one of the world's most pressing environmental threats, with vast amounts of waste buried in landfills or dumped untreated in rivers and oceans.
- The manufacturing process is also a major source of climate-warming greenhouse gas.
- The Plastic Waste Management Rules, 2016, as amended, provide the statutory framework and the prescribed authorities for enforcement of the rules, including ban on identified single-use plastic items.
- The following identified single use plastic items, which have low utility and high littering potential, have been prohibited, with effect from 1st July, 2022, vide Plastic Waste Management Amendment Rules, 2021.

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- o Ear buds with plastic sticks, plastic sticks for balloons, plastic flags, candy sticks, ice- cream sticks, polystyrene [Thermocol] for decoration;
- o Plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays, wrapping or packing films around sweet boxes, invitation cards, and cigarette packets, plastic or PVC banners less than 100 micron, stirrers

Science and Technology

Voice Deep Voice Fake

About: Voice Deep Fakes are becoming a rage on social media.
- A voice deepfake is one that closely mimics a real person's voice.
- The voice can accurately replicate tonality, accents, cadence, and other unique characteristics of the target person.
- Deepfakes needs high-end computers with powerful graphics cards, leveraging cloud computing power.
- DeepVoice Fake use AI and robust computing power to generate such voice clones or synthetic voices.
- Detecting voice deepfakes needs highly advanced technologies, software, and hardware to break down speech patterns, background noise, and other elements.
- Research labs use watermarks and blockchain technologies to detect deepfake technology.
- Programmes like Deeptrace are helping to provide protection. Deeptrace uses a combination of antivirus and spam filters that monitor incoming media and quarantine suspicious content.
- Multifactor authentication (MFA) and anti-fraud solutions can also reduce deepfake risks.

LINK IT WITH: ChatGPT, DeepFake, Fake News

Jupiter

About: Astronomers have discovered 12 new moons around Jupiter, putting the total count at a record-breaking 92.
- Jupiter has more moons than any other planet in our solar system. Saturn comes close to 83 moons
- These newest moons range in size from 0.6 miles to 2 miles.
- Jupiter and Saturn are loaded with small moons, believed to be fragments of once bigger moons that collided with one another or with comets or asteroids.
- Uranus has 27 confirmed moons, Neptune 14, Mars two and Earth one. Venus and Mercury come up empty.
- Jupiter's newly discovered moons have yet to be named.

LINK IT WITH: Kuiper Belt, Chandrayaan, Far-Side of Moon

Magnetic Field and Migratory Bird

About: Disturbances in Earth's magnetic field may be responsible for stranded migratory birds.
- Birds rely on the Earth's magnetic field to navigate, especially when flying long distances.
- Scientists analysed 2.2 million records of birds constituting 152 species, and found that the birds' ability to use the geomagnetic field was hampered when there were disturbances in the magnetic field.
- Changes in the Earth's magnetic field impacted both juvenile and adult birds, indicating that they depend on geomagnetism regardless of their migrating experience.
- The geomagnetic field, or Earth'sinvisible magnetic field which runs from the North Pole to the South Pole, is highly influenced by a number of internal and external factors.
- Though the study was conducted only on birds, its results could help researchers understand the reasons why other migrating species such as whales get stranded far from their usual domain.

LINK IT WITH: Migratory Birds and Sites in India

New Ice Form

About: Scientists made a new form of ice
- Scientists have fashioned a previously unknown form of ice - one that might exist on our solar system's icy moons.

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

- They employed a process called ball milling to vigorously shake ordinary ice together with steel balls in a container cooled to minus-328 degrees.
- Medium-density amorphous ice, or MDA, which looked like a fine white powder.
- Ordinary ice is crystalline in nature, with water molecules - two hydrogen atoms and one oxygen atom, or H_2O - arranged in a regular pattern.
- Amorphous ice's water molecules are in a disorganized form resembling a liquid.
- Ball milling is used in industries to grind or blend materials. The researchers used the technique to make about 3 ounces (8 grams) of the new ice, keeping some of it in cold storage.

Green Commet

About: Green Commet is seen near Earth after 50,000 years

- Comets are frozen rocky or gas-filled objects that are remnants of the formation of the solar system.
- Due to their composition, characteristics and the path they move in, they tend to leave a light "behind them".
- Just like other bodies in space, comets also have orbits. They are sometimes pulled in close to the sun because of the sun's gravity acting on them.
- They heat up and spew gases and dust into a glowing head that can be larger than a planet. The remains of dust following this burning up, from a distance, look like a trail of light to humans on Earth.
- Comets, therefore, have often been seen giving out blue or whiteish light, or even green.
- Comets can range in their width from a few miles to tens of miles wide.
- The Oort cloud is thought to be a big, spherical region of outer space enveloping our sun, consisting of innumerable small objects, such as comets and asteroids.

LINK IT WITH: Comet C/2020 F3 Neowise, Halley's Comet

PERSON IN NEWS

Sarojini Naidu	*Known as Nightingale of India,* she played a significant role as an activist. Her writings and melodies had a lasting impression on India's freedom movement. She was a notable warrior and poetess. *She also advocated for women's rights, and therefore her birthday is popularly known as National Women's Day. (9 August)* She was elected as the Indian National Congress's *first-ever female president in the year 1925. She was also part of the Round Table Conference held in 1930 along with Mahatma Gandhi. She was a key figure in the Civil Disobedience movement and led Dharsana Satyagraha. During the Quit India agitation in 1942, she got arrested.* She was a multilingual and used to give her speech in English, Hindi, Bengali or Gujarati. She was one of the members of the constituent Assembly, thus contributed as the founding pillars of Indian democracy through a written and well-thought Constitution. *She was the first woman governor in independent India.* She became the governor of the Uttar Pradesh. Her literary works *The Bird of Time: Songs of Life, Death and the Spring, The Broken Wing: Songs of Love, Muhammad Jinnah: An Ambassador of Unity, Feast of Youth, The Magic Tree, and The Wizard's Mask..*
Lala Lajpat Rai	*Known as Punjab Kesari or Lion of Punjab,* was one of the greatest extremist freedom fighters of India. Inspired by *Swami Dayananda Saraswati he joined Arya Samaj in Lahore.* He believed that ideals of Hinduism when combined with nationalism will lead to the establishment of a secular state. For *his political agitation he was deported to Burma without trial in 1907* but returned after a few months because of lack of evidence. He *founded the Hindu Relief movement in 1897, Co-founded Punjab National Bank Servants of People Society in 1921 and Home Rule League of America in 1917 in New York.* He was also associated with *Hindu Mahasabha and was president of All India Trade Union Congress.* His literary works include *Young India, England's Debt to India, Evolution of Japan, India's Will to Freedom, Message of the Bhagavad Gita, Political Future of India, Problem of National Education in India, The Depressed Glasses, and the travelogue 'United States of America'.* He published and edited Arya Gazette. *He founded*

	several institutions and organizations such as Hisar Bar Council, Hisar Arya Samaj, Hisar Congress, National DAV Managing Committee. was elected deputy leader of the Central Legislative Assembly in 1926. He died during a rally while protesting against Simon Commission.
Subhash Chandra Bose	Netaji Birth Anniversary is being celebrated as the *Prakram Diwas.* The Government of India decided to Institute an award to recognize the excellent work done by individuals and Institutions in India in the field of Disaster Management. *Bose was highly influenced by Vivekananda's teachings and considered him as his spiritual Guru, while Chittaranjan Das was his political mentor.* Bose actively participated in the *Salt Satyagraha of 1930 and vehemently opposed the suspension of Civil Disobedience Movement and the signing of the Gandhi-Irwin Pact in 1931*. Bose was closely associated with left politics in Congress along with Jawaharlal Nehru and M.N. Roy. *He won Congress Presidential election of Haripura and Tripuri in 1938 and 1939.* However, Due to ideological differences with Gandhi, Bose resigned and left congress in 1939. Rajendra Prasad replaced him. He founded a new party, 'The Forward Bloc'. *He was the editor for Das's newspaper– Forward, and later started his own newspaper, Swaraj.* He founded the *INA and gave a clarion call of "Delhi Chalo".*
George Orwell	Orwell was born in East Champaran District in Bihar in 1903. he joined the Indian Imperial Police in Burma (now Myanmar) before resigning in 1928 to devote his life to writing. He took his penname from River Orwell, which flows through Suffolk County*. One of his well-recognised works are Down and Out in Paris and London; Keep the Aspidistra Flying; Homage to Catalonia; Animal Farm; and 1984 (or Nineteen Eighty-Four).* A political system which is despotic in nature and employs a powerful propaganda machinery to make subjects follow its world view, which is the underlying theme of the book, has given us the eponymous word Orwellian. **Used as an adjective, it describes a regime which tries to control every aspect of people's behaviour and thought.**
Chaudhary Charan Singh	The birth anniversary of the Ex-PM Chaudhary Charan Singh (23rd December) is celebrated as Kisan Diwas or National Farmers Day. Charan Singh was also, known as Champion of India's Peasants for his work towards upliftment of farmers and development of agriculture throughout the country. He was a leading part in formulation and finalisation of the Debt Redemption Bill 1939, in order to give relief to the peasantry from moneylenders. He was instrumental in bringing about the Land Holding Act, 1960 which made land holdings uniform throughout Uttar Pradesh. He served twice as Chief Minister of Uttar Pradesh. He became Prime Minister of India in 1979. Charan Singh made his identity as a kisan the principal axis of his politics rather than his caste. He aimed at empowering the peasantry in different ways and at different levels throughout his life. He wrote several books and including 'Abolition of Zamindari', 'Co-operative Farming X-rayed', 'India's Poverty and its Solution', 'Peasant Proprietorship or Land to the Workers' and 'Prevention of Division of Holdings Below a Certain Minimum'. In his book *India's Economic Policy: The Gandhian Blueprint*, *he outlined a Gandhian solution to India's problems. Inspired by Dayanand Saraswati, he fought the caste system tooth and nail. As a solution, he proposed inter-caste marriages, and that the government stop extending financial assistance to any educational institution which bears the name of a particular caste*

Map Connect
Places in News-India
Region in News

Shinku-La: The Union Cabinet gave its nod for the construction of the 4.1-km Shinku La tunnel on the Nimu-Padam-Darcha road link to provide all-weather connectivity to the border areas of Ladakh. Shinku-La Tunnel, also known as Shinkula Tunnel or Shingo-La Tunnel, is a planned motorable tunnel linking Himachal Pradesh's Lahaul Valley and Ladakh's Zanskar Valley in Northern India. It's part of BRO's Project Yojak It'd be the third route connecting Ladakh to the main place, following the Manali-Sarchu-Leh and Srinagar-Kargil-Leh highways.

Eastern Rajasthan River Link Project: The Union government has prepared a mega proposal to merge two projects — the Eastern Rajasthan Canal Project (ERCP) and the Parbati-Kalisindh-Chambal River Link

Thane: A rare low-altitude basalt plateau housing 76 species of plants and shrubs from 24 different families discovered in Thane region in the Western Ghats—one of the four global biodiversity hotspots in India, can prove to be a repository of information for species interactions. It can help study effects of climate change on species survival and increase awareness of the conservation needs of rock outcrops and their immense biodiversity value in the global context.

Yaya Tso (Ladakh): Yaya Tso lake is Ladakh's first biodiversity heritage site (BHS). Yaya Tso is a nesting habitat for a large number of birds and animals, such as the bar-headed goose, black-necked crane and Brahminy duck. it also has the distinction of being one of the highest breeding sites of the black-necked crane in India.

Khajuraho (Madhya Pradesh): The city will host the meeting of the G20 Culture Working Group. Khajuraho is internationally recognized for its rich architectural grandeur of the Western Group of temples that UNESCO recognizes as world heritage. The G20 CWG will advocate 'Culture for LiFE' – an environmentally conscious lifestyle as a campaign for sustainable living. Khajuraho temples were Built between 950-1050 AD by the Chandela Dynasty in Nagara-style architecture.

Dibang Valley (Arunachal Pradesh): Wildlife scientists and conservationists flagged threats to local biodiversity from the proposed Etalin hydroelectric (3,097 MW) project. The project involves the construction of concrete gravity dams on the Tangon and Dri rivers which are tributaries of Dibang river. falls under the "richest bio-geographical province of the Himalayan zone" and "one of the mega biodiversity hotspots of the world".

Vizag (Andhra Pradesh): Vizag will be the new capital of Andhra Pradesh. It is the only city in India which can boast two of the largest ports in the country. The city has several beaches, museums, temples, which have turned it into a tourist hotspot too. It is town where freedom fighter Alluri Sitaram Raju spent his early days.

Erode (Tamil Nadu): Bhavanisagar Dam and Reservoir also called Lower Bhavani Dam, is located on the Bhavani River in Erode district. The dam feeds the Lower Bhavani Project Canal and is the second largest dam in Tamil Nadu. It is also the second biggest earthen dam in the World (First one in Russia).

Chennai (Tamil Nadu): Pen Monument offshore memorial to the late DMK patriarch M Karunanidhi. Located off Marina beach falls (360 m from Bay of Bengal) under Coastal Regulation Zones (CRZ) IA, II, and IVA, and requires clearance under Section 4(ii)(j) of the Union Environment Ministry's Coastal Regulation Zone Notification, 2011. The memorial in the shape of a pen represents his many contributions to Iyal (poetry and literature), Isai (music), and Naadagam (theatre), the three fundamental pillars of both ancient and contemporary Thamizh.
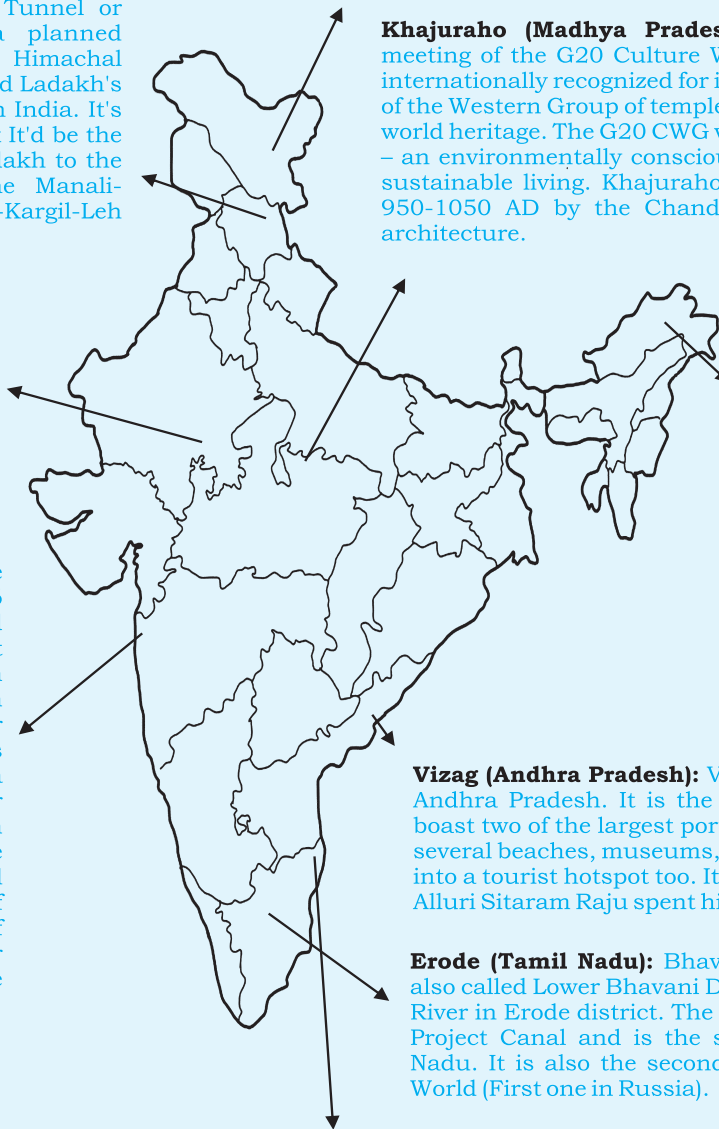
Mediterranean Sea

- The name "Mediterranean" comes from two Latin words "Medius" (Middle) and "Terra" (Earth as in soil). To the ancient Romans, the Mediterranean was the center of the Earth as they knew it.
- It is an intercontinental sea that stretches from the Atlantic Ocean on the west to Asia on the east and separates Europe from Africa
- To the west it is connected to the Atlantic Ocean through the Strait of Gibraltar, to the east with the Black Sea through the Dardanelles Straits, and to the south with the Red Sea through Suez Canal.
- Bordering Countries (22 countries): Spain, France, Monaco, Italy, Malta, Slovenia, Croatia, Bosnia and Herzegovina, Montenegro, Albania, Greece, Turkey, Cyprus, Syria, Lebanon, Israel, Palestine, Egypt, Libya, Tunisia, Algeria, and Morocco.
- A massive flood that occurred about 5.33 million years ago created what is now known as the Mediterranean Sea.
- Both the countries of Cyprus and Malta are located entirely within the Mediterranean.
- The two biggest islands located within the Mediterranean Sea (in terms of both size and population) are the Italian islands of Sicily and Sardinia.
- West to East arrangement of important seas of the island are: the Alboran Sea, the Balearic Sea, the Ligurian Sea, the Tyrrhenian Sea, the Ionian Sea, the Adriatic Sea, the Sea of Marmara, and the Aegean Sea.
- It has abnormally dark blue waters. The sea lacks many nutrients that lead to plant growth, meaning it appears darker than the average ocean waters and produces an instantly recognizable color.
- Nile river (Africa) drains into the Mediterranean Sea.

PLACES IN NEWS-WORLD

Odesa (Ukraine): The historic centre of the Ukrainian port city of Odesa has been designated an endangered World Heritage site by the United Nations cultural agency. Parts of Odesa were also added to the World Heritage in Danger list, which gives the city access to technical and financial assistance of UNESCO.

Tripoli (Lebanon): Rachid Karami International Fair in Lebanon's port city Tripoli has been added to the United Nations' list of world heritage sites in danger. the collection of structures on the 70-hectare plot is considered one of the keys works of 20th century modernism in the Middle East.

Brazil: The extreme right-wing supporters of former Brazilian President Jair Bolsonaro stormed the Presidential offices, the Supreme Court building, and the Federal Parliament in Brazil's capital, Brasilia, in a copycat replication of the events of January 6, 2021, in Washington, DC.
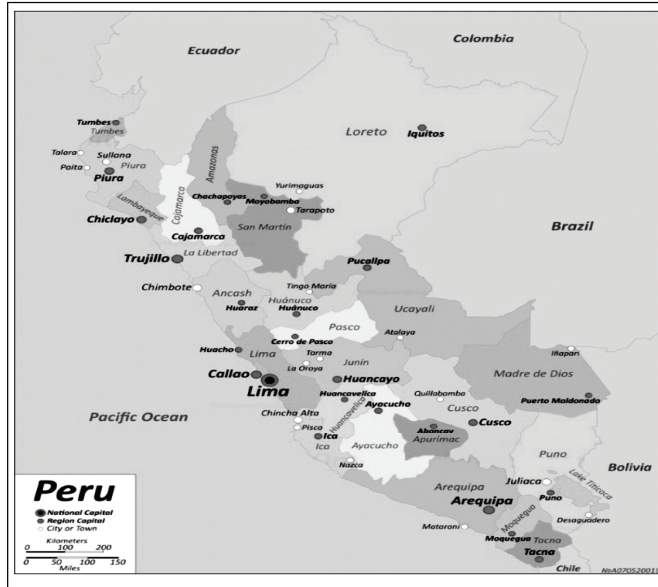
Peru: The President in Peru has been unceremoniously removed from office before he could complete his term, the fourth to be removed in the past two years. the Peruvian Congress, under the control of a right-wing opposition, voted its left-wing President, Pedro Castillo, out of office.

Marib (Yemen): The Landmarks of the ancient Yemeni Kingdom of Saba located in Marib governorate of Yemen is added into the UNESCO heritage site and World Heritage in Danger List. The Landmarks of the Ancient Kingdom of Saba, Marib, is a serial property comprising seven archaeological sites that bear witness to the rich Kingdom of Saba and its architectural, aesthetic and technological achievements from the 1st millennium BCE to the arrival of Islam around 630 CE. The Landmarks include Barran Temple or Throne of Belqees, Awam Temple, ancient city of Marib, Old Marib Dam, & Ancient City of Sirwah. The sight bear witness to the complex centralized administration of the Kingdom when it controlled much of the incense route across the Arabian Peninsula
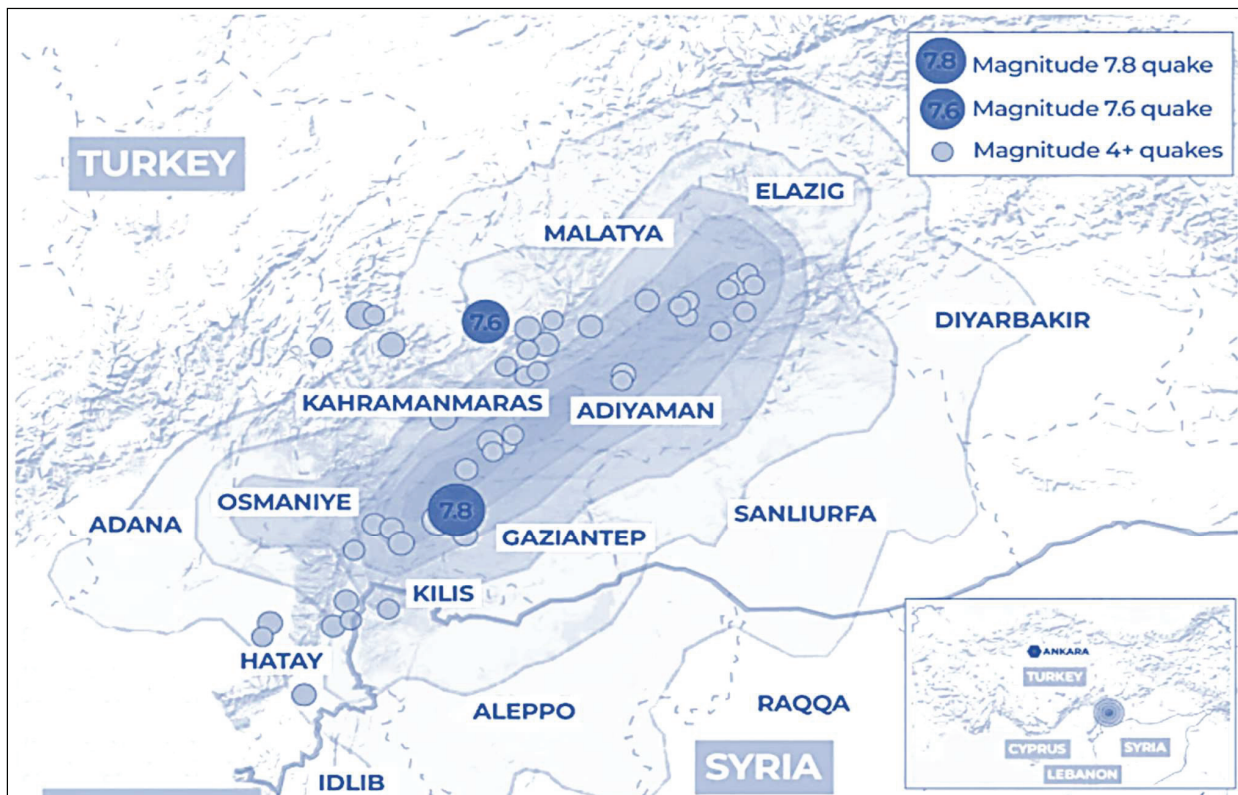
Turkey: A series of devastating earthquake hit the border area of Turkey and Syria. Turkey is located on the Anatolian tectonic plate, which is wedged between the Eurasian and African plates. On the north side, the minor Arabian plate further restricts movement. One fault line — the North Anatolian fault (NAF) line, the meeting point of the Eurasian and Anatolian tectonic plates — is known to be "particularly devastating". Then there is the East Anatolian fault line, the tectonic boundary between the Anatolian Plate and the northward-moving Arabian Plate. It runs 650 kilometers from eastern Turkey and into the Mediterranean. In addition to this, the Aegean Sea Plate, located in the eastern Mediterranean Sea under southern Greece and western Turkey, is also a source of seismic activity in the region.

According to one estimate, almost 95% of the country's land mass is prone to earthquakes, while about a third of the country is at high risk, including the areas around the major cities of Istanbul and Izmir and the region of East Anatolia.

Data of the Month

The Data is based on the Survival of the Richest Report by Oxfam India for more analysis of the report- Refer to the Economy Section on the same topic.
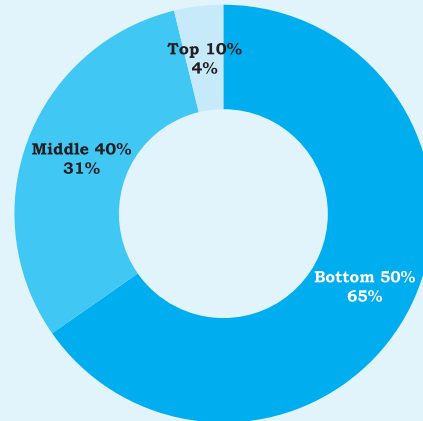
TOTAL % OF INCOME SPENT ON TAXES FOR FOOD AND NON-FOOD ITEMS PER ADULT
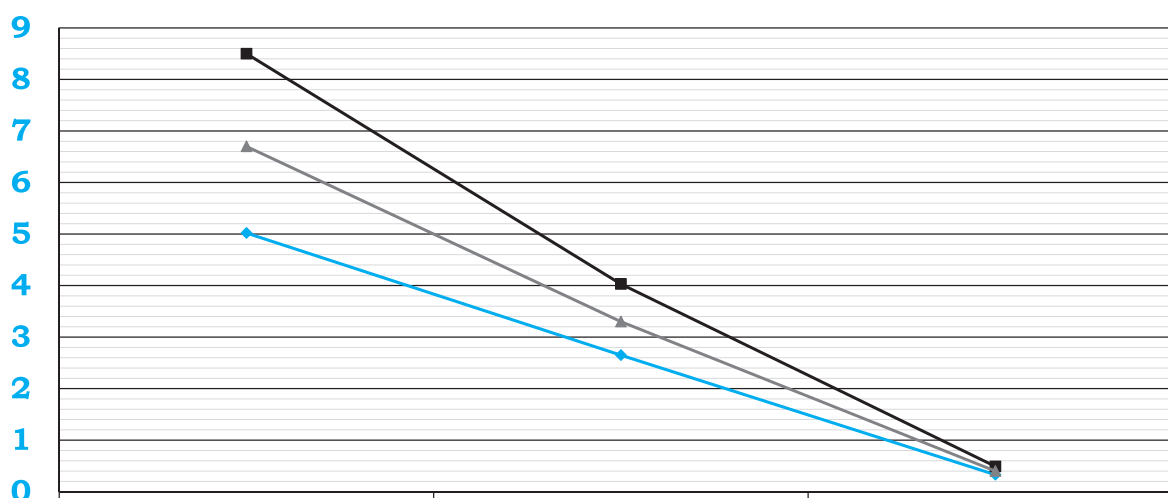
	Bottom 50%	Middle 40%	Top 10%
Urban	5.02	2.65	0.33
Rural	8.5	4.03	0.49
All India	6.7	3.3	0.4

Share of taxes for food and non-food items per wealth group (Urban)
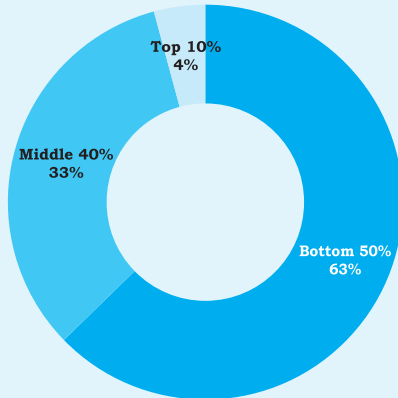
Top 10%
4%

Middle 40%
33%

Bottom 50%
63%

Share of taxes for food and non-food items per wealth group (Rural)

Top 10%
4%

Middle 40%
31%

Bottom 50%
65%

Share of taxes for food and non-food items per wealth group (All-India)

Top 10%
4%

Middle 40%
32%

Bottom 50%
64%
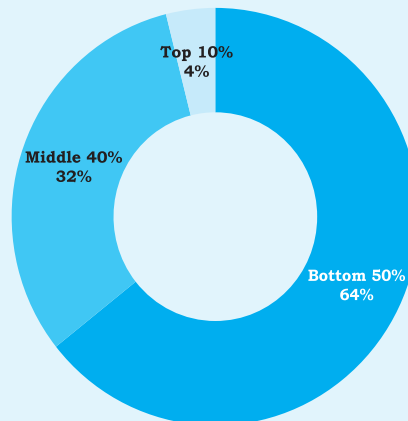
Thematic Essays

- Difficult Roads Lead to Beautiful Destinations
- The real peril of war lies not in military defeat. It lies in war itself.
- A genuine leader is not a searcher for consensus but a molder of consensus

SCAN THIS QR FOR MODEL APPROACH

CONCEPT CLEARING ASSIGNMENT

1. What do you understand by Embedded Finance? How it will help in revolutionizing banking sector in India?
2. What are the main objectives of Production Linked Incentive scheme (PLI)? Discuss its role and challenges in Economic growth of India.
3. Discuss the main objectives of World Economic Forum. How it has helped in public private cooperation around the world?
4. Discuss the strategic importance of India – Egypt relations in detail.
5. How will Critical and Emerging Technology (iCET) strengthen India US relationship? What are the challenges for India under iCET?
6. How has the pandemic impacted the primary education in India? Discuss in detail with reference to ASER Report 2022.
7. Discuss in detail the significance of Women's officers in Indian Army? How it will lead to women empowerment?
8. What is generative AI? What are ethical and legal issues regarding generative 4. How is the Governor appointed in a state? What are the discretionary powers of the Governor?
9. Discuss main provisions of the Protection of Children from Sexual Offences (POCSO) Act. How this act has led to the reduction in child marriages?
10. Discuss the evolution of the Basic structure doctrine? Which features of the Indian Constitution forms part of Basic Structure?
11. What was the philosophy of Swami Vivekananda? Discuss the relevance of his thoughts in today's world.
12. What are spy balloons? Discuss the concerns and challenges posed by spy balloons.
13. How is the Governor appointed in a state? What are the discretionary powers of the Governor?
14. Discuss main provisions of the Protection of Children from Sexual Offences (POCSO) Act. How this act has led to the reduction in child marriages?
15. Discuss the evolution of the Basic structure doctrine? Which features of the Indian Constitution forms part of Basic Structure?

PT ORIENTED QUESTIONS

1. **Consider the following statements regarding Joint Parliamentary Committees:**
   1. It is set up by the Parliament for the detailed scrutiny of a subject or Bill.
   2. It has fixed number of members.
   3. It can scrutinize documents and summon people for questioning.
   Which of the statements given above is/are correct?
   (a) 1 only   (b) 2 and 3 only
   (c) 1 and 3 only   (d) 1, 2 and 3

2. **Consider the following statements regarding Sickle Cell Anaemia Elimination Mission:**
   1. It aims to eliminate Sickle Cell Anaemia by 2030.
   2. It will work for awareness and screening of disease in the affected tribal areas.
   Which of the statements given above is/are correct?
   (a) 1 only   (b) 2 only
   (c) Both 1 and 2   (d) Neither 1 nor 2

3. **Consider the following statements regarding particularly vulnerable tribal groups (PVTGs):**
   1. These are tribal communities with declining or stagnant population.

   2. These tribal communities have been identified in three Union Territory.
   Which of the statements given above is/are correct?
   (a) 1 only   (b) 2 only
   (c) Both 1 and 2   (d) Neither 1 nor 2

4. **Which of the following statements is incorrect regarding Zomi tribe?**
   (a) These are Tibeto-Burman people.
   (b) These are spread over the areas of Jammu, Uttarakhand and Himanchal Pradesh.
   (c) Gante and Kom tribes are included in the Zomi council of Zomi tribes.
   (d) They speak the Chin-Kuki language.

5. **With reference to Circuit Breaker, consider the following statements:**
   1. They are triggered to prevent markets from crashing due to a panic-induced sale of stocks.
   2. They temporarily halt trading and stop the sell-off.
   3. Circuit breaker system applies at two stages of the index movement i.e., 10 % and 20 %.
   Which of the statements given above is/are correct?
   (a) 1 only   (b) 1 and 2 only
   (c) 1 and 3 only   (d) 1, 2 and 3

Page 97

www.ksgindia.com
DELHI VN: 9717380832 & **DELHI ORN:** 9811293743 | **JAIPUR:** 8290800441 | **PATNA:** 7463950774| **RANCHI:** 9939982007 | **BHOPAL:** 7509975361|
INDORE: 7314977441 | **BENGALURU:** 7619166663 | **HYDERABAD:** 79960 66663 | **IMPHA:** 9650245599 | **SRINAGAR:** 98712 35599| **MUMBAI:** 98712 65599|
facebook.com/ksgias | instagram.com/ksgias | t.me/ksgias | youtube.com/ksg_ias | twitter.com/ksg_ias

6. **Which of the following Committee is associated with the initiation of Pravasi Bhartiya Divas?**
   (a) Dhanuka Committee
   (b) C. Babu Rajiv Committee
   (c) Chandra Shekhar Committee
   (d) LM Singhvi committee

7. **Consider the following countries:**
   1. Switzerland
   2. Austria
   3. Finland
   4. Egypt
   5. Italy
   Which of the following are not part of Paris Club?
   (a) 1, 2 and 3 only
   (b) 2, 3 and 5 only
   (c) 1, 2, 3 and 5 only
   (d) 1, 2 ,3, 4 and 5

8. **Which of the following statement is incorrect regarding Short Selling?**
   (a) It is based on the "buy low, sell high" approach
   (b) The sequence of transactions is reversed to sell high first and buy low later.
   (c) It is a trading strategy based on the expectation that the price of the security will fall.
   (d) The trader usually owns the securities he sells and borrows them.

9. **Consider the following statements regarding Loan-Loss Provision:**
   1. Stage 1 assets the interest revenue is calculated on the gross carrying amount of the asset.
   2. Stage 2 and Stage 3 assets the interest revenue is calculated on the net carrying amount.
   Which of the statements given above is/are correct?
   (a) 1 only
   (b) 2 only
   (c) Both 1 and 2
   (d) Neither 1 nor 2

10. **Consider the following statements:**
    1. A debt/equity swap transaction the debts of a company are exchanged for something of value, namely, equity.
    2. Debt/equity swaps involve the exchange of equity for debt to write off money owed to creditors.
    Which of the statements given above is/are correct?
    (a) 1 only
    (b) 2 only
    (c) Both 1 and 2
    (d) Neither 1 nor 2

11. **The Global Human Capital Report is published by which of the following organizations:**
    (a) World Bank
    (b) World Economic Forum
    (c) United Nations Development Programme
    (d) International Monetary Fund

12. **Which of the following are the objectives of Production Linked Incentive scheme?**
    1. Reduce India's dependence on imports
    2. Provide support to labour intensive sectors
    3. Increase employment ratio in India
    Select the correct answer using the code given below:
    (a) 1 only
    (b) 1 and 2 only
    (c) 2 and 3 only
    (d) 1, 2 and 3

13. **Which of the following forms part of the revenue budget?**
    1. Income Tax
    2. Defense Expenditure
    3. Loans by the government
    4. Pensions
    Select the correct answer using the code given below:
    (a) 1 and 2 only
    (b) 1, 2 and 4 only
    (c) 2, 3 and 4 only
    (d) 1, 2 and 3 only

14. **The Critical and Emerging Technology (iCET) is an initiative of which of the following countries?**
    (a) India-United Kingdom
    (b) India – Israel
    (c) India- United States of America
    (d) India- Japan

15. **Consider the following statements regarding Indo-Abrahamic Alliance:**
    1. It is the convergence of the Middle East with the Southern Asia together forming a Western Asian System.
    2. It is manifested through the formation of QUAD and promotion of the Abraham Accords and the Negev Forum.
    Which of the statements given above is/are correct?
    (a) 1 only
    (b) 2 only
    (c) Both 1 and 2
    (d) Neither 1 nor 2

16. **Consider the following statements regarding Indus Water Treaty:**
    1. India gets the right of unrestricted use over the Eastern rivers.
    2. Pakistan is entitled to unrestricted use of Western rivers.
    3. Under it, India got roughly 80 percent of the river system water while Pakistan got 20 percent.

Which of the statements given above is/are correct?
(a) 1 and 2 only   (b)   2 only
(c) 1 and 3 only   (d)   3 only

17. **Consider the following statements regarding Cancer:**
    1. It is a genetic disease.
    2. Human papillomavirus (HPV) and Hepatitis, are responsible for Cancer cases in low- and lower-middle-income countries.

    Which of the statements given above is/are correct?
    (a) 1 only   (b)   2 only
    (c) Both 1 and 2   (d)   Neither 1 nor 2

18. **Consider the following statements regarding Annual Status of Education Report ASER Report 2022:**
    1. It is the largest citizen-led survey in India
    2. It is a school-based survey.
    3. According to the report there has been an increase in the proportion of children availing private tuitions.

    Select the correct answer using the code given below:
    (a) 1 only   (b)   1 and 3 only
    (c) 2 and 3 only   (d)   1, 2 and 3

19. **Recently "PRASHAST Mobile App" has been launched by Indian government for:**
    (a) Tracking positions for safe travels
    (b) For easier communication by Army personnel
    (c) Monitoring the presence of teachers in primary schools
    (d) Pre-Assessment Holistic Screening Tool for schools

20. **Among the following crops, which one is the most important anthropogenic source of both methane and nitrous oxide? (2022)**
    (a) Cotton   (b)   Rice
    (c) Sugarcane   (d)   Wheat

21. **Which one of the following protected areas is well-known for the conservation of a sub-species of the Indian swamp deer (Barasingha) that thrives well on hard ground and is exclusively graminivorous?**
    (a) Kanha National Park
    (b) Manas National Park
    (c) Mudumalai Wildlife Sanctuary
    (d) Tal Chhaper Wildlife Sanctuary

22. **Consider the following statements: (2022)**
    1. "The Climate Group" is an international non-profit organization that drives climate action by building large networks and running them.

    2. The International Energy Agency in partnership with the Climate Group launched a global initiative "EP100".
    3. EP100 brings together leading companies committed to driving innovation in energy efficiency and increasing competitiveness while delivering on emission reduction goals.
    4. Some Indian companies are members of EP100.
    5. The International Energy Agency is the Secretariat to the "Under2 Coalition".

    Which of the statements given above are correct?
    (a) 1, 2, 4 and 5   (b) 1, 3 and 4 only
    (c) 2, 3 and 5 only   (d) 1, 2, 3, 4 and 5

23. **Consider the following statements: (2019)**
    1. Asiatic lion is naturally found in India only.
    2. Double-humped camel is naturally found in India only.
    3. One-horned rhinoceros is naturally found in India only.

    Which of the statements given above is/are correct?
    (a) 1 only   (b)   2 only
    (c) 1 and 3 only   (d)   1, 2 and 3

24. **Water can dissolve more substances than any other liquid because (2021)**
    (a) it is dipolar in nature
    (b) it is a good conductor of heat
    (c) it has high value of specific heat
    (d) it is an oxide of hydrogen

25. **Consider the following statements:**
    1. Natural immunity is acquired from exposure to the disease organism through infection with the actual disease.
    2. Vaccine-induced immunity is acquired through the introduction of a killed or weakened form of the disease organism through vaccination.

    Which of the statements given above is/are correct?
    (a) 1 only   (b)   2 only
    (c) Both 1 and 2   (d)   Neither 1 nor 2

26. **Recently "BharOS" a mobile operating system had been developed by which of the following institutions?**
    (a) IIT Madras
    (b) IISc Banagalore
    (c) IIT Bombay
    (d) IIT Kanpur

27. "Incovacc" world's first intranasal vaccine for COVID-19 has been developed by which of the following company?
    (a) Serum Institute of India (SII)
    (b) Dr Reddys Laboratories Limited
    (c) Bharat Biotech
    (d) National Institute of Virology (NIV)

28. Consider the following statements regarding NISAR:
    1. It is a combination of NASA-ISRO-SAR (Synthetic Aperture Radar).
    2. It will be used to measure changes in the surface of the Earth.
    3. SAR can produce high-resolution images during day time only.
    Which of the statements given above is/are correct?
    (a) 1 only
    (b) 1 and 2 only
    (c) 2 and 3 only
    (d) 1, 2 and 3

29. Consider the following statements regarding Muons:
    1. These are subatomic particles raining from space.
    2. These particles resemble protons.

3. These are created due to the collision of particles in Earth's atmosphere with cosmic rays.
Which of the statements given above is/are correct?
(a) 1 only
(b) 1 and 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

30. Consider the following statements regarding the Wildlife Protection act (WPA)
    1. WPA was amended in 2002 and banned the sale of captive elephants which were not registered with the Chief Wildlife Warden of the State.
    2. If an elephant is owned without being declared, the Forest Department has the authority to cease the elephant on the grounds of illegal ownership.
    3. Section 9 of the Wildlife Protection Act, 1972 talks about the prohibition of hunting of the animals listed under Schedule I, II, III, IV.
    Which of the statements given above are correct?
    (a) 1 and 2 only
    (b) 1 and 3 only
    (c) 2 and 3 only
    (d) 1, 2 and 3

Answer Key

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

FEEDBACK FORUM