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UPSC MONTHLY CURRENT AFFAIRS
JANUARY 2023

JANUARY 2023 CURRENT AFFAIRS

1.INDIAN POLITY

1.1	Project 39A	1
1.2	The New Integrated Food security Scheme	2
1.3	Article 19 of the Indian Constitution	4
1.4	Aspirational Block Programme	6
1.5	Delegated Legislation	8
1.6	Monument Mitra Project	10
1.7	Human Rights Watch report	12
1.8	Open Market Sale Scheme	14
1.9	SC on Passive Euthanasia	15
1.10	Competition Commission of India	18
1.11	National Commission for Protection of Child Rights	19
1.12	Annual Status of Education Report (ASER)	22

2.INDIAN ECONOMY

2.1	Co-location Scam	25
2.2	Air Suvidha System	26
2.3	Mali Parbat Bauxite mine	27
2.4	Manipur's Heimang	28
2.5	Alternate Investment Fund and Credit Default Swap	29
2.6	RBI's Contingency fund	30

3.INTERNATIONAL RELATIONS

3.1	Arab Spring	31
3.2	Y20 Summit	32
3.3	World Economic Forum	33
3.4	United Nations Institute for Water, Environment	34

4.INDIAN HISTORY AND CULTURE

4.1	Sarsa Rivulet	36
4.2	Mural Art	37
4.3	Fatima Sheikh	39
4.4	Ottanthullal	40
4.5	Banjaras and Hakku Patra	41
4.6	Purana Qila	42
4.7	Puri Jagannath Temple	43

5.GEOGRAPHY

5.1	Schengen Zone	45
5.2	Siachen Glacier	45
5.3	Chilka lake	46

6.ENVIRONMENT

6.1	Black Carbon	48
6.2	Green Urban Oasis Programme	48
6.3	Silent Valley National Park	49
6.4	Sustainable Aquaculture In Mangrove Ecosystem (SAIME)	50
6.5	Deepor Beel	51
6.6	Simlipal National Park	52
6.7	Kelp forests	53
6.8	Water Hyacinth	54
6.9	Asiatic Golden Cat	55
6.10	Living Root bridges of Meghalaya	56
6.11	Yangtze Finless porpoise	57

7.SCIENCE AND TECHNOLOGY

7.1	Transfats	59
7.2	Immune Imprinting	60
7.3	Exoplanets	61
7.4	Shukrayaan I	61
7.5	Local Bubble	63
7.6	Quantum Supremacy	63

1.POLITY AND GOVERNANCE

1.1 Project 39A

News:

Project 39A Report on Death Penalty

Background:

- The Supreme Court of India has initiated a review of the process for awarding death penalty while expressing concern over the manner in which trial courts and High Courts carry out sentencing with little relevant information.
- Despite the high number of death sentences in trial courts, very few death sentences are upheld by higher courts.
- The 1980 framework in Bachan Singh's case outlines the guidelines for judges to choose between life imprisonment and death penalty, considering both the crime and accused, with life imprisonment as default.
- However, there has been widespread concern that imposition of death sentences has been arbitrary, inconsistent and crime-cantered.
- The Supreme Court aims to correct errors and ensure comprehensive sentencing information for judges in death penalty cases.

Major findings of the Report:

- With 165 death sentences at the end of 2022, this is the highest number of death sentences imposed in a year in over two decades (since 2000).
- This shift has been sharply influenced by the extraordinary sentencing of 38 persons to death in Ahmedabad in a single bomb blast case, representing the largest number of persons sentenced to death in a single case since 2016.

- There are 539 prisoners on death row, a 40% increase since 2015 owing to an increased number of death sentences imposed by trial courts with fewer cases being heard in appeal by higher courts.
- In the past one-year, High Courts across India decided 68 matters, while the Supreme Court decided 11 matters.
- Of the 68 cases decided by the high courts, only four death sentences were confirmed, while 40 accused in 19 cases were acquitted, 51 accused in 39 cases were handed lesser sentences, and six cases were referred back to trial courts.
- Even when death sentences are commuted, they have increasingly resulted in the imposition of life imprisonment without remission.
- Placing convict sentences beyond the scope of executive remission raises concerns with the focus of the prison system on reformation and rehabilitation.
- Cases of sexual violence continue to dominate the imposition of death penalty, with such cases constituting over half of the total death sentences imposed by trial courts in 2022.
- Most death row prisoners are economically vulnerable and have poor legal representation leading to a lack of mitigation information.
- Judges often dismiss mitigating factors and there is no real guidance on assigning weight to aggravating and mitigating factors i.e., individual's circumstances of the accused taken into account in determining punishment.

1.2 The New Integrated Food security Scheme

News:

- The Central Government of India recently announced the launch of a new integrated food security scheme, which will provide free food grains to 81.35 crore beneficiaries under the National Food Security Act (NFSA) for the year 2023.

Objectives of the Scheme

- According to the Ministry of Consumer Affairs, the government has a social and legal commitment to ensuring that the people of India have access to food and nutritional security, through the availability of quality food grains.
- The new scheme aims to ensure effective and uniform implementation of the National Food Security Act, and to provide accessibility, affordability, and availability of food grains for the poor.
- It will also enable uniform implementation of portability under the “One Nation One Ration Card” program, which allows ration cards to be used anywhere in the country.

Beneficiaries of the Scheme

- Under the scheme, the government will provide free food grains to all NFSA beneficiaries, including Antyodaya Ann Yojana households and Priority Household persons, for one year through the network of 5.33 lakh fair price shops across the country.
- The food grains will be distributed through the widespread network of over five lakh Fair Price Shops across the country.

Implementation of the Scheme

- The new integrated scheme will subsume two current food subsidy schemes of the Department of Food and Public Distribution (DFPD): the food subsidy to the

Food Corporation of India (FCI) for the NFSA, and sops for decentralized procurement states, which deal with the procurement, allocation, and delivery of free food grains under the NFSA.

- In order to implement the scheme, the Secretary of DFPD held a meeting with all state food secretaries on December 29, 2022, during which issues related to the distribution of free food grains were discussed, including technical resolutions. All states and Union Territories assured to implement the free food grain scheme from January 1, 2023.
- The government has also issued an order to all general managers of the FCI to visit three ration shops every day in different areas of their jurisdiction from January 1 until January 7, and to submit a report to the DFPD nodal officer on a daily basis for review and corrective action.
- In view of the free food grains, an advisory has been issued to the states and Union Territories on the mechanism for providing a dealer's margin for distributing food grains to beneficiaries, as well as on the status of the implementation of the scheme.

1.3 Article 19 of the Indian Constitution

- By ruling that a citizen can seek enforcement of the fundamental rights to freedom of speech not just against the state, the Supreme Court has, effectively, extended the ground for seeking these rights against other citizens.

About Article 19:

Article 19(1) of the Constitution of India guarantees six fundamental freedoms to every citizen of India, namely:



- Freedom of speech and expression;
- Freedom to assemble peacefully and without arms;
- Freedom to form associations, unions or co-operative societies;
- Freedom to move freely throughout the territory of India;
- Freedom to reside and settle in any part of the territory of India, and
- Freedom to practice any profession, or to carry on any occupation, trade or business.

Importance of Article 19

- This freedom is essential because the censorial power lies in the people over and against the Government and not in the Government over and against the people.
- The freedom of speech and expression is required to fulfil the following objectives:
 - To discover truth
 - Non self-fulfilment
 - Democratic value
 - To ensure pluralism

Reasonable Restrictions under Article 19:

The State can impose restrictions on the freedom of speech and expression in the interests of

- Sovereignty And Integrity Of India,
- The Security Of The State,
- Friendly Relations With Foreign States,
- Public Order, Decency Or Morality, Or
- In Relation To Contempt Of Court,
- Defamation, Or
- Incitement To An Offence.

1.4 Aspirational Block Programme

Recently, Aspirational Blocks Programme (ABP) has been launched during the 2nd National Conference of Chief Secretaries held from 5th January to 7th January, 2022.

What is Aspirational Blocks Programme?

- It is a development initiative aimed at improving the performance of areas that are lagging on various development parameters.
- It was announced in the Union Budget 2022-23.
- It will initially cover 500 districts across 31 states and Union Territories, with over half of these blocks located in six states – Uttar Pradesh, Bihar, Madhya Pradesh, Jharkhand, Odisha and West Bengal.
- The ABP is based on the Aspirational District Programme (ADP).

About:

- It was launched in 2018 which aims to transform districts that have shown relatively lesser progress in key social areas.
- Aspirational Districts are those districts in India, that are affected by poor socio-economic indicators.
- It covers 112 districts across the country.
- At Government of India level, programme is anchored by NITI Aayog. In addition, individual Ministries have assumed responsibility to drive progress of districts.

Broad Contours of the Programme:

- Convergence (of Central & State Schemes)
- Collaboration (of Central, State level ‘Prabhari’ Officers & District Collectors),
- Competition among districts through monthly delta ranking.
- The delta ranking of the Aspirational Districts combines the innovative use of data with pragmatic administration, keeping the district at the locus of inclusive development.

Objectives:

- It focuses on the strength of each district, identifying low-hanging fruits for immediate improvement and measuring progress by ranking districts on a monthly basis.
- Districts are prodded and encouraged to first catch up with the best district within their state, and subsequently aspire to become one of the best in the country, by competing with, and learning from others in the spirit of competitive & cooperative federalism.

- The Government is committed to raising the living standards of its citizens and ensuring inclusive growth for all – “Sabka Saath Sabka Vikas aur Sabka Vishwas”.
- The ADP is essentially aimed at localizing Sustainable Development Goals, leading to the progress of the nation.

Parameters for Ranking:

The ranking is based on the incremental progress made across 49 Key Performance Indicators (KPIs) under 5 broad socio-economic themes -

1. Health & Nutrition (30%)
2. Education (30%)
3. Agriculture & Water Resources (20%)
4. Financial Inclusion & Skill Development (10%)
5. Infrastructure (10%)

1.5 Delegated Legislation

News:

Recently, the majority ruling of the Supreme Court upheld the validity of the delegated legislation in the Centre’s 2016 decision on demonetisation.

What is Delegated Legislation?

About:

Since the Parliament cannot deal with every aspect of the governance system by themselves, they delegate these functions to the authorities established by law. This delegation is noted in statutes, commonly called delegated legislations.

E.g. - Regulations and by-laws (law made by a local authority which applies only in its area) under legislations.

SC's View on Delegated Legislation:

- The SC in *Hamdard Dawakhana v Union of India* (1959) case struck down delegation of powers on the grounds that it was vague.
- It held that the Centre's power of specifying diseases and conditions under Drug and Magic Remedies (Objectionable Advertisements) Act 1954 is 'uncanalised', 'uncontrolled', and going beyond the permissible boundaries of valid delegation. Hence, the same was deemed unconstitutional.
- The Supreme Court in a 1973 ruling held that the concept of delegated legislation has evolved out of practical necessity and pragmatic needs of a modern welfare State.

What is the Significance and Criticism of Delegated Legislation?

Significance:

- It allows flexibility and adaptability in the law-making process. By delegating certain powers, the legislature can respond more quickly and efficiently to changing circumstances and emerging issues.
- Delegated authorities with extra skills, experience, and knowledge (in fields like technology, environment etc. where the Parliament may not always have an expertise) are more suitable for making law.

Criticism:

- It can lead to a lack of accountability/transparency in the law-making process as laws made by executive agencies/administrative bodies are not subjected to the same level of public scrutiny and debate as laws made by legislature.
- Additionally, it can also lead to a concentration of power in the executive and administrative branches of government, which may undermine the principle of separation of powers.
- However, certain types of delegated legislation, such as ordinances must be approved by the legislature.

1.6 Monument Mitra Project

The Monument Mitra scheme, which entails adopting a heritage site and maintaining it, will soon be revamped to enable private firms, to partner for the upkeep of 1,000 ASI monuments.

About Project:



- It aims at ensuring quality and inclusive provision of amenities and facilities across heritage, natural, and tourist sites through active participation of private and public sector organizations and individuals.
- These organizations would be known as “Monument Mitras” for their collaboration initiative.
- This project is envisioned to fulfill the objective of the Government of India to provide an enhanced tourism experience to all travelers.
- The project plans to entrust development, upgradation and maintenance of amenities and facilities at the heritage, natural and tourist sites to the Monument Mitras, coupled with innovation and technology interventions to increase awareness of these incredible treasures.
- The project began with 93 ASI monuments and has extended to heritage, natural and tourist sites across India.
- This revised scheme will be led by the culture ministry.
- The previous scheme was led by the tourism ministry.

The monuments are separated into three categories depending on tourist footfall and visibility:

Green:

- Iconic sites like the Taj Mahal, Qutub Minar, and Red Fort, among others, are categorized as ‘Green’.

Blue:

- while Purana Quila and Jantar Mantar fall in the ‘Blue’ category.

Orange:

- The Sanchi Stupa is one popular site in the ‘Orange’ category.
- Entities are encouraged to adopt from the Blue and Orange category, or a mix of the three.
- Adoption of only ‘Green’ category monuments is not allowed.

1.7 Human Rights Watchreport

News:

Recently, the Human Rights Watch in its World Report 2023 (33rd edition) said that Indian authorities had “intensified and broadened” their crackdown on activist groups and the media throughout year 2022.

It also claimed that the current Central ruling party used abusive and discriminatory policies to repress minorities.

What are Human Rights?

- Human Rights are rights inherent to all human beings, regardless of race, sex, nationality, ethnicity, language, religion, or any other status.
- These include the right to life and liberty, freedom from slavery and torture, freedom of opinion and expression, the right to work and education, and many more.
- The National Human Right Commission (NHRC) of India defines Human Rights as rights relating to life, liberty, equality and dignity of the individual guaranteed by the Constitution or embodied in the International Covenants and enforceable by courts in India.

What is the Human Rights Watch?

- Human Rights Watch (HRW) is an international non-governmental organisation founded in 1978 as “Helsinki Watch,” initially aimed at investigating rights abuses in countries that signed the Helsinki Accords.
- Currently, its ambit has expanded to about 100 countries worldwide.
- It is headquartered in New York City.
- Helsinki Accords (1975) was a major diplomatic agreement signed in Helsinki, Finland, at the conclusion of the first Conference on Security and Co-operation in Europe (now Organization for Security and Co-operation in Europe).
- Primarily an effort to reduce tension between the Soviet and Western blocs, they were signed by all the countries of Europe, the US and Canada.
- The agreement made the 35 signatory nations pledge to respect human rights and fundamental freedoms.

What are the World Report 2023’s Findings about India?

Violation of Human Rights by Government:

- The report found the Central govt. promoting Hindu majoritarian ideology, provoking authorities and supporters to engage in discriminatory and at times violent actions against religious minorities.
- It highlighted the government’s discriminatory stance toward minority communities in cases of violence against women (release of Bilkis Bano rape convicts).
- Even after 3 years of removal of Article 370 and subsequent creation of two UTs (J&K and Ladakh), “the government continued to restrict free expression and peaceful assembly” in the two UTs.

- Authorities also invoked the J&K Public Safety Act and Unlawful Activities Prevention Act (UAPA), 1967 to “arbitrarily” detain journalists and activists.
- It also referred to suspected militant attacks on minority Hindu and Sikh communities in the Kashmir Valley.

Welcoming of Various SC Rulings:

- HRW appreciated the increasingly liberal steps taken by the Supreme Court of India such as the ruling to halt all use of the colonial-era Sedition law.
- It also referred to the SC’s ruling on extending abortion rights to all women regardless of marital status and widening the definition of a family to include same-sex couples, single parents, and other households.
- It also took note of the SC’s banning of the two-finger tests in a step to protect survivors of sexual assault.
- However, the SC did not reach a verdict on the rights of Muslim female students of wearing a hijab in educational institutions.

1.8 Open Market Sale Scheme

News:

The Food Corporation of India (FCI) will off load 30 LMT wheat from the Central pool stock to the market through various routes under the Open Market Sale Scheme (Domestic).

Wheat will also be offered to State Governments/UTs for their schemes without e-auction.

What is an Open Market Sale Scheme (OMSS)?

- FCI sells surplus stocks of wheat and rice at predetermined prices through e-auction in the open market from time to time to enhance the supply of food grains.
- The purpose of OMSS is to dispose of surplus stocks of wheat and rice held by FCI, and to regulate the prices of wheat in the open market.
- FCI conducts weekly auctions for the OMSS for wheat on the platform of the National Commodity and Derivatives Exchange Limited (NCDEX).
- NCDEX is a commodity exchange platform in India that provides a platform for trading in various agricultural and other commodities.

1.9 SC on Passive Euthanasia

News:

Recently, Honourable Supreme Court agreed to ease the procedure for passive euthanasia in the country

About

- A five-judge Constitution bench headed by Justice KM Joseph agrees to significantly ease the procedure for passive euthanasia in the country.
- As per new guidelines, the document will now be signed by the executor of the "living will" in the presence of two attesting witnesses, preferably independent, and attested before a notary or Gazetted Officer.
- Previously in 2018, the SC had in its judgment recognized that a terminally ill patient or a person in a persistent vegetative state may execute an advance medical directive or a "living will" to refuse medical treatment, holding the right to live with dignity also included "smoothening" the process of dying.

What is Euthanasia?

- Euthanasia is the act of deliberately ending a person's life to eliminate pain or suffering

Passive euthanasia

- It is defined as intentionally letting a patient die by withholding artificial life support such as a ventilator or a feeding tube
- This can include removing a patient from life support or not providing treatment for a terminal illness.
- Passive euthanasia is legal in some countries, including India, under certain circumstances and with proper consent.

Significance

- **End of Pain:** Euthanasia provides a way to relieve the intolerably extreme pain and suffering of an individual. It relieves the terminally ill people from a lingering death.
- **Respecting Person's Choice:** The essence of human life is to live a dignified life and to force the person to live in an undignified way is against the person's choice. Thus, it expresses the choice of a person which is a fundamental principle.
- **Treatment for others:** In many developing and underdeveloped countries like India, there is a lack of funds. There is a shortage of hospital space. So, the energy of doctors and hospital beds can be used for those people whose life can be saved instead of continuing the life of those who want to die.
- **Dignified Death:** Article 21 of the Indian Constitution clearly provides for living with dignity. A person has a right to live a life with at least minimum dignity and

if that standard is falling below that minimum level then a person should be given a right to end his life.

- Addressing Mental Agony: The motive behind this is to help rather than harm. It not only relieves the unbearable pain of a patient but also relieves the relatives of a patient from the mental agony.

Issues

- Medical Ethics: Medical ethics call for nursing, caregiving and healing and not ending the life of the patient. In the present time, medical science is advancing at a great pace making even the most incurable diseases curable today. Thus, instead of encouraging a patient to end his life, the medical practitioners have to encourage the patients to lead their painful life with strength.
- Moral Wrong: Taking a life is morally and ethically wrong. The value of life can never be undermined.
- Vulnerable people will become more prone to it: Groups that represent disabled people are against the legalisation of euthanasia on the ground that such groups of vulnerable people would feel obliged to opt for euthanasia as they may see themselves as a burden to society.
- Suicide v/s Euthanasia: When suicide is not allowed then euthanasia should also not be allowed. A person commits suicide when he goes into a state of depression and has no hope from the life. Similar is the situation when a person asks for euthanasia. But such a tendency can be lessened by proper care of such patients and showing hope in them.

1.10 Competition Commission of India

- Google has said that the order passed by India's competition regulator — the Competition Commission of India (CCI) — against Android's operating system policies will result in devices getting expensive in India and lead to proliferation of unchecked apps that will pose threats for individual and national security.

About Competition Commission of India:

- The Competition Commission of India has been established to enforce the competition law under the Competition Act, 2002.
- It comes under the Ministry of Corporate Affairs.
- It should be noted that on the recommendations of Raghavan committee, the Monopolies and Restrictive Trade Practices Act, 1969 (MRTP Act) was repealed and replaced by the Competition Act, 2002.
- The Commission consists of a Chairperson and not more than 6 Members appointed by the Central Government.
- It is the statutory duty of the Commission to eliminate practices having an adverse effect on competition, promote and sustain competition, protect the interests of consumers and ensure freedom of trade carried on by other participants, in markets in India as provided in the Preamble as well as Section 18 of the Act.
- The Commission is also mandated to give its opinion on competition issues to government or statutory authority and to undertake competition advocacy for creating awareness of competition law.
- Advocacy is at the core of effective competition regulation.

- Competition Commission of India (CCI), which has been entrusted with implementation of law, has always believed in complementing robust enforcement with facilitative advocacy.
- It is a quasi-judicial body.
- CCI also approves combination under the act so that two merging entities do not overtake the market.

The Competition Act

- The Competition Act, 2002, as amended by the Competition (Amendment) Act, 2007, follows the philosophy of modern competition laws.
- The Act prohibits anti-competitive agreements, abuse of dominant position by enterprises and regulates combinations (acquisition, acquiring of control and M&A), which causes or likely to cause an appreciable adverse effect on competition within India.

1.11 National Commission for Protection of Child Rights

News:

The National Commission for Protection of Child Rights (NCPCR) celebrated its 18th Foundation Day on 12th January 2023.

National Commission for Protection of Child Rights:

- The National Commission for Protection of Child Rights (NCPCR) is a statutory body established under the Commission for Protection of Child Rights (CPCR) Act, 2005.



- It is under the administrative control of the Ministry of Women and Child Development.
- Under the act, a Child is defined as a person in the 0 to 18 years age group.
- It aims to ensure that all Laws, Policies, Programmes, and Administrative Mechanisms are in harmony with the Child Rights perspective as enshrined in the Constitution of India and also the UN Convention on the Rights of the Child.
- Composition: This commission has a chairperson and six members of which at least two should be women.
- All of them are appointed by the Central Government for 3 years.
- The maximum age to serve in the commission is 65 years for Chairman and 60 years for members.
- The salary and allowances payable to, and other terms and conditions of service of, the Chairperson and Members, shall be such as may be prescribed by the Central Government.

Functions of the National Commission for Protection of Child Rights;

- Examine and review the safeguards provided for the protection of child rights and recommend measures for their effective implementation.

- Inquire into child rights violations and recommend initiating proceedings in such cases.
- Examine all factors that curb the enjoyment of rights of children affected by terrorism, communal violence, riots, natural disaster, domestic violence, HIV/AIDS, trafficking, maltreatment, torture and exploitation, pornography and prostitution and recommend appropriate remedial measures.
- Look into the matters relating to the children in need of special care and protection including children in distress, marginalized and disadvantaged children, children without families and children of prisoners and recommend appropriate remedial measures.
- Study treaties and other international instruments and undertake periodical reviews of existing policies, programs and other activities on child rights and make recommendations for their effective implementation in the best interest of children.
- Undertake and promote research in the field of child rights.
- Spread child rights literacy among various sections of society and promote awareness of the safeguards available for the protection of these rights through publications, the media, seminars and other available means.
- Inspect or cause to be inspected any juvenile's custodial home, or any other place of residence or institution meant for children, under the control of the Central Government or any State Government or any other authority.
- Inquire into complaints and take suo moto notice of matters relating to:
 - Deprivation and violation of child rights.
 - Non-implementation of laws providing for the protection and development of children.

- Non-compliance with policy decisions, guidelines or instructions aimed at mitigating hardships and ensuring the welfare of the children and providing relief to such children.
- Such other functions may consider necessary for the promotion of Child Rights.
- The Commission shall not enquire into any matter pending before a State Commission or any other Commission duly constituted under any law for the time being in force.
- Present an annual report to the Central Government and at such other intervals as the Commission may deem fit.
- Compile and analyze data on children.

1.12 Annual Status of Education Report (ASER)

Why in News?

Recently, the 17th Annual Status of Education Report (ASER) 2022 was released by NGO Pratham, which highlights the impact of the pandemic on education.

The report unveils high enrolment of children in schools which is a good performance indicator for government programmes like Nipun Bharat Mission.

What is ASER?

- The ASER, is an annual, citizen-led household survey that aims to understand whether children in rural India are enrolled in school and whether they are learning.
- ASER has been conducted every year since 2005 in all rural districts of India. It is the largest citizen-led survey in India.

- ASER surveys provided representative estimates of the enrolment status of children aged 3-16 and the basic reading and arithmetic levels of children aged 5-16 at the national, state and district level.

Findings of the Report

1. Enrollment in Government Schools:

According to the ASER, 2022 the country has seen an increase in the enrollment of children in government schools.

2. Basic Reading and Arithmetic Skills:

There has been a decline in the basic reading and arithmetic skills of young children in Class 3 and Class 5 in India.

3. Proportion of Girls not Enrolled:

The decrease in the proportion of girls not enrolled in schools for the age group 11-14 from 4.1% in 2018 to 2% in 2022 is a significant improvement and a positive development.

This indicates that efforts to promote gender equality in education have been effective and have helped to increase the enrollment of girls in schools.

1.13 Advance Authorization Scheme (AAS)

News

Recently, the Directorate General of Foreign Trade (DGFT) simplified the process of Levying Composition fees in case of extension of the Export Obligation Period under the Advance Authorisation Scheme (AAS).

About Advance Authorization Scheme:

- It allows duty free import of inputs, which are physically incorporated in an export product.
- In addition to any inputs, packaging material, fuel, oil, catalyst which is consumed utilized in the process of production of export product, is also be allowed.
- The quantity of inputs allowed for a given product is based on specific norms defined for that export product, which considers the wastage generated in the manufacturing process.
- DGFT provides a sector-wise list of Standard Input-Output Norms (SION) under which the exporters may choose to apply.
- Alternatively, exporters may apply for their own ad-hoc norms in cases where the SION does not suit the exporter.
- Advance Authorisation covers manufacturer exporters or merchant exporters tied to supporting manufacturer(s).
- About Directorate General of Foreign Trade:
- Directorate General of Foreign Trade (DGFT) Organization is an attached office of the Ministry of Commerce and Industry and is headed by Director General of Foreign Trade.
- Headquarters at New Delhi.
- It is responsible for implementing the Foreign Trade Policy with the main objective of promoting India's exports.

2.INDIAN ECONOMY

2.1 Co-location Scam

News:

The Securities and Exchange Board of India (SEBI) will challenge the order of the Securities Appellate Tribunal (SAT), against the National Stock Exchange (NSE) by the market regulator in the co-location scam.

Context:

What is co-location?

- In 2009, the NSE started to offer co-location services to members of the exchange.
- Co-location allows a member to set up his server in a specifically earmarked data centre within the NSE's exchange premises for a certain price.
- And even though this data centre is located in a different wing from the exchange's trading systems, the relative proximity allows members wishing to gain access to the entirety of buy and sell orders sent to the exchange by market participants, or tick-by-tick data, a headstart of a few microseconds or nanoseconds.

What is the controversy?

- Co-location per se is not illegal. Stock exchanges across the world allow the practice to flourish as a paid service. The SEBI, in fact, had allowed exchanges to offer co-location in 2008.

- However, a whistleblower in 2015 alleged that some exchange members were able to manipulate NSE's co-location services to their own benefit with the support of certain officials in NSE's IT department.

2.2 Air Suvidha System

News:

Union Health Minister Dr. Mansukh Mandaviya reviewed Air Suvidha system and RT-PCR testing facilities for international passengers at the Indira Gandhi International Airport, New Delhi.

What was the Air Suvidha requirement?



- The portal was launched in August 2020
- International passengers had to mandatorily submit details of their journey and Covid vaccination or testing status on this portal.
- The pre-arrival self-registration portal also enabled authorities to ascertain whether a person was arriving from a high-risk region.
- When the Omicron variant of Covid-19 spread, the Union Health Ministry mandated submitting details on the portal, including passengers' 14 day travel

history and negative RT-PCR test reports to map if the traveller was arriving from an ‘at-risk’ country.

2.3 Mali Parbat Bauxite mine

News: Public hearing on the environment clearance (EC) for Mali Parbat Bauxite Mining by Hindalco Industries in Koraput recently was presided over by the district judicial officer.

Mali Parbat Bauxite mine:



- It is located in Pottangi tehsil of Koraput district of Odisha.
- The bauxite mined out from the Maliparbat mine will be used in existing Hindalco’s Alumina refineries located at Renukoot (Uttar Pradesh), Muri (Jharkhand) & Belgaum (Karnataka).
- Some rivers near the mine are Kukurhaghat Nala, Kunduli Nala and Kolab River.
- Hindalco Industries is one of the leading producers of aluminium in the country.
- The company business involves bauxite mining to alumina refining.
- Hindalco Industries was granted EC for an area of 268.110 hectares of Maliparbat

bauxite mine in 2006.

2.4 Manipurs Heimang

News:

Despite recent studies highlighting the Manipur's Heimang's remarkable adaptability, it hasn't yet been used much in commerce.

Manipurs Heimang



- The Heimang tree grows widely in Manipur and other north-eastern regions
- Its fruit have a citrus-like tartness and, it is packed with nutrients such as polyphenols, flavonoids, and antioxidants.
- Traditional healers of Manipur called Maibas or maibis, prescribe heimang for common gastrointestinal problems like diarrhoea and dysentery.
- It is also recommended to eat water-soaked fruit for indigestion and stomach ulcer.

- The research found that compounds isolated from the stem of the heimang tree can significantly suppress HIV-1 activity in vitro.
- Local communities in the state also use heimang leaves to prepare a herbal shampoo called chinghi by boiling them with rice water.

2.5 Alternate Investment Fund and Credit Default Swap

News:

The Securities and exchange board of India has allowed alternative investment funds to participate in credit default swaps (CDS) as protection for both buyers and sellers.

What are AIFs?

- As defined in Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012, AIFs refer to any privately pooled investment fund, (whether from Indian or foreign sources), in the form of a trust or a company or a body corporate or a Limited Liability Partnership (LLP).
- AIF does not include funds covered under the SEBI (Mutual Funds) Regulations, 1996, SEBI (Collective Investment Schemes) Regulations, 1999 or any other regulations of the Board to regulate fund management activities.
- Hence, in India, AIFs are private funds which are otherwise not coming under the jurisdiction of any regulatory agency in India.

Credit Default Swaps (CDS)

- A CDS is a type of derivative that transfers the credit exposure of fixed income products.

- CDS is a specific kind of counterparty agreement which allows the transfer of third party credit risk from one party to another.
- CDS can be used for speculation, hedging, or as a form of arbitrage.
- Credit default swaps played a role in both the 2008 Great Recession and the 2010 European Sovereign Debt Crisis.
- In a credit default swap contract, the buyer pays an ongoing premium similar to the payments on an insurance policy.
- In exchange, the seller agrees to pay the security's value and interest payments if a default occurs.

2.6 RBI's Contingency fund

News:

THE SURPLUS available with the Reserve Bank of India for transfer or the RBI dividend to the Union government is likely to remain low in the current financial year ending March 2023.

Contingency Fund(CF):

- This is a specific provision meant for meeting unexpected and unforeseen contingencies including:
- Depreciation in the value of securities,
- Risks arising out of monetary/exchange rate policy operations,
- Systemic risks and any risk arising on account of the special responsibilities enjoined upon the Reserve Bank.

3.INTERNATIONAL RELATIONS

3.1 Arab Spring

News:

K.P. Fabian's newly launched book, 'The Arab Spring That Was and Wasn't' was seen in the news recently.

About Arab Spring



A wave of uprisings, revolts, protests, and unrest, spread across Arabic nations in the Middle East and North Africa by early 2011.

What gave birth to the Arab Spring?

- In December 2010, a Tunisian street vendor Mohammed Bouazizi set himself ablaze in the city of Sidi Bouzid to protest the draconian seizing of his vegetable shop by the police over failure to receive a permit.
- His sacrifice became a catalyst for the Arab Spring revolution in Tunisia.
- The pro-democracy protests that ensued in Tunis, eventually provoked authoritarian president Zine El Abidine Ben Ali, who ruled for more than 23 years, to resign and flee to Saudi Arabia.

- The regime change in Tunisia inspired activists in other countries and began to protest authoritarian governments in their own nations.
- The street protests triggered a wave of revolts across the Middle East as people began to voice their angst against unemployment, corruption, discrimination, authoritarianism, and poverty.

Impact of Arab Spring

- The Arab Spring caused the end of many long-standing autocrats.
- In Yemen, the fallout of the Arab Spring is playing out in a proxy war between Saudi Arabia and the UAE — both US proxies — and Iran.
- Millions have been displaced, and a Saudi-led blockade has led to massive starvation and malnutrition.
- Although the protest movements in 2011 were unique in their interconnected struggle for democracy across the region, the push to end corruption and improve citizens' quality of life did not end with the Arab Spring.

3.2 Y20 Summit

News:

Recently Union Minister for Youth Affairs and Sports Anurag Thakur launched the themes of the Y20 summit.

Y20 Summit:

- The Y20 is the official youth engagement group for the G20 (Group of 20), the forum for the world's largest and most advanced economies.

- The Y20 is a process which brings together young leaders from across the globe, to discuss and debate global challenges and agree policy recommendations they would like to see G20 leaders take forward.
- The list of policy recommendations is known as a communiqué, which is announced publicly at the Y20 Summit and presented to world leaders as part of the official G20 summit.
- India is hosting the Y20 summit for the first time.
- In Youth 20 Engagement Group, India's key focus is to bring young leaders from all across the globe together and discuss ideas for a better tomorrow and draft an agenda for action.
- The activities to be undertaken by Y20 during India's presidency will focus on global youth leadership and partnership.
- In a run-up to the final Youth-20 Summit, for the next eight months, there will be Pre summits on the five Y20 themes along with various discussions and seminars at different Universities across the country.

3.3 World Economic Forum

News:

The Annual Meeting of World Economic Forum (WEF) will begin at Davos in Switzerland.

World Economic Forum

About:

- The World Economic Forum (WEF) is a Swiss nonprofit foundation established in 1971, based in Geneva, Switzerland.

- Recognized by the Swiss authorities as the international institution for public-private cooperation.

Mission:

- Committed to improving the state of the world by engaging business, political, academic, and other leaders of society to shape global, regional, and industry agendas.
- Founder and Executive Chairman: Klaus Schwab.

3.4 United Nations Institute for Water, Environment

News:

A report was recently released by United Nations Institute for Water, Environment and Health (UNU-INWEH) that stated that world will lose 26% storage by 2050 to trapped sediment.

UNU-INWEH:



- UNU-INWEH was established in 1996 as subsidiary body of the United Nations University (UNU) institutes and an academic arm of the UN.

- Its operations are secured through long-term host-country and core-funding agreements with the Government of Canada.
- The Institute is located in Hamilton, Canada; its facilities are supported by McMaster University.
- It specializes on water for development, working, primarily with countries in the Global South, and addressing water issues of global significance.
- It is the UN Think Tank on Water created by the UNU Governing Council.
- UNU-INWEH is the only Institute in UNU that focuses entirely and solely on water issues.
- It is also the only entirely water-focused UN entity in Canada.

4. HISTORY AND ART & CULTURE

4.1 Sarsa Rivulet

News:

As Sikhs across India and the rest of the world observe the 356th birth anniversary of Guru Gobind Singh, a rivulet in north India associated with a key moment in his life is gasping for breath.

Sarsa Rivulet



- The river rises in the Shiwalik foothills of Southern Himachal Pradesh. It flows in the western part of Solan district, then enters into Punjab near Diwari village.
- Sarsa joins the river Sutlej at the eastern part of Rupnagar district of Punjab. It joins the Satluj River near Taraf village.

History

Pariwar vichhora gurudwara

- Nitnem Gutka of Guru Gobind Singh that became wet while crossing the Sarsa rivulet in December 1704 or 1705
- In December 1704, the Battle of Sarsa (a part of the Mughal-Sikh Wars) was fought between Khalsa and Mughal Empire. The river was flooded that night. Guru Gobind Singh was the tenth Sikh Guru. His family separated (vichor) during this incident and were presumed to be among the dead.
- A Gurudwara named Parivar Vichora is situated near the bank of river Sirsa in the village Majri.

4.2 Mural Art

News:

The Wall of Peace, a great work of modern mural art on the 700-foot long compound wall of Government Vocational Higher Secondary School at Cherpulassery, was recently inaugurated.

Mural Painting:



- A mural is a large picture painted or affixed directly on a wall or ceiling. The existence of mural paintings in India dates back to 2nd century BC to 8-10th century AD. Some of the places where this painting is found include- Ajanta, Bagh, Sittanavasal, Armamalai cave, Ravan Chhaya rock-shelter and Kailashnath temple in Ellora caves.
- Majority of the themes in these paintings relates to religion- Buddhism, Jainism and Hinduism.

1. Ajanta paintings

- Ajanta is the only surviving example of painting of the first century BCE and the fifth century CE
- The subject matter of these paintings is almost exclusively Buddhist, excepting decorative patterns on the ceilings and the pillars.

2. Bagh and Badami Cave paintings

- The paintings from Bagh caves in Madhya Pradesh correspond to those paintings of Ajanta in cave No. I and II.
- Stylistically both belong to the same form, but Bagh figures are more tightly modeled, and are stronger in outline.
- They are earthlier and human than those at Ajanta.
- The earliest Brahmanical paintings so far known, are the fragments found in Badami caves, in cave No.III belonging to circa 6th century A.D.
- The painting of Siva and Parvati is found somewhat well preserved.

3. Ellora

- A number of Hindu, Buddhist and Jain temples were excavated from Ellora between the 8th and 10th centuries A.D. from the living rock.

- Located nearly 100 Kms away from Ajanta caves in the Sahyadri ranges of Maharashtra, it is a group of 34 caves – 17 Brahmanical, 12 Buddhist and 5 Jain.
- These set of caves were developed during the period between 5th and 11th centuries CE by various guilds from Vidarbha, Karnataka and Tamil Nadu.
- The most impressive of these, the Kailashnath Temple is a free standing structure which is in fact a monolith which has several fragments of painting on the ceiling of the different parts of this temple. It was developed under the patronage of Rashtrakuta king Krishna I and is dedicated to Lord Shiva.

4. Badami cave paintings

- Badami was the capital of the early Chalukyan dynasty which ruled the region from 543 to 598 CE.
- The inscription in Cave No.4 mentions the date 578–579 CE, describes the beauty of the cave and includes the dedication of the image of Vishnu.
- Paintings in this cave depict palace scenes. One shows Kirtivarman, the son of Pulakesin I and the elder brother of Mangalesha, seated inside the palace with his wife and feudatories watching a dance scene.

4.3 Fatima Sheikh

News:

On her 192nd birth anniversary in 2022, Fatima Shaikh was honoured with a Google Doodle on her birthday.

Fatima Sheikh:

- She was a pioneering teacher, anti-caste activist, proponent of girls' education, and social reformer in 19th century Maharashtra.
- She befriended Savitribai Phule when the two were enrolled in a teachers' training programme by American missionary Cynthia Farrar.
- While in the programme, both developed a bond over their politics and mission to educate those who had been traditionally denied knowledge and education.
- She was a pioneering figure whose life, at a time when regressive attitudes towards women and Bahujans pervaded society, is a testimony to her courage.
- No surviving documents of Fatima Sheikh are available today.

4.4 Ottanthullal



- Ottam Thullal is a dance-drama performing art form of Kerala, created by Kunchan Nambiar, as an alternative to the Chakyar koothu.

- Kunchan Nambiar used it as a medium to protest against the prevalent socio-political structure and prejudices of the society in his time. It went on to become the most popular folk art presented in Kerala temples.
- The distinguishing factor of Ottanthullal is the performer himself singing and playing the story, which is a tedious task. Another person will recite the same verses. The accompanying instruments for Ottanthullal are Mridangam and Idakka.

4.5 Banjaras and Hakku Patra

News:

Recently Prime Minister of India symbolically distributed Hakku Patra (land title deeds) to five families of the Banjara (Lambani) community, a nomadic Scheduled Caste group in Karnataka.

About Banjaras:

- The Banjaras are a key scheduled caste sub-group in Karnataka, although they are considered to be a tribal group in terms of the lives they lead.
- The Banjara are a historically nomadic trading caste who may have origins in the Mewar region of what is now Rajasthan.
- Fire dance, ‘Ghumar’ dance and Chari dance are the traditional dance forms of the Banjaras.
- Banjaras have a sister community of singers known as Dadhis or Gajugonia.

- They are traditionally travelled from village to village singing songs to the accompaniment of sarangi.
- The Banjara community has been listed as a Scheduled Tribe in the states of: Andhra Pradesh, Telangana and Odisha.
- They were designated as an Other Backward Class in: Chhattisgarh, Gujarat, Haryana, Madhya Pradesh, Maharashtra and Rajasthan.
- They were designated as a Scheduled Caste in: Karnataka, Delhi and Punjab.

About Hakku Patras or title deeds:

- A title deed is a property ownership document, and the bearer of the document owns the land.
- The title deeds enable owners to avail of bank loans with the said document.
- They will also be eligible to buy or sell land to which the title deed is granted by the government.

4.6 Purana Qila

News:

Archaeological Survey of India, ASI is all set to begin excavation at Delhi's Purana Qila again – third time after excavations in the year 2013-14 and 2017-18.

Purana Qila (lit. 'Old Fort')



- It is one of the oldest forts in Delhi, India. Built by the second Mughal Emperor Humayun and Sur Emperor Sher Shah Suri, it is thought by many to be located on the site of the ancient city of Indraprastha.
- The fort formed the inner citadel of the city of Dinpanah.
- It is located near the expansive Pragati Maidan exhibition ground and is separated from the Dhyanchand Stadium by the Mathura Road, Delhi.

4.7 Puri Jagannath Temple

News:

- Odisha Governor has backed the entry of foreign nationals inside the world famous Jagannath Temple in Puri, wading into a debate that has lasted for decades and periodically triggered controversy

Puri Jagannath Temple



- The temple is believed to be constructed in the 12th century by King Anatarman Chodaganga Deva of the Eastern Ganga Dynasty.
- Jagannath Puri temple is called ‘Yamanika Tirtha’ where, according to the Hindu beliefs, the power of ‘Yama’, the god of death has been nullified in Puri due to the presence of Lord Jagannath.
- This temple was called the “White Pagoda” and is a part of Char Dham pilgrimages (Badrinath, Dwaraka, Puri, Rameswaram).
- There are four gates to the temple- Eastern ‘Singhdwara’ which is the main gate with two crouching lions, Southern ‘Ashwadwara’, Western ‘Vyaghra Dwara and Northern ‘Hastidwara’. There is a carving of each form at each gate.
- In front of the entrance stands the Aruna stambha or sun pillar, which was originally at the Sun Temple in Konark.

5.GEOGRAPHY

5.1 Schengen Zone

News:

Croatia adopted the European Union's common currency, the euro, and joined the Schengen Area, Europe's visa-free travel area, on January 1.

What is Schengen area?

- Schengen Area signifies a zone where 27 European countries, abolished their internal borders, for the free and unrestricted movement of people.
- Croatia became the 27th nation in the passport free Schengen zone.
- Member of this area include: 23 of the 27 EU member states and all members of the European Free Trade Association (Iceland, Liechtenstein, Norway and Switzerland).
- Being part of this area means that countries: do not carry out checks at their internal borders, except in cases of specific threats; carry out harmonised controls at their external borders, based on clearly defined criteria.

5.2 Siachen Glacier

News:

The Prime Minister has applauded as Capt. Shiva Chauhan of Fire and Fury Sappers became the first woman officer to be operationally deployed in Kumar Post, post completion of arduous training, at the highest battlefield of the world Siachen.

Where is Siachen?



- It is located in the eastern Karakoram range in the Himalaya Mountains, just northeast of the point NJ9842 where the Line of Control between India and Pakistan ends.
- It forms part of the Leh district of the Ladakh division in the Indian state of Jammu and Kashmir.

5.3 Chilka lake

News:

Chilka lake in Odisha, Asia's biggest brackish water lagoon, saw an increase in the number of migratory birds this winter compared to the previous year.

Chilika Lake:



- Chilika is Asia's largest and world's second largest lagoon.
- In 1981, Chilika Lake was designated the first Indian wetland of international importance under the Ramsar Convention.
- Major attraction at Chilika is Irrawaddy dolphins which are often spotted off Satapada Island.
- The large Nalabana Island (Forest of Reeds) covering about 16 sq km in the lagoon area was declared a bird sanctuary in 1987.
- Kalijai Temple - Located on an island in the Chilika Lake.
- Chilika lake hosts birds migrating from thousands of miles away from the Caspian Sea, Lake Baikal, Aral Sea, remote parts of Russia, Kirghiz steppes of Mongolia, Central and South East Asia, Ladakh and the Himalayas.

6. ENVIRONMENT

6.1 Black Carbon

News:

A recent study conducted on Tibetan plateau showed that increase in South Asian black Carbon aerosols is increasing loss of glaciers from Tibetan Plateau.

About Black Carbon:

- Black carbon is the sooty black material emitted from gas and diesel engines, coal-fired power plants, and other sources that burn fossil fuel.
- It comprises a significant portion of particulate matter or PM, which is an air pollutant.

6.2 Green Urban Oasis Programme

News:

Recently, Food and Agriculture Organization of the United Nations (FAO) launched report on Urban forestry and urban greening in drylands.

Green Urban Oases Programme:



- Launched in 2021.
- Aim – To improve resilience of dryland cities into ‘green urban oases’ by tackling climate, health, food and economic challenges.
- It contributes to FAO’s Green Cities initiative.
- Launched in 2020 to improve livelihoods and well-being of urban and peri-urban populations in at least 100 cities around the world in next 3 years.

Drylands:

- They are regions in which aridity index is not more than 0.65.
- Aridity Index: Ratio of annual precipitation and mean annual potential evapotranspiration.
- Drylands make up 41% of the Earth’s land surface, housing about 2 billion people, of whom 90% live in developing countries, mainly in Africa and Asia.

6.3 Silent Valley National Park

News:

A bird survey conducted at the Silent Valley National Park identified 141 species, of which 17 were new. So far, 175 species of birds have been spotted in Silent Valley.

Silent valley national park



- Silent Valley National Park is a national park in Kerala, India.
- It is located in the Nilgiri hills.
- Mukurthi peak, the fifth-highest peak in South India, and Anginda peak are also located in its vicinity.
- Bhavani River, a tributary of Kaveri River, and Kunthipuzha River, a tributary of Bharathappuzha river, originate in the vicinity of Silent Valley.
- The Kadalundi River has also its origin in Silent Valley.
- Lion tailed macaques is the flagship species of the Park.

6.4 Sustainable Aquaculture In Mangrove Ecosystem (SAIME)

News:

A new initiative of sustainable shrimp cultivation provides hope for mangrove restoration in Sundarbans.

SAIME Initiative

- Under Sustainable Aquaculture In Mangrove Ecosystem (SAIME) initiative, farmers have taken up cultivation of shrimp at 30 hectares in West Bengal.

- Additionally, they are restoring mangroves.
- Started in 2019, the community-based initiative of sustainable shrimp cultivation is being conceived by NGOs- Nature Environment and Wildlife Society (NEWS) and Global Nature Fund (GNF), Naturland, Bangladesh Environment and Development Society (BEDS).
- The mangrove ecosystem is integrated with shrimp cultivation, but when fisheries were expanded inwards, the mangrove ecosystem was excluded.
- Fishing, particularly shrimp cultivation, is one of the key occupations of the people of Sundarbans, which is a complex network of rivers and low-lying islands that face a tide surge twice a day.
- Shrimp cultivation is practised in about 15,000 to 20,000 hectares of the unique ecosystem in India.

6.5 Deepor Beel

News:

Deepor Beel, Assam's only Ramsar site, which is troubled by development projects and urban waste, has 30 more waterfowl species than the total counted in 2022, a bird survey has found.

About Deepor Beel:

- Deepor Beel (Beel means wetland or large aquatic body in Assamese) is located Southwest of Guwahati.
- It is considered one of the largest and important riverine wetlands in the Brahmaputra Valley of lower Assam, India.

- Due to the richness of avian fauna, it has been selected as one of the Important Bird Area (IBA) sites by Birdlife International.
- It was designated a Ramsar site in 2002 for sustaining a range of aquatic life forms besides 219 species of birds.
- A Ramsar Site is a wetland designated to be of international importance under the Convention on Wetlands, held at the Iranian city of Ramsar in February 1971.

6.6 Simlipal National Park

News:

Simlipal National Park has turned out to be the hunting ground for animal poachers over the last few years.

Simlipal National Park

- Simlipal derives its name from ‘Simul’ (silk cotton) tree.
- It was formally designated a tiger reserve in 1956 and brought under Project Tiger in the year 1973.
- It was declared a biosphere reserve by the Government of India in June, 1994.
- It has been part of the UNESCO World Network of Biosphere Reserve since 2009.
- It is part of the Similipal-Kuldiha-Hadgarh Elephant Reserve popularly known as Mayurbhanj Elephant Reserve, which includes 3 protected areas i.e. Similipal Tiger Reserve, Hadagarh Wildlife sanctuary and Kuldiha wildlife sanctuary.

6.7 Kelp forests

News:

Kelp populations at equatorward-range edges are particularly vulnerable to climate change as these locations are undergoing warming.

Kelp forests



- Kelp are large brown algae
- These are underwater ecosystems found in cool, nutrient rich, shallow waters that are close to the shore
- Many organisms use the thick blades as a safe shelter for their young from predators or even rough storms.
- Sea urchins can destroy entire kelp forests.
- Sea otters play a key role in stabilizing sea urchin populations so that kelp forests may thrive.
- *Ecklonia radiata* is the dominant and most widely distributed Laminarian kelp in the southern hemisphere

- Kelp can sometimes persist at lower latitudes, aided by cool water upwelling or in deep-water refugia where they are protected by thermocline.
- Thermocline is the transition layer between the warmer mixed water at the surface and the cooler deep water below).

6.8 Water Hyacinth

News:

An artificial lake in Madhya Pradesh's Shivpuri district has virtually disappeared under a thick layer of an invasive aquatic plant, threatening the biodiversity of the water body.

Water Hyacinth



- Scientifically known as *Eichhornia crassipes* Mart. (Pontederiaceae)
- It is an aquatic weed common in water bodies across South Asia, including India.
- This is not an indigenous species but was introduced to India during the British colonial rule as an ornamental aquatic plant from South America.
- The plant produces beautiful purple flowers that have high aesthetic value.

Usage:

- The plant has been used as a bio-fertiliser in some organic agriculture practices.
- It has been reported that this plant is a good phytoremediation species, suggesting it has the ability to trap and remove toxic metabolites and harmful heavy metals from water.
- But more research needs to be conducted to find suitable use for the notorious weed

6.9 Asiatic Golden Cat

News:

Recently melanistic Asian golden cat captured through camera traps in West Bengal's Buxa Tiger Reserve (BTR).

About Asiatic Golden Cat:



- The Asian golden cat (*Catopuma temminckii*) is a medium-sized wild cat native to the Northeastern Indian subcontinent, Southeast Asia and China.
- They are diurnal and crepuscular.

Conservation Status:

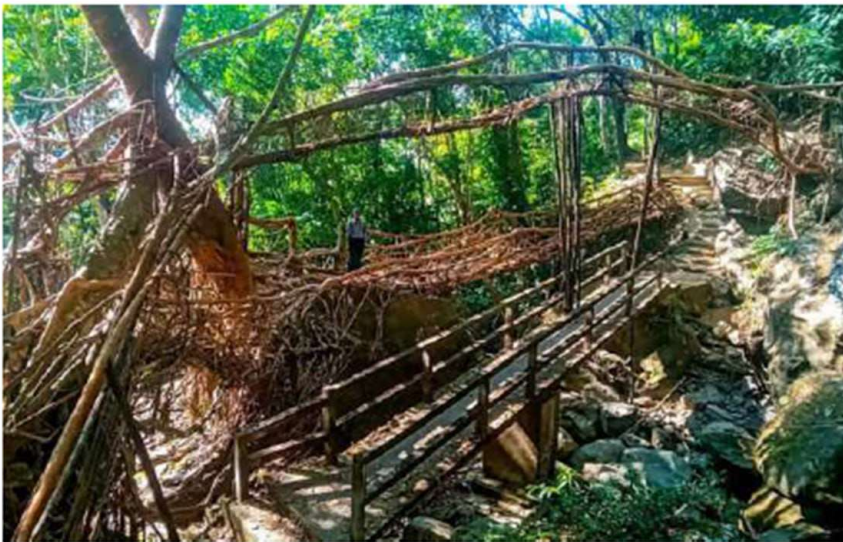
- o IUCN: Near threatened
- o Wildlife Protection Act, 1972: Schedule

6.10 Living Root bridges of Meghalaya

News:

A farmer takes forward the State's traditional practice of building root bridges and connects two areas across Umkar river in Cherrapunji.

Living Root Bridge



Years of work: The root bridge over the Umkar river in Slej village, Meghalaya. SPECIAL ARRANGEMENT

- Living root bridges (also known as Jing Kieng Jri) are the aerial bridges that are built by weaving and manipulating the roots of the Indian rubber tree.

- A root bridge uses traditional tribal knowledge to train the roots of the Indian rubber tree (found in abundance in the area) to grow laterally across a stream bed resulting in a living bridge of roots.
- It spans between 15 and 250 feet and is built over centuries.
- They have been serving as connectors for generations in the Indian state of Meghalaya.
- The bridges are primarily a means to cross streams and rivers. They have also become world-famous tourist attractions. The two most popular tourist spots are- Riwai Root Bridge and Umshiang Double Decker Bridge.
- They have three main properties:
 - They are elastic,
 - The roots easily combine, and
 - The plants grow in rough and rocky soils.

6.11 Yangtze Finless porpoise

News:

New research done in the Dongting lake in China that joins the Yangtze river found the cetaceans were pushed out of certain stretches of their habitat due to sand mining.

Yangtze finless porpoise:

- IUCN status – critically endangered

- The Yangtze finless porpoise belongs to the group of animals which also includes dolphins and whales.
- It is the only freshwater porpoise in the world and breeds just once in 18 months.

6.12 Amrabad Tiger Reserve



- Amrabad Tiger Reserve lies in Nallamala hills of Telangana.
- It is India's second-largest tiger reserve, next only to Nagarjunasagar Srisailem Tiger Reserve (Andhra Pradesh and Telangana).
- It has a large presence of the Chenchu tribe.
- It harbours great biodiversity, consisting of around 70 species of mammals, more than 300 hundred avian varieties, 60 species of reptiles and thousands of insects, all supported and nourished by more than 600 different plant species.

7.SCIENCE & TECHNOLOGY

7.1 Transfats

News:

Five billion people globally are exposed to harmful trans-fat, increasing their heart disease and death risk, according to a new report by the World Health Organization (WHO).

Trans Fat:



- Trans fat, also called trans-unsaturated fatty acids, or trans fatty acids, is a type of unsaturated fat that occurs in foods.
- Trace concentrations of trans fats occur naturally, but large amounts are found in some processed foods. Since consumption of trans fats is unhealthy.
- Most of the trans fat in the foods we eat is formed through a manufacturing process that adds hydrogen to vegetable oil, which converts the liquid into a solid fat at room temperature. This process is called hydrogenation.

- Hydrogenation, which uses hydrogen gas and metal catalysts to reduce the degree of unsaturation and provide proper physical characteristics in oils since 1890s, is a major process to generate trans fat in our daily diet.
- Artificial trans fat has been banned in many nations, but it is still widely consumed in developing nations, resulting in hundreds of thousands of excess deaths each year.

7.2 Immune Imprinting

News:

Over the years, scientists have realised that imprinting acts as a database for the immune system, helping it put up a better response to repeat infections.

About Immune Imprinting:

- Immune imprinting is a tendency of the body to repeat its immune response based on the first variant it encountered through infection or vaccination —when it comes across a newer or slightly different variant of the same pathogen.
- The phenomenon was first observed in 1947, when scientists noted that “People who had previously had flu, and were then vaccinated against the current circulating strain, produced antibodies against the first strain they had encountered”, according to a report published in the journal Nature.
- Working : After our body is exposed to a virus for the first time, it produces memory B cells that circulate in the bloodstream and quickly produce antibodies whenever the same strain of the virus infects again.

7.3 Exoplanets

News:

The National Aeronautics and Space Administration (NASA) recently announced that the James Webb Space Telescope has discovered its first new exoplanet. Researchers have labelled the planet as LHS 475 b, and it's roughly the same size as Earth.

About Exoplanet



- Exoplanets are planets that orbit other stars and are beyond our solar system. The first confirmation of detection of exoplanets occurred in 1992.
- According to NASA, to date, more than 5,000 exoplanets have been discovered.
- Scientists believe that there are more planets than stars as each star have at least one planet orbiting it.
- Exoplanets come in a host of different sizes. They can be gas giants bigger than Jupiter or as small and rocky as Earth. They are also known to have different kinds of temperatures — boiling hot to freezing cold.

7.4 Shukrayaan I

News:

ISRO had originally hoped to launch Shukrayaan I in mid-2023 but cited the pandemic when it pushed the date to December 2024.

Shukrayaan I

- Optimal launch windows from Earth to Venus occur once around every 19 months.
- But even more optimal windows, which further reduce the amount of fuel required at liftoff, come around every eight years.
- Both the U.S. and the European space agencies have Venus missions planned for 2031 — referring to VERITAS and EnVision

Shukrayaan I or the Venus mission:

- It will be an orbiter mission i.e. a spacecraft designed to orbit a celestial body without landing on its surface
- The spaceship, GSLV Mark II will be used to launch the mission with a launch mass of 2,500 kg.
- Its scientific payloads currently include a high-resolution synthetic aperture radar and a ground-penetrating radar.
- In the year 2020, scientists announced that they have detected Phosphine (a life friendly element indicative of possible life on the planet) in the atmosphere of Venus. ‘Shukrayaan-I’ will also bring with it some instruments that will examine infrared, ultraviolet and submillimetre wavelengths to study the claims more deeply.

7.5 Local Bubble

News:

Researchers from the Centre for Astrophysics (CfA) | Harvard & Smithsonian have generated a 3D magnetic map of the cavity called Local Bubble.

Local Bubbles:

- The Local Bubble is a 1,000-light-year-wide cavity or a superbubble. Other superbubbles also exist in the Milky Way.
- The Local Bubble is a large, low-density region in the interstellar medium (ISM) of our galaxy, the Milky Way.
- The interstellar medium is the material which fills the space between the stars.
- It's a cavity that is thought to have been created by a series of supernovae explosions that occurred about 30 to 50 million years ago.

7.6 Quantum Supremacy

News:

Recently, a draft research paper claimed Google researchers have achieved long-sought-after goal in physics called “quantum supremacy”.

What is “quantum supremacy”?

- The phrase “quantum supremacy” was coined in 2012 by John Preskill.
- Quantum supremacy refers to a quantum computer solving a problem that cannot be expected of a classical computer in a normal lifetime.